



Appetising apricots

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Substantial investment across 40ha - two titles

Maungatapere, Northland 38 Kokopu Block Road



A solid piece of real estate that will be attractive across all classes of property investors – our retiring vendors have created what truly is a trophy property polished to absolute perfection. Covering a massive 40ha (more or less) on two titles, seldom do we see real estate of this quality, scale and nature come to market.

The 12 hectares of established avocado orchard is split into 10 well sheltered blocks of easy to flat contour. The vendors have invested a lot of capital in the early years to get the orchard performing to the level it is today. With a high level of orchard husbandry, the orchard is set to continue hitting its strides for the seasons to come.

Supporting orchard infrastructure consists of a large load-out bay, four-bay TotalSpan implement shed (with 3 phase power available), modern self-contained flat, spray filling station and excellent internal roading.

The “romance effect” of driving through the mature native bush is absolutely stunning, along with the bird life and self-sustaining eco-system it provides. This aesthetic appeal provides the ideal host venue for weddings, luxury B&B, or other exclusive events where privacy is a key factor.

The balance of the property consists of approximately 15 hectares of grazing land which could lend itself to expansion of the Avocado orchard or diversification into other high value horticulture crops.

Completing this massive package is a 400sqm, executive style, four bedroom home, which will be an entertainers dream, with its open plan living and easy transition from indoor to outdoor spaces. The grounds have been landscaped and home orchard has been planted. All that’s left to do is move in.

Property Details

Location	Located in the sought after suburb of Maungatapere
Land	Flat to gentle sloping contours with volcanic soil types
Infrastructure	Four-bay TotalSpan shed with triple roller door access
Main dwelling	Newly built executive 400sqm, four bedroom home
Additional flat	Modern self-contained flat

4 2 2 4

Auction (unless sold prior)
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A regular advertorial section of new products and services. This publication does not endorse the products or services featured here.

- 73 Substantial investment across 40ha - two titles

2021: A New Year and New Decade

As we begin another New Year, if we review what eventuated over the last 12 months, we hopefully have plenty of good reflections and not too many bad ones. At the same time, some of us will have thought about taking a different approach to try and avoid what we didn't like or didn't want to happen last year.

By Barry O'Neil
President : HortNZ



If I think about what would be on a grower's New Year's wish list, most of us would have many issues in common, and top of the list would be labour - affordable and reliable labour! And no more hail please, and enough rain (at the right time). Let's also have consistently high demand and high prices for our produce, along with sea and airfreight reliability.

This year 2021 is also the start of a new decade according to the Gregorian calendar, as this calendar started with year 1 BC and not year 0 BC. We have not only welcomed in a New Year, but also a new decade.

I think it's also useful to muse on what would be on our New Decade's wish list. Things that we would want to see happen in horticulture over the next 10 years. Would our New Decade's list be the same as our New Year's list? I really hope it's not the same, as I believe over the next 10 years we should be setting our sights much higher as a sector that has so much future potential and opportunity.

So what are some of the things that I believe we should be setting our sights on and achieving over the next 10 years?

A Lighter Touch

A Lighter Touch, the research programme with which most of our sector is currently involved, must deliver the tools to enable those currently dependent on hard chemicals to move to biological and softer chemical options. We must refocus our efforts on reducing any reliance we have on hard chemicals, whether that be by plant breeding, changing our growing systems, or replacement with more acceptable alternatives.

Alternatives to 'hard' chemicals

I suggest that by the end of the decade 'hard' or just as importantly 'perceived to be hard' chemicals - including glyphosate, paraquat, hydrogen cyanamide and mancozeb - will not be accepted by consumers for use in food production systems in most developed countries. We therefore have 10 years to find acceptable alternatives. So let's not spend all our effort arguing for their retention, and in doing so waste 10 years of the time that's needed to find the necessary alternative options.

Automation

Automation needs to be a priority focus to deliver practical and affordable ways to remove the hard physical labour aspects of growing, harvesting and packaging. There are some really smart kiwi businesses working in this space that are focused on delivering solutions for New Zealand growers, so let's get behind them and support them.

Reliable employment strategies

But automation will never solve all our labour issues. As a result, we need to ensure we have employment strategies that we can rely on, and not run the risk of the labour tap being turned off at short notice, as has happened due to Covid-19.

“

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RSE programme

We will still need to have in place the very successful (and World Bank acclaimed) Recognised Seasonal Employer (RSE) programme, to give us full confidence that we have the labour we need for growth, and very importantly, to support our Pasifika communities. But in addition, within the food and fibre sector, horticulture should be positioning itself as the employer of choice, because we offer quality permanent roles, respect our workers and treat them well, and welcome diversity.

Water storage systems

Water storage systems will have to significantly expand in order to address climate change impacts. At the same time, production areas will need to increase to deliver the economic gains and employment the country needs from our sector. I think new proposals should look closely at the strategy used by the successful Te Tai Tokerau Water Trust model. This initiative is enabling 7,000ha of new horticulture land to be developed in Northland, and provides significantly improved employment opportunities for the local community. We have been arguing about the importance of new water storage schemes for years, but in reality very little has eventuated. In Northland, it only took five years to get approval and to access government funding, so why can't this model work in other regions of New Zealand?

“

We will need to work in partnership to address and redress the longstanding issues with nutrient and water allocation, and find ways to resolve the Treaty of Waitangi Wai 262 claims

Māori trusts

Māori trusts will become an even greater force driving growth in our sector. In this decade, we will need to work in partnership to address and redress the longstanding issues with nutrient and water allocation, and find ways to resolve the Treaty of Waitangi Wai 262 claims. Sustainability, including Te Taiao, will become a major focus of growers over this decade. We need to ensure we have invested in generating knowledge and understanding of how to grow successfully without negative environmental impacts. Also, how to operate successfully with the full backing of local communities and consumers, both domestic and international.

International marketing

International consumers will become even more discerning. Our opportunity is to position our products and production systems so these customers will actively seek out New Zealand products as they are the healthiest, tastiest, safest, most environmentally friendly, and have the wonderful provenance of Aotearoa New Zealand.

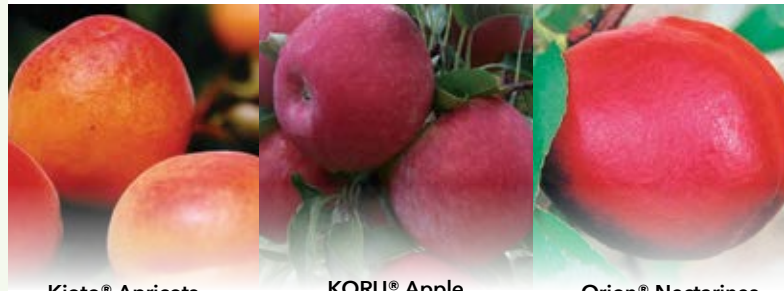


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Editor:

Andrew Bristol
Ph: 04 470 5665
Email: andrew.bristol@hortnz.co.nz

Advertising Manager:

Jackie Enright
Ph: 04 494 9986
Mobile: 0274 489 913
Email: jackie.enright@hortnz.co.nz

Design:

Scenario – brand new thinking
Ph: 04 385 9766
Email: joy@scenario.co.nz

Subscriptions:

Email: info@hortnz.co.nz

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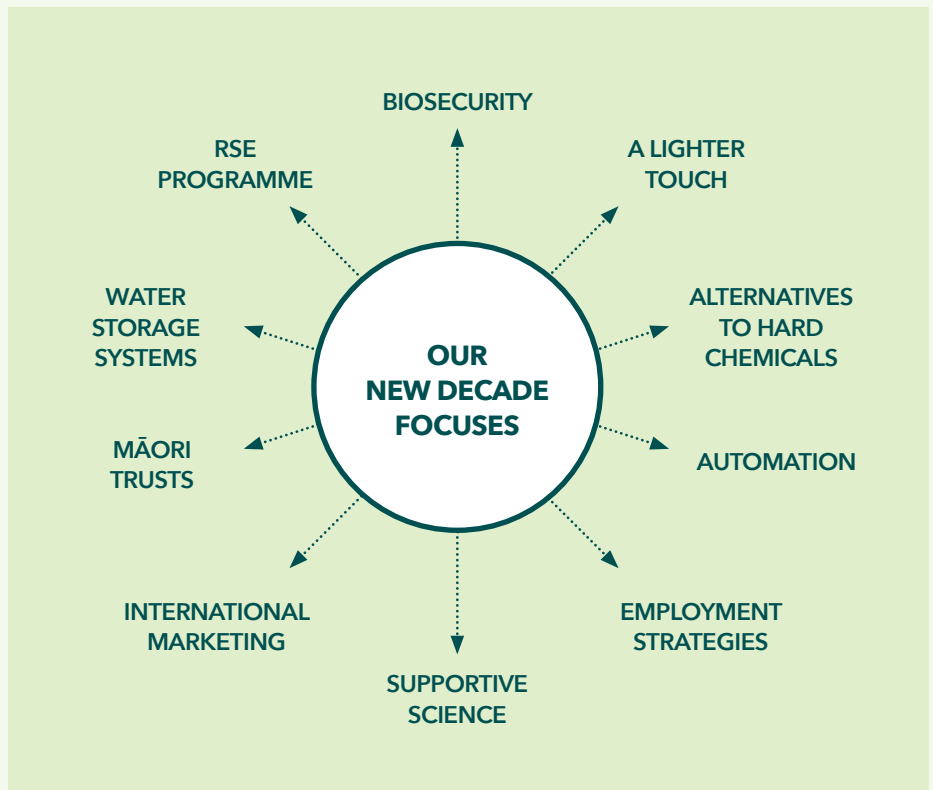


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Supportive science

Our science system needs to be better aligned to the challenges and needs of the horticulture sector. It needs to be adequately funded to identify and enable future opportunities and solutions. Science needs to support moves to more covered cropping to mitigate the impacts of changing climate and reduce biosecurity risk. Science-driven breeding programmes need to deliver exciting horticulture opportunities, with new varieties that grow, produce and store well, and that taste like a million dollars! And as a result, we will have multiple 'Zespri' success stories.



Science needs to support moves to more covered cropping to mitigate the impacts of changing climate and reduce biosecurity risk

Biosecurity

And last but not least, Covid-19 has shown us what we need to do to keep a significant biosecurity risk from affecting our families, communities and businesses. We now have a better appreciation of not only the need to keep such risks out of New Zealand, but also the need for our biosecurity plans to be in place, to keep the next big risk away from our enterprises. Let's not forget the lessons that Covid-19 has taught us and make sure that over the next decade, we adopt biosecurity practices that will keep our plants and produce safe.

These are some of my thoughts about what we could achieve this decade. I look forward to engaging with you on whether these are the key priorities that collectively we should be putting our efforts into to make sure they happen.

Happy New Year and New Decade. Hopefully 2021 will also become known as the year of the safe and effective Covid-19 vaccine, which enabled the world to live again! ●

Acting in unity for industry good

2020 was a challenging year for all of us and then there were the floods and hail over Christmas.

By Mike Chapman
Chief Executive : HortNZ

The difficulties of 2020 are being repeated in 2021 and as noted in the President's Word, we continue to face multiple and significant challenges. My reflection is that last year's challenges and those we face currently are forcing us to change how we operate as an industry at all levels.



Many of the changes are coming from both the proposed and new environmental regulations, and from the need to find enough workers. These two areas dominated my attention in 2020 and I can see that there will be no change to my work priorities for 2021. The number one challenge here is how do we get the government to recognise the importance of horticulture; and then how do we get the government to enable growing healthy food into the future? I firmly believe that we can only achieve this outcome by working together as a collective, as one horticultural industry with clear and consistent messaging. My focus is to link the industry together to achieve unity through product groups, district associations and everyone involved in the industry for the benefit of growers. Being based in Wellington, Horticulture New Zealand has the unique ability to work daily at all levels in government to achieve the outcomes that horticulture needs in order to contribute to New Zealand's economic and health well-being.

Unfortunately, the Covid-19 world we now live in does not give any of us - including the government - the options that previously existed. Across all primary and industrial sectors, the same environmental and labour supply challenges are making continued operation very difficult. The government is being forced to make some very difficult decisions, and in making those decisions, there will be winners and losers.

I believe that the only approach to take is one where we would be in partnership with government. I do not believe,

based on my previous experience, that taking an adversarial approach will achieve our goals. When you consider the decisions that have been made in recent months by the government, horticulture has been one of the winners. We have not got all that we need but we have got some support. Other sectors have not been so fortunate.

In addition to working with the government, what we are trying to do is create the best possible operating conditions for government support. When it comes to finding, training and retraining the best possible workers, we have our network of career progression managers, which we are working to expand. This network is taking a fresh and innovative approach, as can be seen from the article written by HortNZ's newly appointed people capability manager in this edition on page 10.

The ability to attract people to horticulture starts with our standing with the public and reputation as an industry. Our future workforce is motivated by their belief in what they are doing and the contribution they are making to our country and the environment. To keep attracting people to our sector, we are working on our reputation. Also, how we employ and engage with the new workforce needs to be adapted to fit their expectations.

The more our sector does to make our employment attractive to our new and future workforce, the better our reputation with the public will be, and government will be more inclined to enable us to continue to adapt and grow. In effect this is a circle. What we do to attract and retain our workforce improves our public and government reputation, and increases what government is prepared to do to support horticulture. That in turn attracts more people to our workforce.

We need to drive our work cycle to spiral upwards. The spiral upwards can only be achieved by us acting in unity. This is one of HortNZ's top priorities for 2021. ●

YOUR LEVY AT WORK

INDUSTRY WIDE ISSUES FOR INDUSTRY GOOD

Natural resources and environment



Air

Northland Regional Plan – Environment Court Hearing

The provisions within the proposed Northland Regional Plan prevent any spraying within 100m of a spray-sensitive area, when the wind direction is towards that area. Our position is that the wording of the current rule is too blunt and would prevent spraying when in practice the effects can be safely managed using good management practices.

Throughout 2020 Horticulture New Zealand attended mediations in Northland regarding rules to manage potential effects from agrichemical application. Not all matters were able to be resolved in mediation, and so the matter is proceeding to the Environment Court.

The hearing will be in April. The HortNZ team will present planning, spatial and agrichemical expert witness evidence.

Ngaruroro Water Conservation Order – Environment Court Hearing

In 2019 a special tribunal granted a Water Conservation Order for the upper Ngaruroro river. The Water Conservation Order required the upper river be managed in its natural state.

HortNZ did not appeal the decision. But the decision was appealed by a number of parties. White Water Rafting NZ and Forest and Bird's appeal sought that a Water Conservation Order also apply to the lower river.

HortNZ joined the appeal in support of Hawke's Bay Regional Council. HortNZ's primary concern is that we do not support a Water Conservation Order being applied to the lower river.

Over the past year HortNZ and experts have been involved in mediation and conferencing. Matters have not been resolved between parties. A hearing is being held in February. The HortNZ team has prepared planning, recreational, water quality, hydrological, ecological and economic expert witness evidence.



Throughout 2020 Horticulture New Zealand attended mediations in Northland regarding rules to manage potential effects from agrichemical application

Otago Regional Plan Change 7 (Water permits) – Environment Court Hearing

Otago Regional Council has proposed a plan change to the Regional Plan: for the replacement of deemed permits with water permits, and for the replacement of any water permits expiring prior to 2025.

The plan change has immediate legal effect. This is because it deals with water, and under the RMA, any applications for a water permit also have to give consideration to a plan change.

HortNZ lodged an industry submission and is currently preparing planning and hydrological expert witness evidence, which is due in February.



Land

Waikato District Plan Review – Council Hearing

The Waikato District Plan sets out policy and rules that manage land use (including activities such as earthworks and vegetation clearance) and subdivision in the Waikato District. The Proposed Waikato District Plan was notified on 18 July 2018.

Currently HortNZ is developing planning evidence to oppose the re-zoning of land currently used for vegetable growing in the Tuakau Area. HortNZ's position is that Council has not adequately assessed the full effects of the loss of highly productive land, and has not considered whether vegetable growing lost from this area can be replaced elsewhere.

Expert witness evidence is due March, with the hearing scheduled in May.

“

Currently HortNZ is developing planning evidence to oppose the re-zoning of land currently used for vegetable growing in the Tuakau Area



Climate Change

Climate Change Commission

The Climate Change Commission provides independent advice to government on climate issues. HortNZ has participated in a technical reference group for the Climate Change Commission throughout 2020.

The Climate Change Commission is undertaking public consultation in February and March, on a draft of their first package of advice to government.

The consultation will cover:

- The proposed first three emissions budgets and guidance on the first emissions reduction plan, advising the government on how the emissions budgets could be met.
- Whether New Zealand's first Nationally Determined Contribution is compatible with contributing to the global efforts to limit warming above 1.5°C above pre-industrial levels.
- Advice on what potential reductions in biogenic methane might be needed in the future.
- HortNZ will participate in the public consultation meetings. ●

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Serpentine leaf miner

Photo courtesy of National Plant Protection Organization, the Netherlands (insectimages.org)

Emerging threat – serpentine leaf miner

By Anna Rathé : Biosecurity Manager, HortNZ

The situation

The serpentine leaf miner (*Liriomyza huidobrensis*) has recently been detected in Australia for the first time. A report from a market garden in Western Sydney was confirmed to be serpentine leaf miner in late October 2020. This was followed by a detection in Queensland in November 2020. Australian authorities are responding and have undertaken surveillance and tracing to determine the extent of the infestation. It appears that eradication in New South Wales is unlikely to be technically feasible due to the extent of the infestation, requiring a transition to management.

Originally from South America, this pest has proven itself to be highly invasive, as demonstrated by its spread around the world. It is now present in a number of countries in Europe, Asia, North America (Canada only), Central America and Africa. Its presence in Australia means the pest is one step closer to New Zealand.

The threat

Serpentine leaf miner feeds on over 300 plant species, including vegetables, legumes and ornamentals. Serpentine leaf miner has long been on the radar for both the fresh and processed vegetable industries, with the changing situation offshore closely watched. The insect is also on Biosecurity New Zealand's priority pest and disease list, reinforcing the significant threat that it poses to plant health in New Zealand.

“

Originally from South America, this pest has proven itself to be highly invasive, as demonstrated by its spread around the world



Larvae are colourless to start with and become pale yellow-white-orange with a maximum size of 3.2mm in length

Serpentine leaf miner is considered a horticultural threat as the maggot (the larval stages of the fly) tunnels through the leaves of host plants such as onion, celery, beans, garlic, lettuce, pea, beetroot, spinach, potatoes, tomatoes and marrow as it feeds. This leaf damage reduces the plant's ability to photosynthesise, slowing growth and reducing productivity. Once established, serpentine leaf miner can be difficult to control due to development of pesticide resistance.

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Once established, serpentine leaf miner can be difficult to control due to development of pesticide resistance

The Ministry for Primary Industries (MPI) has strict measures in place to limit the chances of the serpentine leaf miner making it through the border hidden in imported fresh cut flowers, nursery stock or fresh produce from countries that have established populations of the pest.

What can you do?

We encourage all growers to keep an eye out for any tell-tale signs of leaf miner infestation. This includes scouting commercial outdoor vegetable crops, covered crops and inspecting home vegetable patches. While there are other leaf miner species present in New Zealand, serpentine leaf miner damage is relatively distinctive, with snakelike and irregular leaf mines. Larvae may be present on leaves or inside leaf mines. They are colourless to start with and become pale yellow-white-orange with a maximum size of 3.2mm in length. Adult flies are very small - less than 3mm and grey/black in colour with bright yellow patches on their head and at the base of their wings.



Report biosecurity threats by calling the MPI Pest and disease hotline on **0800 80 99 66**.

If the pest were to arrive in New Zealand, early detection maximises our chance of eradication. Under the Biosecurity Act 1993 New Zealanders are expected to report the presence of what appears to be an organism not normally seen or otherwise detected in New Zealand - this would include suspect serpentine leaf miner. If you think you've seen the pest do the right thing and catch it (or collect the leaf), snap a photo of the insect (and/or its damage), and report it by calling the MPI Pest and disease hotline on 0800 80 99 66. ●

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Five secrets of the new Gen Z workforce

The February issues of The Orchardist and NZGrower carry several stories about young people making careers in horticulture.

By Emma Boase : Career Progression Manager, HortNZ

These stories have been written in the context of industry-wide labour shortages that have been exacerbated by Covid-19 and border closures. I say exacerbated because our industry has been challenged by labour and skill shortages for many years.

In my new role as career progression manager, I was asked to reflect on what our industry needs to do to attract more young people, as well as the benefits of having young people in horticulture.

These are the five points to consider when thinking about 'Gen Z' joining the workforce

1 HOW WE TALK ABOUT HORTICULTURE

Young New Zealanders are not hesitant to work in horticulture. The awesome result that Summerfruit NZ had before Christmas attracting students for picking is proof of this. However, we need to realise that the word 'horticulture' is jargon to most people. It is perhaps more effective to share a story around sustainable food production, regional economies, people and teams, and nutrition for the world.

2 AUTHENTICITY

The new workforce is Gen Z or 'Zoomers' - pragmatic, tech natives, seeking authenticity. The workplace for Gen Z is a place of connection, where they get paid but also where they find value in non-monetary terms. Gen Z want to find meaningful work - horticulture can most definitely provide this.

“

Gen Z want to find meaningful work - horticulture can most definitely provide this

3 DIVERSITY AND INCLUSION

True diversity and inclusion - not just of gender or race, but of experience and perspective - is key to Gen Z. Organisations who take this on will win. Not only will they attract the best talent, but their decision making will be supported by increased breadth and depth of knowledge, allowing for a more resilient, adaptive, and connected operation.

4 MENTORSHIP

Our Boomers, Gen X, and Millennials all have plenty to offer younger people coming through. Actively offering mentorship, sharing opportunity, and pulling others up behind you is essential to capability development. You have walked the pathway our young people are still trying to find. The value of sharing that will never be replaced by a flyer or YouTube video. Mentorship is a two-way street: mentors gain fresh perspective, energy and enthusiasm for innovation, and the opportunity to identify and resolve issues that they wouldn't otherwise see. Who are you giving a hand up to in 2021?

5 KEEPING UP WITH THE COMPETITION

New Zealand is already a world leader in healthy food production. Our skills, technologies and systems are increasingly exportable, and are advertised by our superb produce. When we compete for value on the global stage, we need to have the best skills, knowledge and entrepreneurial ability. The pace of change is increasing and the measure of success will be who can keep up. ●



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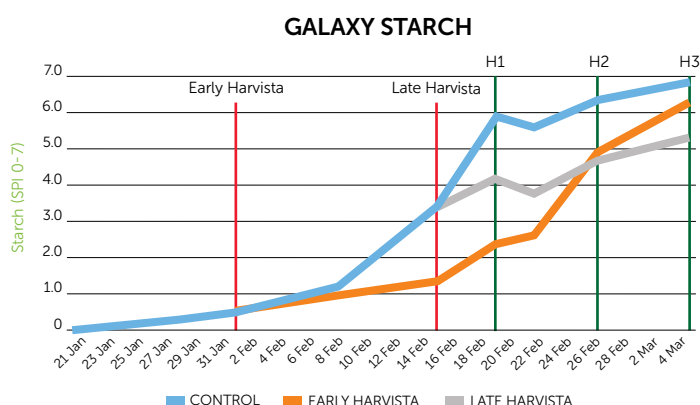
This season, New Zealand growers can better optimise apple quality and harvest management. AgroFresh announces the registration and commercial availability of Harvista™ 1.3 SC in New Zealand.

Harvista technology is a near-harvest sprayable application that enhances apple quality and extends the harvest window. Harvista is a globally recognised and successful orchard sprayable proprietary formulation containing 1-methylcyclopropene. The launch is another example of AgroFresh's commitment to deliver innovation to the New Zealand produce industry, and is the latest "Smarter Freshness" technology to support the success of the country's apple growers. The addition of Harvista, along with AgroFresh's globally recognised SmartFresh™ Quality System, enhances the industry's apple growing and freshness preservation capabilities.

Harvista works by inhibiting internal ethylene perception and slowing down ethylene-dependent maturation and ripening processes. Harvista can be applied from 4 to 21 days before harvest to maximise fruit quality and labour resources. Harvista does not replace SmartFresh for maintaining fruit firmness and extending harvest quality during storage.

Commercial trials in New Zealand have demonstrated that Harvista provides unparalleled flexibility for targeting specific blocks and varieties, which generates more strategic marketing and storage options for growers and packers.

Impact from Harvista on SPI development and maturity at harvest



Harvest 1 (H1) 19 February; Harvest 2 (H2) 28 February; Harvest 3 (H3) 5 March

SOURCE: AgroFresh Commercial Trial, Hawkes Bay 2019

In this block, there was a delay in Starch Pattern Index (SPI) development of 7-10 days between Control and trees treated with Harvista at commercial harvest.



The SPIs reflect the maturity for each of the treatments on 19 February 2019, when the block was commercially harvested.

DAA denotes days after application

Better quality from the start

The earlier Harvista is applied, the more consistent fruit maturity is at harvest for consolidation of the number of picks required, and reducing fruit drop and watercore. Later Harvista applications can also help to manage fruit maturity and variability as the harvest approaches. An application 4 days prior to commercial harvest has demonstrated Harvista is a very flexible harvest management tool for delaying harvest maturity especially when faced with labour restraints or weather events.

AgroFresh Technical Support

Chris Waites recently joined AgroFresh as Technical Account Manager and brings a wealth of horticultural experience with a focus on spraying equipment and calibration, which is key to the application of Harvista. Chris is working directly with growers to achieve optimum results on their use of Harvista, including sprayer set up, calibration and SPI sampling for guiding application timing.

About AgroFresh, the company behind the science of ethylene control

AgroFresh is a leading AgTech innovator and provider of science-based solutions, data-driven technologies and experience-backed services to enhance the quality and extend the shelf life of fresh produce. For more than 20 years, AgroFresh has been revolutionising the apple industry and has launched new innovative solutions in a variety of fresh produce categories. AgroFresh introduced its proprietary SmartFresh technology to the New Zealand apple industry in 2003. Since then, SmartFresh has been used extensively by exporters to maintain their market edge and develop new markets.

AgroFresh

We Grow Confidence™

CONTACT: Chris Waites, Technical Account Manager
CWaites@agrofresh.com, 027 233 6949

AgroFresh.com

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T&G staff presented their Freshworx campaign at the Expo

GoHort Northland Expo attracts hundreds

Industry event unites Northland growers to tackle labour issues

By Hugh Chesterman : Communications & Events Assistant, HortNZ

A common theme at the GoHort Northland Expo was that people are our most valuable asset. The Expo attracted more than 200 growers, industry leaders, potential employees and government representatives. (See sidebar.)

“We can’t grow our business without people,” said Mapua Avocados general manager, Ian Broadhurst. “Our business will be harvesting about one million trays of avocados each year when our plants reach maturity. People are our key asset: without them this can’t happen.

“We’ve got to employ locals because we can’t rely on labour coming in from outside the area. We’ve got a great opportunity to hire locals and currently employ more than 40 full-time. On top of that, we’re going to need an additional 70 people.

“We’re offering training incentives and supporting our staff to seek additional qualifications. When they achieve these qualifications, we increase their pay and offer promotions so that our staff can see the career pathway ahead of them. People in our community can see how committed we are to our people, especially when they see their whānau progressing on this pathway,” Ian said.

Mapua is not alone with rolling out training incentives. Orangetown HR manager Ingrid Edmonds said a similar pay incentive scheme rewards their staff when they complete additional training.

“We have five of our younger employees who are currently completing a post-harvest apprenticeship, and a further 13 completing Level 2 qualifications through Primary ITO.

“We identified these five apprentices when they started, as good people with a lot of promise that we want to keep.

They're all doing really well and have chosen training modules which suit their interests and career goals.

"When you find good people, you need to hold onto them. At Orangewood, every position in our business is going to double, meaning we need a lot more staff in coming years. Our staff know this, and can see that we are serious about promotions and the career opportunities we talk about.

"We ask our staff 'whose job would you like to be doing?' and then give them a pathway to get to where they want, and give them the training and promotions they need," Ingrid said.

Focusing on providing life skills as well as professional qualifications to their staff, Tokotoko Solutions presented their holistic approach to supporting locals. Their unique approach combines life skills, pre-job training and ongoing seasonal work to provide both full-time work and personal growth opportunities to locals.

Connecting the various seasonal labour demand peaks in the region, Tokotoko Solutions makes use of the downtime between peaks for further training. By filling these employment gaps, they are able to turn seasonal work into sustainable permanent jobs with career growth opportunities.

Tokotoko Solutions director Isopo Samu (Samu) said that by partnering with growers, this format works towards their goal of redefining seasonal jobs as permanent work, providing greater certainty to both employers and their community.

"There are so many opportunities to link together these seasonal peaks and look after our people in a way that they don't want to leave the industry," Samu said.

"When we map out the labour needs of an orchard, they might say they need five people for a harvest season. Instead, we give them 10, meaning that we're able to create a four-day-on, four-day-off roster which minimises attrition rates and creates time for study and learning.

"We also plan with orchards or farms what roles they are going to need six months down the line. Knowing this, we can train our staff up so when those roles are needed, they already have the qualifications they need to do the job."

Samu said that what is often missing in the process of hiring locals is the preparation before they start work.

"One of the problems historically encountered when hiring locals is that people aren't being properly prepared. We're working to change that.

"Not having base skills like having reliable transport, showing up to meetings on time and having daily routines before starting work leads to high attrition rates and people not wanting to return to the industry. We make sure to teach key personal skills like these before we start with job training, so our people know what to expect when they start.



Ian Broadhurst, General Manager of Mapua

The GoHort Northland Expo on Wednesday 9 December 2020 drew a crowd of more than 200 to find out more about careers in the industry.

Organised by GoHort career progression manager Maria Fatholahi, in collaboration with local Ministry of Social Development and Ministry of Education representatives, the Kerikeri event brought together growers, packhouses, product groups, industry bodies and training providers to discuss the labour needs for the region, opportunities of hiring locals and career pathways within industry.

Split in two halves, the morning session of the event catered to industry and focused discussion around how to attract and retain locals in permanent and seasonal roles. The latter half of the expo was centred around job-seekers with a 'speed-dating' recruitment format.

“

Hiring locals first, supporting them, and providing career opportunities is a win-win for employers and the community

"Hiring locals first, supporting them, and providing career opportunities is a win-win for employers and the community. It creates a better workforce and a community that will support the industry in return.

"There's so much opportunity in hiring locals for seasonal roles, we just need to shift our attitudes and perspectives to seasonal work," Samu said. ●



The 'Speedmeet' saw more than 200 through the doors at the Kerikeri expo

SPEEDMEET SEES HUNDREDS THROUGH THE DOORS AND JOBS FILLED

Taking place in the afternoon of the GoHort Northland Expo, the 'Speedmeet' matched local employers with job seekers in a 'speed-dating' format. More than 200 people attended the session, with many jobs being offered to keen candidates.

At the Speedmeet interested candidates had rapid meetings with employers to find out more about job offerings, and if interested, registered with the employer or 'matched' with each other using the Ministry of Social Development app.

Job seekers found the event invaluable, with some travelling from as far away as Auckland to attend. One of the job seekers, Dylan Holdaway, said the opportunity to have all of the industry together in one room with many jobs available was a big drawcard.

"This event has been so valuable to be able to make heaps of connections with businesses," Dylan said. "Meeting people and making connections with businesses is normally a hard process when you're just one person, but it's been amazing to bring them all together."

Employers were also fans of the new expo and were impressed with the turnout.



T&G Fresh labour and compliance manager, Richard Lenton, said they had a lot of interest from locals wanting to know about their available opportunities.

"We were rapt with the turnout," Richard said. "The afternoon session had a huge number of people through. What was impressive was the diverse demographic of locals who were interested in the industry, with everyone from school leavers to even some retirees. There were people totally new to the industry as well as returning seasonal workers."

"We were able to register a lot of interest on the day and invite people to our blueberry open day the following day. There were a lot of people that we'd met at the expo who showed up and have helped. We've been able to fill all our blueberry harvest positions."

Having just launched their Freshworx campaign to promote their seasonal roles, Richard said that T&G is investing huge resources into attracting Kiwis into the industry and offering career growth opportunities.

"We want to show the people in our community that the industry is full of vibrant career options that can take you anywhere, which can all start through a seasonal role." ●



Emma Boase

Capability role shift to influence positive change

Filling in an application for a nursing scholarship caused Emma Boase to question her planned career path and eventually led to her appointment to the new role of people capability manager at Horticulture New Zealand.

By Elaine Fisher

"As I was filling in the form, I realised I wanted to help build the fence at the top of the cliff by keeping people healthy, rather than being the ambulance at the bottom of the cliff," says Emma, whose new role also includes that of co-ordinator for Women in Horticulture.

That was in 2015, and although Emma could not have foreseen the appointment to her current role, her thinking was already in line with HortNZ's vision "Oranga kai, oranga tangata, haere ake nei - Healthy food for all, forever".

"I attended a high school which did not offer agricultural or horticultural courses, but I was interested in people, health and nutrition so thought nursing was the career for me.



However, when I thought about it more, I realised working in food production offered me a way to apply these interests and passions in a variety of ways.

"Not only does it help maintain and progress rural communities, but it also provides sustainable, nutritional food for people's health and well-being, reducing the impacts of obesity and other illnesses."

So Emma attended Lincoln University, completing a Bachelor of Agribusiness and Food Marketing followed by a Masters in Agricultural and Applied Economics at the University of Missouri, USA. Her Master's research in food marketing and consumer behaviour received



the Outstanding Student Paper Award at the 2019 International Food Marketing Research Symposium. Emma’s research explored how claims made on food packaging labels can lead consumers to perceive other attributes in the same product differently, which she called a “halo effect”.



I find it incredibly rewarding to empower people to make the connection between the fruit and vegetables on their plate, and where they are grown and the industry they come from

Back in New Zealand to consider her future direction, Emma took up the role of horticulture industry engagement coordinator at Massey University. Massey is home to the only Horticulture science degree programme in New Zealand, and ensuring its success is a key goal. “There is an awesome team at Massey who are passionate about horticulture and linked in with industry in everything they do. The aim is to highlight horticulture (to students) as the industry to be in when they graduate. Integrating aspects of industry through guest lectures, workshops, study tours, scholarship support, and extracurricular activities helps students see these opportunities.”

One of the programmes Emma helped to support with the leadership of Professor Hamish Gow was IHIP (International Horticulture Immersion Programme) piloted in June 2019 with support from AGMARDT (The Agricultural & Marketing Research & Development Trust), NZAPI (New Zealand Apples & Pears Inc.), and Zespri.

In January 2020 Emma left for Europe to pursue a PhD in Denmark. “However, as Covid-19 lockdowns continued I decided that doing three years of research with that level of uncertainty was not what I wanted, so I returned to New Zealand in June, spending two weeks in isolation.”

Delighted to be back in New Zealand and fresh from enjoying camping in Northland during the summer break, Emma is excited about the opportunities and challenges of her new role with HortNZ.

“Capability is an unbounded space with lots of opportunities and projects on the go already. Covid has magnified the need to focus on encouraging New Zealanders into the horticultural industry and we need to find innovative ways to sustain permanent jobs for New Zealanders in horticulture as well as fill seasonal positions.

“I find it incredibly rewarding to empower people to make the connection between the fruit and vegetables on their plate, and where they are grown and the industry they come from.

“Once people make the link between providing people with fresh, healthy food and a career in horticulture, they start thinking about working in the horticulture industry differently. Being able to relate the food that you interact with every day to a dynamic and innovative industry is really cool.”

As the new people capability manager for HortNZ, Emma will be supporting and coordinating the established nationwide network of career progression managers.

“The horticulture industry has already been working on creating innovative ways to meet seasonal labour needs, while making sure that long-term attraction campaigns get people into permanent careers,” says Emma.

“A big issue that the industry is working to address is perception. We need young people, their teachers, mentors, influencers and parents to be more aware of the diverse range of careers out there in the industry and show them that they can have a bright future in horticulture.”

Retaining people in the industry requires a change in focus from traditional employment perceptions. “Showing people they are valued is important, as is attracting people who share the employer’s vision and purpose so they want to show up, even on rough days.

“It’s particularly important to pay attention to the newest employees, as someone’s first job or experience often sets strong preferences for the rest of their career.”

Emma says today’s young people (referred to as Generation Z - or the Zoomers) have unlimited access to information through technology. “Today’s bright young things can learn



what they want, when they want and if they are sceptical about something, they can research it and form an opinion in five minutes. We're looking at new ways to connect with people both digitally and in-person to shape positive opinions and encourage careers in horticulture.

"For them the workplace is a place of connection, certainly where they get paid, but the research says Gen Z want more from their career. They and their employer need to understand the 'why' of working in that business. If they are not feeling it, and feeling valued, they will likely move."

Emma's role includes advocacy and policy work, liaising with the Ministry for Primary Industries, Ministry of Social Development and the Ministry of Business, Innovation and Employment.



True diversity and inclusion allows organisations to have a myriad of experiences coming to the table

In her role with Women In Horticulture, Emma will assist with planning for a session at the 2021 HortNZ conference; building regional support and networks and helping the organisation achieve its vision of "an innovative and collaborative industry that empowers women at all levels", and to "foster an environment that encourages and recognises women's participation from entry level to leadership roles in horticulture".

Further developing inclusion within the horticultural industry is also part of Emma's job description which includes supporting and amplifying Māori and Pasifika programmes. "True diversity and inclusion allows organisations to have a myriad of experiences coming to the table. This in turn allows for decisions to be made with an increased breadth and depth of knowledge allowing for a more resilient, adaptive, and connected operation."

Diverse and challenging as her new role is, Emma is excited about the opportunities to effect positive change within the industry and people's lives.



To keep up to date with our news and activities, join our membership database by emailing info@women-in-hort.nz. We welcome everyone. ●



\$500 Industry Training Scholarships

These scholarships are available to industry trainees studying towards a certificate or diploma. They provide assistance and acknowledge the achievements of those studying and working at the same time.

\$4500 Undergraduate Scholarships

HortNZ is again offering undergraduate scholarships in 2021. These are to support people undertaking undergraduate study in horticulture or related fields.

These scholarships also include complimentary attendance at the Horticulture Conference 2021 at Mystery Creek, Hamilton, between 4 - 6 August (costs covered include registration fees, conference dinners, accommodation and travel).

\$10,000 Postgraduate Scholarships x 2

Horticulture New Zealand (HortNZ) is offering a \$10,000 scholarship in 2021. The scholarship is available to people undertaking postgraduate study in horticulture or related fields.

The New Zealand Fruitgrowers' Charitable Trust is offering a \$10,000 scholarship (new) in 2021. The scholarship is available to people undertaking postgraduate study specifically related to the fruit industry.

Please note that all scholarships are for one year.

Completed application and reference forms must be submitted to HortNZ by 5pm, 20 March 2021. They are available on the HortNZ website: www.hortnz.co.nz/scholarships.

Please email your completed forms to schols@hortnz.co.nz. For more information, you can phone Jacqui Stalknecht on (04) 494 9978.

Please note that the Selection Team will be looking for:

- Commitment
- Potential contribution to the industry
- Past achievements
- Individual approach, qualities and skills
- Referees' comments.



Kerri Nakajima - operations manager for CentralPac in Cromwell

Gender no barrier to success in horticultural career

When Kerri Nakajima graduated from the University of Canterbury, she expected her BA majoring in Russian language and literature would lead to a role in the New Zealand diplomatic service.

By Elaine Fisher

However, today Kerri is operations manager for CentralPac in Cromwell - the Central Otago facility which packs cherries for more than 20 orchards - and she's loving it.

"It's such a varied job with lots of challenges and every day is different," says Kerri who is also a member of Women in Horticulture's governance group.

Kerri, who grew up in Invercargill, doesn't come from a horticultural background. For five years after leaving university she was an executive assistant and interpreter for Japanese-owned company Bridgestone NZ, which involved some international travel.

In 2005, she and her husband Hiroki moved to Central Otago, and Kerri became office manager and then packhouse manager at Central Cherries in Cromwell.

For 10 years she worked for Central Cherries before joining CentralPac as packhouse manager, then production assistant, and now she is operations manager.

She and Hiroki live in the Catlins where they have a business, and during the cherry harvest season Kerri bases herself two-and-a-half hours away in Cromwell. "The rest of the time I can do most of my work from home."

“

The biggest attribute required I think is flexibility and willingness to learn on the job



Cherries are the only fruit CentralPac packs and the high-value, delicate fruit require careful handling from picking to packing. While many primary industries were struggling to find sufficient staff due to New Zealand's border closures in response to the Covid-19 pandemic, Kerri says CentralPac didn't have that problem in late 2020.

"We have been lucky in that we have attracted some very highly qualified staff from other industries, including from tourism companies in Queenstown, affected by Covid-19, who have joined our team this season.

"There are also a number of backpackers who have managed to have their visas extended so they have been able to stay and work in New Zealand."

It's among those foreign workers that Kerri sometimes gets to practice her language skills, Japanese in particular. "Russian not so much."

The cherry harvest began in early December with fruit destined first for the national and international Christmas markets, followed by the main harvest in January and February.

“it's about being confident in your ability and a willingness to work hard and put your ideas forward

"Export fruit goes by air freight to various countries including China, Taiwan, Thailand, Malaysia, Singapore, Canada and North America. Freight costs are more expensive because of Covid."

While she didn't plan a career in horticulture, Kerri says it's an industry with so much diversity that it offers a wide variety of opportunities for people from varied backgrounds and with a variety of skill sets.

"The biggest attribute required I think is flexibility and willingness to learn on the job. There are always new challenges, and no two seasons are the same."

In her role as operations manager Kerri's technical knowledge has increased as she keeps pace with the ever-evolving computer technology required in a modern packhouse.

In her 15 years in the industry Kerri hasn't found any barriers to advancement because she is a woman. "It's not about whether you are male or female, it's about being confident in your ability and a willingness to work hard and put your ideas forward. You also need to be very flexible to be able to react quickly to the different challenges that each season brings."

Kerri enjoys belonging to Women in Horticulture as it is a way to network and share ideas, learnings and experiences with other women in the industry.

To keep up to date with our news and activities, join our membership database by emailing info@women-in-hort.nz. We welcome everyone. ●



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Nelson-Tasman photo competition

Budding photographers were quick to enter the Grow NZ Women and Go Horticulture inaugural 'Fun Sun Grow' photo competition.

By Anne Hardie

The aim was to showcase the Nelson-Tasman horticulture scene and add a touch of cheer to a year disrupted by Covid-19.

Go Horticulture's careers progression manager for the region, Robyn Patterson, says it did just that, with entries flowing in of bees, flowers, orchard work and even a prickly hedgehog bundle.

"We were acknowledging it had been a tough year for people and we wanted to cheer people up and do something positive in the community. We're horticulture groups, so we had a horticulture theme and we wanted to showcase the industry.

"People got behind the competition and we got some good photos from it," she says. "I think it inspired people to open their eyes."

Entries had to be from amateur photographers and had to include a living thing with a heartbeat. It was split into four categories and sponsors provided substantial prizes for the winner. The category for school students with a prize of \$250, was won by Charlie Robinson-Burrell. The community category with a prize of \$500 went to Tash Berridge. The category for entrants working in the horticulture industry was won by Monique Murphy, who received \$500. And the prize for the overall winning photo was awarded to Erica Henare who received \$1,000.

“

The prize for the overall winning photo was awarded to Erica Henare who received \$1,000

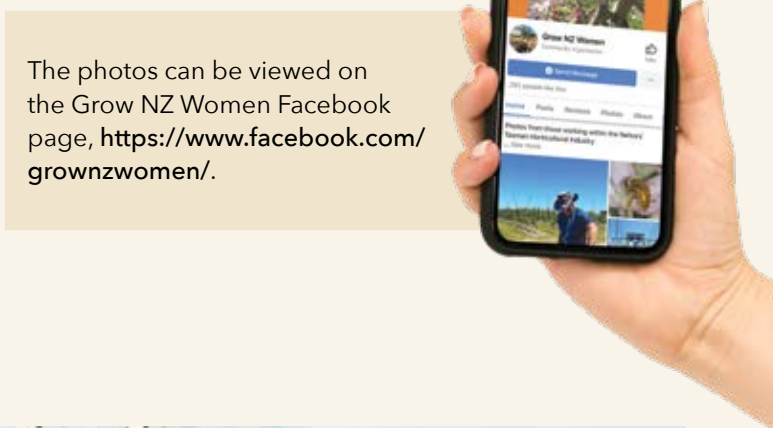


1 Overall winning photo by Erica Henare, 2 The winning school student photo by Charlie Robinson-Burrell, 3 The winning industry photo by Monique Murphy, 4 The winning community photo by Tash Berridge

The photos were put on the Grow NZ Women's Facebook page and voting was judged by the most likes.

The competition was advertised via multiple social media networks and Horticulture New Zealand, plus the polytech, schools and even the Nelson Regional Development Agency. Organisers also 'blitzed' the region with posters to entice people to get out their camera or phone and capture an image.

Robyn says the success of the competition has prompted the Nelson-Tasman groups to plan another next year, with Horticulture New Zealand planning to hold a national competition. ●



The photos can be viewed on the Grow NZ Women Facebook page, <https://www.facebook.com/grownzwomen/>.

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From left: Mark Thomas and Bevan Thompson - Pipfruit Managers at Thomas Bros Ltd

"Hortivate structures are easy to install, cost effective and a solid product. The ease of having the complete system arrive on-site at one time simplifies the project and we enjoyed dealing with one supplier at competitive rates. The componentry of the structure is very user friendly, allowing you to use a larger range of experienced staff to install. Hortivate offered great support and we look forward to working with them on future projects." - Mark Thomas



Food Act 2014 – Renewals due in 2021

It has now been two years since the deadline for horticulture businesses to become registered under the Food Act 2014, so grower registrations are now due for renewal. (Registration is due every two years.)

By Damien Farrelly : Food Safety Manager, HortNZ

In 2019, more than 4,000 growers were registered under the Food Act 2014 as a result of recognition of our Good Agricultural Practice (GAP) schemes (NZGAP and GLOBALG.A.P.)



As growers have taken advantage of an effective batch registration process via industry groups (NZGAP, Zespri, Avoco, Seeka, and New Zealand Apple and Pears), the costs and complexities of Food Act registration have been minimised. Using this same process, the renewal of Food Act registrations will be seamless for growers who are utilising this industry service. Growers wishing to use this service, or unsure whether to do so, should contact their relevant industry group (NZGAP, Zespri, Avoco, Seeka, or New Zealand Apple and Pears). Packhouses, transporters, storage providers, and wholesalers can also register via NZGAP.

“**A grower’s Food Act renewal date is based on when the grower was first registered with the Ministry for Primary Industries rather than the anniversary date of the grower’s GAP certificate, therefore most Food Act registrations will expire between February and April this year**

A grower’s Food Act renewal date is based on when the grower was first registered with the Ministry for Primary Industries (MPI) rather than the anniversary date of the grower’s GAP certificate, therefore most Food Act registrations will expire between February and April this year. Growers should soon expect to receive communications from the respective GAP industry group who originally registered them for the Food Act (see above). Once the renewal has been confirmed by the industry group and subsequently processed by MPI, growers will receive an updated Food Act registration certificate from MPI. This certificate will most likely be

received at the beginning of the month that the existing Food Act registration is due to expire.

Overall, batch registration has saved the horticulture industry a lot of administration and confusion, plus over \$1 million in direct registration costs to date, and savings will almost double this year once renewals have been processed. This is compared to the cost if each business had registered individually via the local council or MPI, and it highlights the value that GAP schemes continue to deliver for growers.

If a horticulture business (grower, packer, storage provider, transporter or wholesaler) is now commercially operating without registration, they are in breach of the Food Act 2014 and could be subject to enforcement action. Although the Ministry for Primary Industries will use a range of interventions, if businesses are found to be unregistered, large fines (up to \$200,000 for companies and \$50,000 for individuals) could be applied. Markets and customers may also refuse to accept goods or use services of businesses not registered under the Food Act, in addition to considering their compliance with existing requirements for GAP certification.

By recognising the GAP schemes, standards, and audit systems that have been in place for over 20 years, growers are now demonstrating compliance with the Food Act 2014 and can continue to provide safe and suitable fruit and vegetables for New Zealanders and our many export markets.



For more information on the Food Act 2014 please contact your GAP provider, industry body, MPI, or check the MPI www.mpi.govt.nz/foodact, NTWG www.hortnz.co.nz, or NZGAP websites www.nzgap.co.nz

Farm Environment Plans and new government requirements

The New Zealand government is drafting new freshwater regulations for certified and audited Farm Environment Plans as well as reviewing the Resource Management Act.

By Ailsa Robertson : Sustainability and Extension Manager, HortNZ

These regulations will set the bar for farm plans across the country. To meet the regulations, growers with five hectares or more of horticultural land use will need to have a certified and audited farm plan. In the farm plan, growers will need to show they are managing any adverse environmental effects of their growing operation. The level of ambition in a grower's farm plan will depend on adverse effects identified. It will also need to align with the freshwater vision and values of the catchment(s) that they grow in.

Horticulture New Zealand advocates for industry assurance programmes, like GLOBALG.A.P. and NZGAP, as the primary vehicle to deliver certified and audited farm plans.

Over 90% of growers in New Zealand are certified through GAP (Good Agricultural Practice) programmes for food safety. GAP modules are also available for social practice and environmental management. The GAP programmes provide a streamlined and integrated approach to meeting a range of market access and regulatory requirements. GAP environment modules like NZGAP's Environment Management System (EMS) add-on, benchmarked to regulation, can help growers document their practices to sustainably manage soils, nutrients, irrigation and biodiversity through a farm plan.



We don't know when the new freshwater regulations will come into force, so I urge you to get started now. All GAP certified growers can use the EMS to develop their farm plan to meet the new regulations.

HortNZ is also offering support to growers through workshops. Our first workshops are for vegetable growers in Gisborne and Pukekohe in the first half of 2021. The workshops will step through a Farm Environment Plan using the EMS add-on to GAP. We plan to visit other regions later this year, and next year.

If you would like know about available support in your area, or how to build your farm plan at home, please contact your local District Association, Product Group, or HortNZ.

A new GAP farm plan module is also in the pipeline for agricultural greenhouse gases. This module will help growers meet new legislation requirements.¹ The first milestone is just around the corner. By the end of 2022, all farms need to document their total annual emissions in their farm plan. For most growers, you will only need to know your emissions from fertiliser use, in tonnes of nitrous oxide and carbon dioxide per year. HortNZ will release more guidance for growers on this in the coming months. ●

¹ <https://www.mfe.govt.nz/climate-change/he-waka-eke-noa-primary-sector-climate-change-action-partnership>

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Young Growers
Pages 42-56





The climate having played havoc with their cherry orchard, Adriana and Michael Mather plan to stay at their rural idyll in Te Karaka but are in talks to hand their plantings over to a younger couple who, they say, would have more energy to make it work

The world is changing, Gisborne growers warn

A pair of Gisborne growers knew they were taking a risk planting cherries in a temperate area but say the pace of climate change took them by surprise ... and took their orchard out of action.

By Kristine Walsh

Long-time residents of New Zealand, Adriana (originally from Scotland) and Michael (England) Mather met on a blind date in 2001, and with their respective adult children well established, decided the new year signified time for a new life - together.

The couple lived in Gisborne for a while but by 2004 had bought in Te Karaka - just 25 minutes inland from Gisborne - nearly half a hectare of land complete with a dilapidated cottage that was formerly home to the resident District Nurse.

For the next few years they continued to work in Gisborne while renovating the cottage and plotting what they would do with their little patch of paradise.

"It was just a bare paddock that had been leased for grazing but I could see there was potential for putting on something to create an income," Adriana says. "So we

took a couple of years to think it over, to work out what we thought would be a good crop."

The soil was good, having formerly been used both to graze young cattle and to grow kumara.

"And the weather at that time told us there was enough cold during winter to make cherries viable, so we decided to go with that."

“

It was just a bare paddock that had been leased for grazing but I could see there was potential for putting on something to create an income

GROWING CHERRIES



Production volume varies from 8 to 10 tonnes per hectare for light cropping varieties, to 14 to 16 tonnes per hectare for heavy cropping varieties.



The ideal climate for growing cherries has more than 800 hours of temperatures between 2°C and 12°C over the winter dormant period, providing the chill that stimulates even blossoming once temperatures rise.



Summerfruit NZ says cherries require deep, well drained soils - generally on flat land - good protection from winds and plenty of sun in summer.



According to AgFirst, 25 hectares are required for commercial scale but smaller areas (7-10ha) can be profitable if they are efficiently run by an owner-operator.



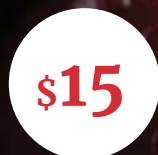
Low rainfall and humidity over the blossom period (mid-September to mid-October) is also required, along with low rainfall/humidity from two to three weeks before harvest to completion of harvest.



Northern regions like Hawke's Bay do not experience this winter chill, so growers use a dormancy breaking chemical that causes the tree to blossom.



The price of entry to the industry can be high: with costs including irrigation and trellis, it can reach \$150,000 to \$200,000 per hectare.



Returns on the local market also vary, with kilos fetching around \$10 to \$15 (before packing, packaging and freight are deducted) pre-Christmas, and about one-third of that after Christmas.



AgFirst says cherry trees deliver their first light harvest after three to four years, increasing each year until maturity at six to eight years.



Cherries are known to be a challenging crop, with a relatively high risk of failure and labour-heavy harvests.



Around 80% of the national crop is exported, with returns varying.



Planting density can range from 800 to 1,600 trees per hectare.



Around 90% of the more than 720 hectares of cherries grown in New Zealand are in Central Otago.



They weren't alone in their thinking: at the time Adriana, an accounts administrator, was working for a local orchardist who had the same idea.

"So in 2007 he ordered 1,000 cherry trees, we ordered 90, and we planted them on our properties. He was very generous with his time and advice, so we're sad that it didn't work out for him either."

Rewarding the couple's optimism, things started well at Waihora Cherries with their plantings of Sweetheart, Roseanne, Earlise and Santana varieties. They added 40 more trees which, with the existing crop, they protected by planting a shelterbelt for relief from the "horrendous" westerly winds.

"We were only a small operation anticipating two to three kilograms from each of our 130 trees, with the season lasting from late November until late December," Adriana says. "And that's what we got. We could have sold a lot more - especially through the local Farmer's Market - but that was enough for us to manage."

Then things started to go wrong - first with an annual influx of blackbirds, which they combated with bird netting; then with brown rot, which meant they had to change their spray-free ideals.

The kicker, though, was the change in the local climate and how fast that occurred.

Te Karaka is known for its microclimates - in places it is often much hotter and drought-prone in summer than nearby Gisborne, and much colder in winter with periods of very heavy rain.

When the Mathers first bought their property some 16 years ago they kept a weather diary that showed their patch got cool night-time temperatures plus a couple of frosts a week throughout winter.

“

Then things started to go wrong - first with an annual influx of blackbirds, which they combated with bird netting; then with brown rot, which meant they had to change their spray-free ideals

"But in the winter of 2020 we only got four frosts for the entire season and night temperatures rose by at least a couple of degrees, plus both the rainfall and the equinox winds come later and are more extreme," Adriana says.

"That makes all the difference between okay cherry-growing conditions and really bad ones and it all happened within a very short period of time."

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The care lavished by Adriana and Michael Mather has made for healthy cherry trees, but the fruit itself has suffered from increasingly fewer frosts and more dramatic - and untimely - rain events

The upshot is that if they were to continue to run their orchard, it would be more capital and labour-intensive requiring rain covers and a diligent regime to deal with fungal and pest damage, she says.

“Even over in Hawke’s Bay, which gets colder than here, the big orchards are covered with netting and many with rain covers as well.”

The Mathers have not been alone in their experience.

As the fruit was ripening late last year an orchard of 300 cherry trees at Patutahi - around 15 kilometres from Gisborne - suffered heavy rain that cost the growers two-thirds of their anticipated crop.

Meanwhile, with both Adriana and Michael Mather both well into retirement age, they will stay at their rural idyll in Te Karaka but are in talks to hand their plantings over to a younger couple who, they say, would have more energy to make it work.

The Mathers are philosophical about their experience, but while noting there are different ideas about the speed and causes of climate change, hope that others can learn from it.

“When we started we thought the cherries would work but had no idea of the pace of climate change, and the impact that would have,” Adriana says.

“What we’re saying is that if the climate is not quite right for your crop, that could only get worse, and much faster than you think.” ●



While a couple of Gisborne growers have concluded that “perhaps cherries should stay down south”, even southern growers have not had an easy time of it this season.

In normal conditions, Central Otago produces about 90% of New Zealand’s cherry exports, with a value of \$84.1 million in 2017-18 and \$66.2 million the following season.

However, the region’s growers lost up to half their anticipated crop in 2019-20 after poor weather during the pollination period in spring and a cool, wet start to summer.

And this 2020-21 season has been no better: two days of torrential rain that started on New Year’s Day left split cherries rotting in the orchards, with growers reporting losses of up to 50% of their crops ... a loss of \$50 million in export revenue.

Even worse, according to Summerfruit NZ, flooding damage to trees - particularly on orchards around Earnsclough - could affect next season’s crop.

By the second week of January growers were working to harvest what was left of their crops and with good weather predicted there was still work for pickers and packers, said Summerfruit NZ chief executive Richard Palmer.


However, the persistent and heavy nature of the rain had not been experienced in 40 years and despite most growers being natural optimists, watching their year’s work wiped out was a “devastating” blow.

“It is incredibly sad to see growers lose so much of their crop in this way,” Richard Palmer said.

“We are working hard to assess what the impact will be on both orchards and the workers, and are looking at how we can keep people in work for the summerfruit season followed by harvests of apples, grapes and pears.”

“

When we started we thought the cherries would work but had no idea of the pace of climate change, and the impact that would have



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The weight of hail proved too much for some hail netting

All hailed out at top of the south

Hail-hit Tasman growers need help to retain permanent staff because they won't have any income for 18 months or longer.

By Anne Hardie

The Boxing Day hailstorm cost the region an estimated \$100 million through loss of income and damage, and that is before the flow-on effects around the region.

It has been described as the worst hailstorm in living memory in the region, wreaking havoc on a big chunk of horticultural land stretching from Riwaka around Motueka and through to Lower Moutere. The rest of the region was also peppered with hail, but it was the storm around Motueka that delivered the brutal damage. Pipfruit, kiwifruit, hops, berries and vineyards all got hammered. Some 300ha of this year's apple crop was wiped out; two million trays of gold kiwifruit and 300,000 trays of green, half of around 150ha of hops decimated and about half the crop of 40ha of grapes lost.



New Zealand Apples and Pears chief executive Alan Pollard says one of the biggest challenges for the hardest hit growers is retaining their permanent staff when they face no income for the next 18 months or more, but will have ongoing costs.

He visited the region in mid-January when around 60 hail-affected growers attended a meeting with consultants, the Ministry for Primary Industries, the Ministry of Social Development and the Top of the South Rural Support Trust. He says some of the key aspects in the wake of the storm are managing and retaining staff, plus the mental health of growers who are facing huge stress, particularly financial.



Kiwifruit hammered by hail

Despite the prospect of no income for many apple growers this year, they now face the task of getting the damaged fruit off the trees and getting their trees back into shape. That will require even more labour than if they had picked a good crop off the trees, he says.


“We need more labour now because you still have to get the fruit off the trees and practice some really strict tree husbandry. You don’t want disease occurring, so there’s more work now.

“The trees are looking very stressed and it’s highly likely there will be an impact into next season. It will depend on getting the fruit off at the right time.”

He says it could be three to five years of ongoing costs for affected orchards because of the damage to trees and the possibility trees may become biennial bearing.

He says hail usually sweeps through a relatively narrow corridor, but this storm had a wide sweep and he stood on one 600sq m block of orchard that didn’t have one piece of fruit left untouched.

“**The trees are looking very stressed and it’s highly likely there will be an impact into next season. It will depend on getting the fruit off at the right time**



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HAILSTORM COST THE
REGION AN ESTIMATED
\$100 MILLION THROUGH
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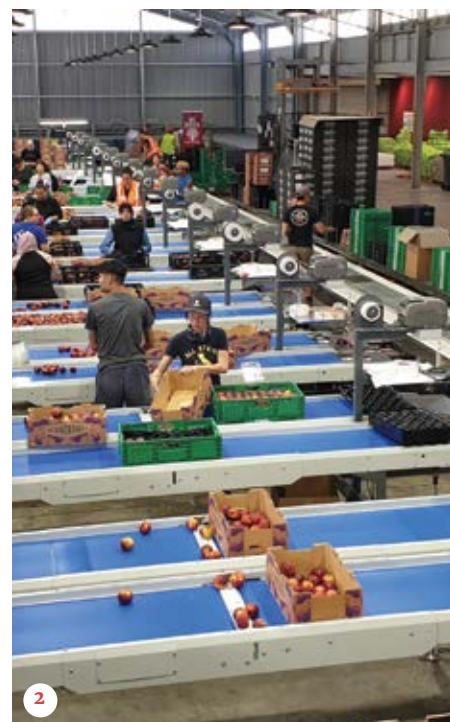
The region no longer has a juicing facility and though there have been talks about trying to get it up and running for this year’s damaged fruit, he says it probably wouldn’t be financially worthwhile for growers to pick the fruit for juice anyway.

In the wake of the storm, he says there will be more talk about hail netting options and the industry has asked the government for accelerated depreciation of hail netting so growers can get tax relief from the netting faster.

Various forms of hail netting are already widely used in the region and Alan Pollard says growers are likely to put up more netting as it becomes more cost effective and as extreme weather events such as this hailstorm become more prevalent.

This storm proved too much for hail netting on some blocks, especially flat-top netting. Boulke Hoekstra is in charge of development and maintenance on a Motueka orchard where 12mm hailstones built up an estimated 1.5 tonnes of hail on panels of the flat-top netting and about 30 tonnes of ice was accumulated on the netting over the entire block.

“The hail goes to the weakest point where it freezes and builds up and can’t go anywhere. The hailstorm lasted up to 20 minutes and it was the last five minutes when the net collapsed. I’ve been here 30 years and I’ve never seen hail like that.” ●



1 Project management team thrilled with their new set-up: Overall project manager Craig Petersen (left), former general manager Gary Wake, and Tomra project manager James George 2 Packing underway on opening day. Stonefruit are an important part of the packing operation

Mt Erin cuts ribbon on new packing facility

An initiative started by a group of like-minded growers to pack and export their own fruit reached a new level with the launch of a new state-of-the-art packhouse in December.

By Rose Mannering

The venture began in 2012, when a group of Hawke's Bay growers banded together with other industry investors to purchase Mt Erin Fruit Services in 2012, looking for control of their apple crop beyond the farm gate. Fast forward to 2020, eight families of Hawke's Bay's well-established growing community were thrilled to present their new facility to the fruitgrowing industry at the opening on December 11.

Sally Gardiner joined the group in late 2019, a professional chair with interests in kiwifruit in the Bay of Plenty, and now also apples.

The newly fitted out packhouse has a capacity of 30,000 plus bins. An old two-lane grader has been replaced with a Compac/Tomra four-lane grader. Fully automated defect sorting reduces the need for people on the sorting tables.

A Spectrim colour defect sorter with infra-red allows for a high-quality output from the new set up.

UltraView, using the latest technology, can check the calyx and stem-end of the apple for any unwanted travellers or defects. The whole packing set-up is run from the control room stationed above the packing lines.

The UltraView inspection module significantly improves detection of difficult defects located in the stem bowl such as stem splits in the fruit. UltraView integrates with Spectrim to increase line efficiency and eliminate slow-downs that can occur when packing lots with a high incidence of defects. UltraView continues to reduce the need for manual grading on the line and supports the adoption of pack automation solutions.



Fruit handling is reduced with auto fill trays, and although the group have not gone as far as robotic stackers, an easier set-up will mean palletising fruit is less physical than previously.

At the packhouse opening, Sally says the growers should be commended for having the vision to control their business beyond the farm gate. "They should take pride in a job well done," she says.

Craig Wilson, speaking on behalf of the grower shareholders, says the group has made phenomenal improvement to the packing set-up since their first investment in 2012. "Some of us are a bit stubborn but we have a common goal which has helped us to get on and make it happen," he says.

Since 2012, the group has built five additional coolstore rooms, a container load-out bay, and installed a high-pressure apple washer and water filtration system. Craig commended the work of project manager Gary Wake who has ensured timeframes were met despite many challenges, not least undertaking the development during a worldwide pandemic.

The grower shareholders, who collectively farm more than 200ha of orchard, are mainly from the Korokipo, Puketapu and Dartmoor areas of Hawke's Bay. Craig and his wife

Gill orchard at Puketapu, Des and Lesley are in Dartmoor, Mark and Leah Ericksen are fourth generation orchardists at Waima, Korokipo, and the Kilmister family are also in Korokipo Rd. Other families include the Halfords, Parsons and Riddells.

Commercial agreements were signed up just as the country went into Level 4 lockdown, and the packhouse, which can pack both apples and stonefruit, was first put through its paces packing early apricots at the beginning of December. Stonefruit are a big part of the group's packing operation.

Newly minted Tukituki MP Anna Lorck congratulated the Mt Erin Group for their efforts: "it was ballsy - well done to the Mt Erin team," she said at the opening, attended by over 90 growers and suppliers.

The group harvest, pick, pack and export only the best quality apples to more than 50 countries worldwide. "We supply all the major apple varieties including Royal Gala, NZ Queen, Fuji, Braeburn, NZ Rose, NZ Beauty, Granny Smith and Pink Lady," Craig says. "Mt Erin Group's strength comes from its collective size, knowledge, and expertise gained over successive generations of family owned and operated orchards. We live and work on our land, growing world-class apples, just the way they should be." ●

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At the Fairgrow launch are (from left) Andrew Keaney, the managing director of T&G Fresh, Peter Aarts from Sundale Farms, and Gavin Findlay, the chief executive of the New Zealand Food Network

Getting food where the need is greatest

Bringing food to the tables of New Zealanders in need is the aim of Fairgrow, launched by T&G Fresh in Auckland at the end of last year, which so far has seen almost 290,000 kilograms of fruit and vegetables donated.

By Glenys Christian

Managing director, Andrew Keaney, told guests at the launch at its Mt Wellington base that the company's purpose is to grow healthier futures through fresh fruit and vegetables.

"We knew well before Covid-19 that there were many New Zealanders not getting enough food," he said.

With estimates of around 500,000 Kiwis affected by food insecurity, the problem extends beyond local communities. So a system had to be developed to get produce distributed right across the country, making fresh fruit and vegetables go a lot further. And with the level of need skyrocketing with Covid-19 as demand outstripped supply, the company saw it could add real value, becoming a foundation member of the New Zealand Food Network in July last year.

This group operates as a central hub, collecting and storing bulk donated food from producers and suppliers, then distributing it out to food rescue organisations, iwi and charities. Gavin Findlay, the chief executive of the New Zealand Food Network, said its philosophy is closely aligned with that of T&G Fresh in supporting those in need with a commitment to do the right thing.

"You could say it's a marriage made in heaven."

Fairgrow is now collecting and aggregating surplus and donated fruit and vegetables from T&G's 1,200 growers as well as from its own business. Andrew Keaney said that as well as rising demand due to Covid-19 it is estimated that \$872 million worth of food is wasted annually in New Zealand, representing 122,500 tonnes sent to landfill.

“We know addressing food insecurity will require everyone, including business, government and community groups, to work together and take collaborative action,” he said.

Fairgrow are helping here too by raising funds to buy produce when it isn't plentiful or readily available, so those in need have greater access throughout the year. Sometimes produce might be left in the ground or on trees as there aren't buyers, so Fairgrow will help out financially, making contributions towards the cost of harvesting and donating some of these crops.

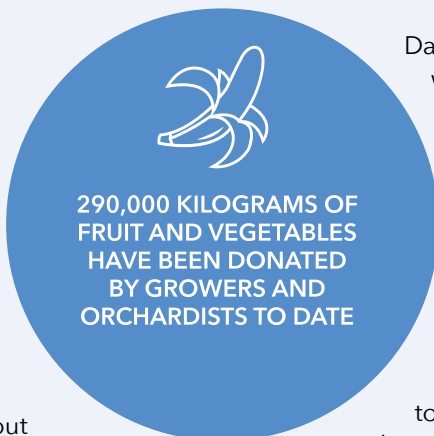
Using its grower network and national fresh produce supply chain, it can match fresh produce supplies with demand from around the country using New Zealand Food Network's connections. Then through its existing infrastructure such as trucks, distribution network and coolstores it will be collected together and distributed to the communities who need it the most.

Peter Aarts from Sundale Farms in Pukekawa, South Auckland, is supporting Fairgrow through regular donations of broccoli, to address what he sees as a critical issue.

“As third generation growers, we take immense pride in growing healthy vegetables,” he said.

“The last thing we want to see is any of this food go to waste.”

To date the 290,000 kilograms of fruit and vegetables donated by growers and orchardists have been made up of a variety of fruit and vegetables including apples, potatoes, carrots, bananas, beetroot, broccoli, lettuce, tomatoes and cucumbers.



290,000 KILOGRAMS OF FRUIT AND VEGETABLES HAVE BEEN DONATED BY GROWERS AND ORCHARDISTS TO DATE

Dargaville's Delta Produce Cooperative which had been donating one tonne of kumara a week split between The Village Community Services Trust in west Auckland, the Auckland City Mission and the Whangarei branch of the Salvation Army, was quick to get on board when approached. They had been providing the vegetables in bags, which was labour intensive, but Fairgrow was able to supply 250kg bins to be filled to go to the City Mission. Delta Produce saw big advantages in its donations being able to be distributed further afield than Auckland by Fairgrow to where food was most required, particularly where the female workforce had been hard hit by Covid-19 closures.

Meanwhile Pukekohe grower Hira Bhana is continuing its donations to The Village Community Services Trust which began in the middle of last year. Woodsy Bhana said more than 20 pallets of vegetables had been collected by the trust or else trucked up to Auckland in its vehicles, with more to come this year.

“We're still donating and we'll continue to help needy people who can't make ends meet,” he said.

Trust chairperson, former All Black Sir Michael Jones, had contacted the company who he knew well through its sponsorship of the Auckland Blues, asking if it could help out as the Covid lockdown took its toll. That demand eased as people got back to work, but then there was another surge with the second lockdown in Auckland, and the trust was well placed to get food discreetly to those who most needed it. ●



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Sulphur	2.00%
Magnesium	0.89%
TRACE ELEMENTS	
Per kg (ppm)	
Iron	<10mg
Boron	1.9mg
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Jeffrey Benfell now helps people into jobs

From helping people make travel plans to getting them into jobs

Speaking from both sides of the table, Jeffrey Benfell shares how he pivoted from travel agent to human resources in the Bay of Plenty kiwifruit industry.

By Casey Vassallo

The primary industry has long provided careers for Kiwis, but it continued to show job stability amid Covid-19 in New Zealand. When jobs in other sectors were hard to come by, it opened its doors for people like Jeffrey Benfell.



“The kiwifruit industry has always been one of the mainstays of the Bay of Plenty area,” Jeffrey says. “I knew there would be at least seasonal work in a packhouse, and I was lucky that it’s worked out to be more than seasonal.”

After 20 years in the travel industry, Jeffrey was made redundant from YOU Travel in Bethlehem, Tauranga, just as the sector started feeling the ripple effects of the pandemic. Turning lemons into lemonade, Jeffrey made a call to a friend who introduced him to the team at Apata. He was promptly hired as a human resources assistant and started work on Monday 23 March 2020, just as the country headed into lockdown Alert Level 3.

Located in Katikati and Te Puke, Apata Group Limited is one of the kiwifruit industry’s largest fully integrated post-harvest operators. It provides both kiwifruit and avocado growers with their pack, coolstore and shipment facilities.

Apata is a far cry from High Street, Kensington, in London where Jeffrey first got into the travel industry working for giant company Trailfinders in 1999.

It was in the United Kingdom he met his wife Jana from the Czech Republic, and they had their two children Nicholas (16) and Amy (14). Wanting a quieter lifestyle for their young family, they headed back to Jeffrey's homeland in 2007, settling in Tauranga.

Jeffrey continued to work as a travel agent in Bethlehem, which always required him to pay close attention to news reports across the world.

“

Working in the kiwifruit industry has brought my feet back to the ground, and I appreciate just how lucky we are in New Zealand

“I remember when the stories [about Covid-19] were first breaking in late October 2019, and I thought, this is going to be a lot worse than a lot of people are thinking,” Jeffrey says. “Once [Covid-19] started spreading, then going into North America and Europe, it looked like only a matter of time before it would hit Australia and then us in New Zealand.”

While a change of career and industry would scare most people, Jeffrey jumped right into the new role, which came at an opportune time.

“[Before being made redundant], I was actually looking for a job that meant I wasn't just achieving something, but I would be doing some good. Working in the kiwifruit industry has brought my feet back to the ground, and I appreciate just how lucky we are in New Zealand.”

After spending the first couple of days in planning for the company to meet the government's social distancing requirements, Apata was back up and running as an essential business.

“It was pretty chaotic, but it was managed chaos, and Apata made sure that everyone was looked after,” Jeffrey says of the family-friendly company. “They alleviated a lot of staff's fears and gave them the option to keep going or step aside.”

As his role covers the full scope of human resources, from recruitment to attendance, Jeffrey was able to transfer many of the skills he'd learnt from his decades in customer service.

“In the travel industry, you have to wear so many different hats and be able to multitask. One person could be wanting to do something in Asia or Africa, and the next person could want a cruise around the Arctic, so you've got to be able to think quick,” he says. “That's also a big thing in human resources - you've got to be able to think on your feet but take the time to give the right answer.”

But it's Jeffrey's love of working with people that makes his new role the perfect fit. “If someone needs a job, or is struggling, we can look after them,” he explains. “There were a few people during the lockdown period who really did need to get into the kiwifruit industry [to support themselves], and we were able to welcome them with open arms.”

From the orchard to the supermarket, kiwifruit requires a variety of skilled workers for its farm to plate journey.

“Almost anyone can work in some capacity in kiwifruit,” Jeffrey explains. “For stackers, it's quite a physically demanding job. For graders, it's mentally focused. And for tray preparation and packers, it takes a lot of skill, thought and speed.”

As Apata specialises in kiwifruit alongside avocados, it also provides sustainable job options in its post-harvest packhouse. “Because we have both, it keeps a lot of our people in very good employment for ten months of the year.”

For Jeffrey, there's plenty to love about his new job; from the genuine people at Apata to the fact he's no longer sitting behind a desk for eight hours a day. Not to mention it involves learning something new every day about food production.

“It's been in the Bay of Plenty for 40 years, but the growth is just incredible,” he says. “In New Zealand, we're fortunate to have our horticulture, viticulture, seafood and forestry. We've got a lot of roles that will be sustaining the country for a long, long time. You can put your stake in the ground, and you know you've got a long-term career if that's what you're looking for.” ●

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The most recent Kellogg cohort who graduated in November 2020 at Lincoln University

Rural leaders: shaping the future of agribusiness

Bright minds seek knowledge and we're lucky that here in New Zealand those bright young minds are popping up in all corners of the country.

By Heather Woods

But paving the future of the agribusiness sector is no easy task. You can't simply train someone in a job and expect stellar results. And it's certainly not a one-person job. Training is a great place to start, but to really drive change and see genuine benefits from the innovations of those bright minds, the best thing you can do - as an employer or an employee - is consider the mentoring, networking and development opportunities of a Rural Leaders programme.

The Kellogg Rural Leadership Programme and the Nuffield NZ Farming Scholarships activate, develop and accelerate leadership qualities. Both programmes are innovative, dynamic, and consistently refined in line with the current climate in the sector - like when a global pandemic strikes. They're flexible and fluid programmes that are always open to new ways of planning and delivering content that benefits the entire agri-business sector.

Growing leadership talent and the entrepreneurial edge

A course is only as good as its leaders. Programme director Scott Champion and academic director Patrick Aldwell are at the controls and that means just one thing - a strong delivery. Scott brings exceptional leadership, strategy and solid facilitation, while Patrick (who has worked with the Kellogg Programme for the last 20 years) works side-by-side with Nuffield Scholarship students helping them develop and refine their research projects. It also makes sense that high calibre speakers from the industry support the programme. People like Ian Proudfoot (global head of business, KPMG), David Nottage (professional trainer and speaker, TORQUE) and Rob Houtt from Team Leader, who is a driving force when it comes to leadership training and generates ringing endorsements for his guidance and teaching style.



Kellogg participants in residential training at Lincoln University

Alumni of these programmes graduate with a concentrated accumulation of learnings. Then once they start to pick strategies apart and digest the load, they acquire a growth mindset that allows them to step up and lead more effectively in their day job. And it is this that gives them the edge over their peers.

Collaboration for innovation

Those in the food and fibre sector will benefit most from the Kellogg Programme, where they will learn to understand themselves and identify their leadership style, including their strengths and weaknesses. Chris Parsons, chief executive for Rural Leaders says “the great thing about Kellogg is becoming part of a 1,000-strong, nationwide alumni of leaders. And as alumni, many go on to have significant influence in their community or sector.” But what also makes the Kellogg Programme a standout is the opportunity to collaborate in-person; a key part of the course is multiple intense residential sessions that foster connection. Covid-19 created obstacles in 2020 with travel and event restrictions but at the end of the day everyone, regardless of which side of the farm gate they’re on, had the opportunity to develop themselves and learn ways to support their communities and businesses.

“
The great thing about Kellogg is becoming part of a 1,000-strong, nationwide alumni of leaders. And as alumni, many go on to have significant influence in their community or sector

The same can be said for the Nuffield Scholarship students. The Nuffield Scholarship is a prestigious programme that runs over 12 months and the experience helps students gain new, valuable insights and ideas to bring



Kellogg participants attending the Beehive on their residential phase in Wellington to understand ‘The Political and Economic Context for Leadership’

back to the New Zealand market, where they’re shared and implemented. And many of those insights positively influence the decisions that affect the entire agri-food sector and our rural communities, driving the industry forward and creating new opportunities, new jobs, utilising more advanced technology and using more sustainable methods to ease the impact on our environment.

Usually 16 weeks of international travel enables complete immersion in global agricultural practices and the context in which they operate, but in 2020 Nuffield Scholarship students worked through a lessons collection activity; a role-defining knowledge quest to capture the insights of innovative and entrepreneurial businesses. And in true Kiwi-style, resilience shone through with students delivering a substantial, insightful report at the November 2020 awards ceremony. They didn’t let Covid-19 win.

A game-changer for personal development

Personal growth is something for which most people naturally strive, so it’s no surprise that testimonials from both programmes are complementary of the learnings. And most realise when they have assimilated the rich accumulation of knowledge and experience, just how much work is involved to really contribute to an evolving industry. But when the programmes come bundled with expert mentoring and the creation of solid life-long friendships, you’re then positioned to leverage an industry-wide network, all the while increasing your confidence to truly lead – and create change.

The team at Rural Leaders have their own mission to be the best at finding, developing, activating and supporting leaders in the primary sector. And they have plans to do it as an internationally benchmarked leadership accelerator and a leading scholar-based think tank. With in-demand alumni and a focus on moving policy and practice forwards, keep an eye out for their centre of excellence for leadership development – it’s guaranteed to be a game-changer. ●



Staff manager Irene Passadore (26), bakery/compliance manager Ellen Watt (25), and administrator/harvest manager Geraldine Watt (24) at Waitaki Orchards in North Otago



Orchard a family affair

Nestled in the Waitaki Valley in North Otago is an orchard owned by the Watt family.

By Helena O'Neill

Waitaki Orchards near Kurow is now run by the eldest three children. Irene (26), Ellen (25), and Geraldine (24) carry out the day-to-day running of the orchard with parents Justin and Julie available for advice and guidance just a short drive away in Duntroon.



For Ellen Watt, horticulture is a busy but rewarding industry to be a part of.

"You get such a huge variety, there's a whole lot of different aspects to it which at times is stressful because you've got so many things that you're trying to juggle.

"You meet a lot of different people as well which is always interesting."

Each season is different with new problems and challenges each year, she says.

"You get more wisdom every year ... and a bit more of an idea of what you're doing."

The Watt family moved from Patumahoe near Auckland to the Waitaki Valley at the end of 2002 and bought the orchard despite having no horticultural experience. Justin was an accountant and Julie worked in a blood-testing laboratory before becoming a stay-at-home mother to their eight children. Justin spent five months learning the ropes before taking over the orchard in May 2003.

Growing up there were always things to do around the orchard, Ellen says, from putting spray guards around the trees or helping to pack fruit.

“**I was 13 when I had my first full season in the packhouse. I've been in the packhouse ever since**”



The Waitaki Orchards shop



Season's best

"I was 13 when I had my first full season in the packhouse. I've been in the packhouse ever since."

The three sisters (Irene, Ellen, and Geraldine) and two brothers (Brian and Duncan) work full-time, while the remaining three siblings, (Alistair, Fergus, and Heather) work part-time at the orchard.

"We watched Mum and Dad doing it growing up, and then when they both ended up with health problems, we stepped up probably a lot earlier than we would have.

"There were certainly a few perks being the bosses' kids, but there was also a bit of responsibility that comes along with it as well."

Irene is the staff manager and shares oversight of the packhouse with Ellen, while Geraldine is the harvest manager and also takes care of administration.

"I'm bakery manager, particularly during the winter, harvesting, responsible for a lot of the compliance, and co-managing the packhouse with my sister Irene," Ellen says.

One of the biggest challenges is keeping on top of everything, particularly compliance which seems to increase each year.

"That role is just getting bigger and bigger ... At times you do feel a bit thinly spread."

With 20 hectares planted, the Watts grow apricots, peaches, plums, nectarines and cherries. The Sundrop apricots are their main crop with the bulk of these exported to Australia and the Middle East.

The orchard also produces a range of jams, chutneys, tarts, gallettes, and sorbets.

"My favourites are the peacharines, they're quite sweet and they're the sort of fruit that you don't tend to eat just one of."

Like most other orchardists and growers, 2020 offered them its own set of challenges.

"The end of last season was pretty messy, with the last of the fruit going out at the same time as lockdown and it

made quite a difference having all the independent stores shut which takes a bit of pressure off the supermarkets. It's a lot of fruit that didn't quite get the prices that it normally would."

"We had six ladies from Vanuatu and they all got trapped here basically. They ended up being our pruning crew, so that was really helpful having them here. We would have been pretty stuck without them."

“One of the biggest challenges is keeping on top of everything, particularly compliance which seems to increase each year

Three of the women remain working at the orchard while the others returned home in October, a few months later than their planned July return.

In 2019, Ellen won the Central Otago Young Fruitgrower of the Year title. She encourages other young people in horticulture to give it a go.

"It's a good way to network. I think that as an industry they're very encouraging in the competition. Everyone is there to support you, which is a really cool thing to see and be a part of."

Outside of the orchard, Ellen is a firefighter with the Kurow Volunteer Fire Brigade and a keen member of the Oamaru Toastmasters Club where she is currently serving as president.

"I started that when I was preparing for the national [Young Fruitgrower of the Year] competition and then we all got given a \$1,000 grant to go towards professional development and mine is my Toastmasters fees.

"Certainly, personally and professionally that has been a good thing for me." ●



Shanaye Fox amongst the kiwifruit at Orangewood



Young graduate focuses on big picture

Studying Agriculture Commerce at Massey University has given Shanaye Fox a lot more than her degree.

By Wendy Laurenson

It has expanded her horizons, offered her the opportunity to take part in the International Horticulture Immersion Programme, and fuelled her passion for a career in the kiwifruit industry. "I now see how broad and varied the work possibilities are in horticulture - from production to post-harvest, marketing, science, business and research."

When Shanaye finished her degree majoring in AgriBusiness near the end of last year, she saw an ad for a summer intern at Orangewood Ltd, a post-harvest and orchard management company in Kerikeri. "I

had grown up in Levin then studied in Palmerston North and was ready to learn something new in a new region, so I applied, got accepted and have been working here since then. I've now been offered a permanent job here as a packhouse and orchard rotated intern, which means I get to work in all aspects of the business. This is a perfect fit for my degree and it's really exciting to be starting my career journey."

It is the kiwifruit supply chain that particularly interests Shanaye. "Kiwifruit is New Zealand's biggest horticulture export with a massive

network of markets and huge growth potential as we secure trade access to Asian markets and as the red variety comes on stream. In our second year at Massey, a small group of mostly horticulture students were lucky enough to be selected for the International Horticulture Immersion Programme where we travelled to the Netherlands, Belgium and South Korea. It was that trip that opened my eyes to the scope of horticulture and New Zealand's global role in it. The experiences included visiting the World Horti Centre (in the Netherlands), discovering vertical gardening, visiting ports and offices



Shanaye Fox checking on this season's kiwifruit

where Zespri was unloading kiwifruit, and seeing supermarkets selling our kiwifruit in South Korea."

Before that international trip, Shanaye had also been included in a uni study trip to Tauranga orchards, packhouses and Zespri offices, and she had done practical work at Massey monitoring kiwifruit and collecting data. But it was taking agriculture/horticulture level 1 at school that first fuelled Shanaye's passion for the plant world. "It introduced me to the hands-on practicality of the natural world, and it built on the time I had previously worked in a plant production nursery and got a taste of the business side of horticulture."

Already in her first weeks at her job at Orangewood, Shanaye has worked thinning kiwifruit, packing avocados, doing export load-outs and documentation, and EDI (Electronic Data Inventory). "The best part of the work so far has been the learning and talking with the managers and the boss as we work together or at tea breaks. I have yet to experience a kiwifruit harvest and I realise it will be a challenge because it's so full on, but that's also exciting because it's how you learn."

Shanaye is looking forward to working across the full spectrum of Orangewood's business. "I'm keen to become familiar with all facets of the kiwifruit business and learn how the detail dovetails with the big picture. At the end of that rotation time I should also be much more valuable to the company. The whole kiwifruit supply chain fascinates me because it covers everything from pre and

post-harvest through to export, so my dream career is in this aspect of horticulture."

At Massey Shanaye was part of a club run by students called the Massey Horticulture Society. "The club helped organise study trips, engage students and was an education-industry link. Some of my friends are still there and I'm keen to maintain contact with them and also with other graduates of my year as they move into their horticulture careers all over the country. In my last year at uni I was inspired by what other recent graduates were doing so I want to help pass that on to others."

Shanaye wants other young people to know that there is so much more to horticulture than production. "Horticulture is a big money industry that involves the supply chain, business, science, post-harvest and research. For a start I'd love to encourage more people back home in Horowhenua to look into horticulture as a career rather than simply as production level market gardening. Because I've been lucky enough to be exposed to the bigger context of the whole horticulture industry, I'm keen to help show others what interesting options are available."

"Healthy food production is more important than ever now, so New Zealand horticulture is entering a whole new era of growth and possibility that also includes the environmental and social aspects that young people feel passionate about. I want to encourage them to step up and out." ●



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Launching the interns programme at Wairoa facility The Limery are (rear left to right) intern supervisors Leah Puncheon and Julia Howard and Limery co-founder Dianne Downey, and (front) interns Samson Tangiora (left) and Ethan Fortune



Limery tapping into 'gold mine' of local youth

Five years ago a couple set up The Limery in Wairoa to establish a value-added business in a town that has seen its share of economic hard knocks.

By Kristine Walsh

Now Dianne Downey and Paul Hyslop have gone a step further, founding an intern programme that over the course of the year, will see a dozen young people experience every aspect of their operation.

And if they happen to get a couple of apprentices out of it themselves, then all the better.

"You don't come to a town like Wairoa without contributing something to the community," Dianne says. "Jobs and training are always important, so this is our contribution."

Located near the mouth of the Wairoa River, just a couple of minutes from town, The Limery is fully-integrated with its Kopu Road Orchard of 4,000 lime trees complemented by a packhouse and on-site juicing facility with a juicing machine, chillers and freezers, and labelling facilities.

Between them and their partner growers they sell both whole fruit and high-quality lime and lemon juice products, which means there is a lot for young players to learn.

With a 2021 schedule of four intakes of three interns - all aged 16 to 24 and each doing three months on site - the Te Rau Haumako programme takes them through all aspects of the business from the orchard and packhouse to the juicing room, labelling, sales and marketing.

“**Te Rau Haumako = "To bring great numbers of people together, to be at one with the land and plants, leading to sustainable prosperity for all."**



Ethan Fortune (23) moved to Wairoa in 2019 and spent a couple of years upskilling and in short-term work contracts. Referred by Wairoa Young Achievers Trust (WYAT), he went to The Limery's intern open day and says he knew it was for him. "I loved the energy, it was so positive, and now that I'm here I've been learning heaps," he said one week into his three-month placement. Ethan is confident the knowledge and experience he gains at The Limery will serve him well. "I have lots of dreams and goals and see this as a great stepping stone."

To find them, they advertised on social media, held an open day and liaised with the local Wairoa Young Achievers Trust (WYAT) which, Dianne says, has been invaluable.

"We just thought that since we have all this knowledge and experience, why not share it with young people to help open their minds and perhaps give them some direction.

"We need youth in our industry and are already amazed at the enthusiasm and work ethic of our first intake. Young people are a gold mine in terms of finding good, raw talent and here they can see opportunities they would not be exposed to anywhere else."

The first intake has started slowly with three being reduced to two when one of the applicants withdrew.

"But that's good because it is actually a learning experience for us, too," says Dianne. "We're looking for feedback from our interns to make sure every experience is a good one."

While Dianne and Paul take the interns through the practical side of running the business, the theory side - like health and safety, or making up a curriculum vitae - is taken care of by orchard development supervisor

Julia Howard and orchard development administrator Leah Puncheon. The pair will also follow up with career guidance, job-seeking and pastoral support for 12 months after an internship ends.

Julia brings her experience as a secondary school teacher to the role, as well as a period working at The Limery when she stepped back from education to care for her young children.

"The opportunity to work with young people again was too good to pass up," says Julia, whose role - along with the interns' safety gear - is funded through the region's Provincial Development Unit. "And our first intake have been amazing, they really hit the ground running."

NEW ZEALAND FRUITGROWERS' CHARITABLE TRUST



The New Zealand Fruitgrowers' Charitable Trust is offering 2 scholarships for the 2021 academic year.

\$10,000 POSTGRADUATE SCHOLARSHIP

The New Zealand Fruitgrowers' Charitable Trust is offering a \$10,000 scholarship. The scholarship is available to people undertaking postgraduate study specifically related to the fruit growing industry.

Application process

A completed application and references must be submitted to HortNZ by 5pm, 20 March 2021. The forms are available on the HortNZ website: www.hortnz.co.nz/scholarships.

Please email your completed forms to schols@hortnz.co.nz. For more information, you can phone Jacqui Stalknecht on (04) 494 9978.

\$5,000 LINCOLN UNIVERSITY DIPLOMA SCHOLARSHIP

The New Zealand Fruitgrowers' Charitable Trust is offering a \$5,000 scholarship in 2021. The scholarship is available to people undertaking their first year of study towards a Diploma in Horticulture or a Diploma in Horticultural Management at Lincoln University.

The annual value of the scholarship shall be a maximum of \$5,000 towards tuition fees or living expenses. \$2,500 will be paid out in Semester 1 and on condition that all Semester 1 courses are successfully completed a second \$2,500 will be paid out in Semester 2.

Application process

Applications for this scholarship close on 1 March 2021.

Further information and application forms are available from the Lincoln University website: www.lincoln.ac.nz/scholarships

Please note that the Selection Teams for both scholarships will be looking for:

- Commitment to the fruit growing industry.
- Potential contribution to the fruit growing industry.
- Past achievements.
- Individual approach, qualities and skills.
- Referees' comments.





Born and bred in Wairoa, Samson Tangiora (Rongomaiwahine, 20) already had experience in horticulture and retail when he returned to Wairoa to help care for his grandfather. Also referred by WYAT, Samson signed up the day after The Limery's intern open day, and in his first week had enjoyed a "mind-blowing" variety of learning experiences. With ambitions to one day run his own business, Samson believes the cross-section of work and learning will be invaluable in the future. "There's so much to learn but I am keen to get everything I can out of it," he says.

LESSONS LEARNED FROM COVID-19 IMPACT

In addition to their newly-minted interns programme, Dianna Downey and Paul Hyslop have already had a big impact on the region they now call home.

In the last couple of years the workforce at their four-hectare, 4,000-tree lime orchard and integrated juicing site has gone from two to eight.

They have recently upgraded with an Italian juicing machine that will take their through-put from 3,000 to 15,000 pieces of fruit an hour.

They have increased their pool of local partner lime growers from 11 to 13, and when they can, buy in an extra half-tonne of lemons a week.

And they have expanded their reach by adding yet another lime grower, Te Rimu Trust at Te Araroa, on the East Cape.

"We always wanted to work with Māori to help whānau gain economic strength from land that might have been unused for many decades," Dianne Downey says.

"At Te Araroa it was just a matter of working with them to ensure all owners were in agreement and that they were keen to see the benefits for everyone. They have already planted 2,000 trees on their 25 hectares and that is going to create a lot of opportunities going forward."

But while The Limery team is always happy to help, they've had their own problems.

The onset of the Covid-19 pandemic dried up their regular pool of French interns; delayed the arrival of part of their new juicer; and with the hospitality industry a big part of their client base, cost them dearly in the loss of whole fruit.

"We also lost our local pickers, as many live with older whānau and were unsure if they should be going to work," Dianne says. "So harvest time brought a punishing work programme for us and any family members we could get to pitch in."

On the upside, they learned a lesson and tweaked their operation from sending 60% of their production out in whole fruit and 40% in juice, to doing 40% whole fruit and 60% juice, which being pasteurised (but not preservatives), has a long life.

"And during lockdown, of all times, we sent off our first export order of juice to Australia," Dianne says. "They really loved the flavour profile of our product so that's an exciting new market for us to build on." ●

The interns don't get paid for their three-month stint, receiving a Jobseekers income to help pay the bills, but the first intake apprentices say it would never occur to them not to go to work.

"We work with them to see what their strengths are, what roles might suit them, and go from there," Dianne Downey says. "We try to help them find their passion and that's what gets them out of bed in the morning."

Whatever strengths the interns identify, and whether or not they stand out enough to be offered a permanent role at The Limery, there will be plenty of work for them in and around Wairoa.

"Many of our young people have very strong ties to the community and a feeling that they want to make a contribution, so they need opportunities close to home," Dianne says.

"On the other hand, a lot of our growers also have day jobs so there will always be work with them, and that is only going to expand over the years.

"I believe everybody has cherishable qualities that just need to be uncovered so they can make the best of their lives." ●



Emma Simpson sees horticulture offering career challenges and opportunities



Ethical orcharding – sustainability challenges ahead

Sustainability, ethical orcharding and social compliance are “big ideas” which face today’s horticultural industry, offering challenges and opportunities for those who pursue careers within it, says Emma Simpson, market access advisor with Zespri.

By Elaine Fisher

Emma gained insight into some of those challenges when she was selected as one of 11 students to take part in the three-week inaugural International Horticulture Immersion Programme (IHIP) in July 2019.

IHIP is a unique, experiential professional development programme that provides a competitively selected group of exceptional university students and recent graduates, who possess high leadership potential, with a complete immersion into selected international horticultural markets and exposure to the complete value chains supporting them.

The group of students from both Massey and Lincoln universities represented the entire value chain from plant science through to engineering and food marketing. Two young industry professionals participated, who along with the four tour leaders, mentored the younger students.

During the programme, participants spent five days in each of the Netherlands, Belgium and South Korea.

“The trip was amazing and opened my eyes to so many different aspects of horticulture that I didn’t know existed,” says Emma.

“One of the standouts for me was how in Europe horticulture and universities are working together to enable and encourage young people to enter the industry. I’d like to see more of this happening in New Zealand.”

Emma was also impressed at how, in Europe, industries as diverse as data processing and greenhouse operations were collaborating in areas of mutual benefit. “In one case the energy generated by computers in a big data centre was used for heating and cooling water in greenhouses.



Students take part in the three-week inaugural International Horticulture Immersion Programme (IHIP) in July 2019

“It was interesting to see the utilisation by the greenhouses of an external factor to reduce the use of a primary input like electricity.”

During the programme, participants followed value chains for various New Zealand and international horticultural products. As part of this, they were exposed to all of the steps along the value chain from world-leading genetics and plant breeding, through production, post-harvest, distribution, and logistics, export and import, to wholesale, retailing and international consumers.

Emma says the trip was non-stop, with full days visiting educational providers, commercial greenhouses, orchards, and technology companies. “Every day we met with experts who explained their business to us. It was fascinating to learn what industries in other countries are doing and compare that with what we do here in New Zealand. It was a chance to identify areas where we could improve and those in which we do better than the rest of the world.”

Being selected for the IHIP programme is not the first time Emma has been recognised as an outstanding young woman in the horticultural industry.

In 2017, when she was about to embark on studies for a Bachelor of AgriScience degree majoring in horticulture at Massey University, Emma was one of six students awarded a Ballance Agri-Nutrients tertiary study scholarship.

In 2019 Emma won the Zespri Award for Excellence in Horticulture at Massey. At the time Emma said: “Throughout the duration of my degree Zespri has provided me with many valuable experiences. Summer

work placements, international experience and in-class visits have greatly expanded my knowledge and love for the New Zealand kiwifruit industry. These experiences and connections have now provided me with the awesome opportunity to work for Zespri after graduation and I am looking forward to working within a dynamic and innovative company like Zespri.”

“**One of the standouts for me was how in Europe horticulture and universities are working together to enable and encourage young people to enter the industry**

Grateful that she was able to take part in the IHIP trip, and had completed her university studies before Covid-19 hit, “turning the world upside down”, Emma says the epidemic did impact on her first full year of employment with Zespri.

“Part of my role in market access is to work closely with the Zespri Global Supply team in Europe but plans for me to travel to support them in 2020 were derailed by Covid.

“However, that did give me the opportunity to learn more about the role. In fact, apart from working from home, it was pretty much business as usual for most New Zealand Zespri staff during lockdown.

“That experience has led Zespri to allow staff more work flexibility and while we do come into the office, we are also able to work from home.”



I was inspired to get into horticulture by my teacher Helen McKoy at Bethlehem College

Market access, says Emma, is a highly complex field. “It covers so much I don’t think I know it completely yet. It includes looking at what our customers require or want us to implement and investigating if those ideas can fit into the supply chain from orchard to market.

“It’s a fine art balancing customer and industry requirements. We don’t want to introduce something which will not work for growers or post-harvest.”

Then there are regulations around residue limits and pests, export documentation and the requirements of each country into which Zespri exports kiwifruit. “Market access can be very political at times.”

Emma grew up in the Bay of Plenty and while her parents have “a few avocado trees”, she always knew she wanted to work in the kiwifruit industry. “I was inspired to get into horticulture by my teacher Helen McKoy at Bethlehem College who taught agriculture and horticulture. I am very grateful to her as I would not be where I am today without her instilling in me a passion for the horticultural industry.”

Emma has experienced orchard work straight out of school and has worked with both Apata Ltd and Zespri as a summer student during her university studies.

“I always knew I wanted to work in the kiwifruit industry but didn’t know quite where. The opportunity to work in market access came a little from left field but I enjoy it a lot. It gives me a wide experience of different areas of the industry and is a great starting point to learn more about it.”

Outside of work Emma likes playing football, swimming at the beach, hanging out with friends, reading, and tending her houseplants.

IHIP is an Industry-driven collaborative venture supported by AGMARDT, NZ Apples and Pears, Zespri International, Massey University, Lincoln University, ANZ Bank, Food HQ, AgFirst, T&G Global, Farmlands, Potatoes NZ, Horticulture Capability Group, and Global HQ. ●

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Jack's grandfather kicked off his passion



Passion for horticulture in the genes

Massey University Horticulture Science Master's student, Jack Hosking, says he inherited his passion for growing from his grandfather.

By Andrew Bristol

Although Jack was brought up in Auckland rather distant from the crop growing areas of the country, he says, "I have always been interested in nature, the outdoors and food production, and the lifestyle seems a lot better than working in town and living a big city life."

"My grandfather kicked off my passion. He had a quarter-acre section and grew heaps of fruit trees, vegetables and roses. My grandfather was passionate about his land, garden and soil, and his passion has been passed onto me."

At Macleans College in Howick, Jack was the only person in his year to go on to study horticulture,



and perhaps the only person ever to take up horticulture after college.

He adds that the subjects he took in Year 13 for University Entrance (Statistics, English, Geography, Chemistry and Biology) "gave me a good background for the horticulture degree that I have just finished." And this year, he is starting a two-year Master of Horticulture Science.

A career in horticulture attracts him because as he puts it, "There's a lot of great stuff going on as the industry develops ways to meet challenges."

"In terms of challenges, labour has to be the biggest one in the short term and it will be interesting to see how that turns out this year. There's also a lot of corporatisation going on in the supply chain, with a move away from family-focused businesses to more corporate, even global companies.

"I feel plant variety rights are going to be big as they seem to be the way to build a profitable business, like Zespri. With climate change and warmer winters, we could see crops like kiwifruit moving southward or inland to Taranaki, Central Hawke's Bay or North Canterbury. Otherwise, we will have to put up with lower yields."

Jack is also attracted to the lifestyle and the people in the horticulture industry. "You get to live in nice places and the people are down-to-earth, great to be around and good role models." Horticulture is a viable career for the future because we will always need to feed the people of New Zealand - and the world.

“

With climate change and warmer winters, we could see crops like kiwifruit moving southward or inland to Taranaki, Central Hawke's Bay or North Canterbury. Otherwise, we will have to put up with lower yields

"Last year, I heard the Minister of Agriculture say that New Zealand needs to be the 'Swiss watch of the global food market', producing the best fruit, vegetables and other food, to export and for ourselves. That's really worth being part of," Jack says.

He finds Massey a really good place to study horticulture. "It's got a lot of resources, for example, the plant growth unit and post-harvest laboratory. And the teaching staff are a good team." ●

BRIDGING THE GAP

One of Jack's supervisors and mentors is Andrew East, Professor of Postharvest Engineering and Director of the Massey AgriFood (MAF) Digital Laboratory.



Andrew sees his role as bridging the gap between traditional horticulture production in New Zealand and new technology.

"Just about everything is possible at the moment and there's often a proliferation of potential solutions for any one problem. However, the horticulture industry has very small margins so it is no use coming up with a solution that will cost more than the financial gain it could generate."

One of the other issues is data. How to generate and label it, which is the hardest thing. Who owns the data - the grower? And then there are problems around data interoperability.

Andrew talks of the Massey AgriFood (MAF) Digital Laboratory in practical terms as a "group of people getting stuff done".

"We're bringing together - in the same building - people with backgrounds in agricultural science, robotics and mechanical engineering to develop cost effective solutions to the challenges facing horticulture, farming and forestry in New Zealand."



To find out more about Andrew and the MAF Digital Laboratory, visit their website: www.mafdigitallab.co.nz ●

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Hannah's task is to add a vegan choice to the range



Looking at the future

For 10 weeks, food technology graduate Hannah Davis has the task of creating a vegan ice cream for Tasman Bay Food Company's Dr Feelgood range.

By Anne Hardie

It's part of the government's Callaghan Innovation programme that funds research and development internships for businesses to take on students during their summer break.

For Hannah, the ice cream project at the Brightwater-based business is the next step after completing a Bachelor of Food Technology (Hons) at Massey University, majoring in product development, before seeking a career centred around horticulture products.

For the vegan ice cream, she's hoping to include local boysenberries, as the company is keen on collaboration with local businesses. Organic coconut sugar is likely to feature and the end product will have completely compostable packaging that is quirky and appeals to its target market.

For the past two summers Hannah worked for The Apple Press in Hawke's Bay where she took up a year-long project to design equipment that could extend a product range. Designing equipment in the food industry and creating vegan ice cream shows the diversity in food technology and the possibilities ahead of her.

She says the internships are a great way for budding food technologists to gain experience and an opportunity for businesses to glean fresh ideas from students for their research and development.

She was one of just 12 Massey food technology graduates in her year because too few high school students know



much about it as a career. Yet she says the world needs more food technologists to meet future demand for not just food products, but also environmental aspects such as packaging.

“Our generation is going to be the generation of change, in packaging, understanding food and what goes into food. There’s going to be a lot of change around additives and preservatives, health and wellness-based food in the future. We’re much more aware of what is going on in our food.”

“We’re picking locally-based products over cheaper products and our generation is prepared to pay a premium for our food. A lot of students are focused on keeping New Zealand going by buying locally.”

Packaging is a huge issue going forward and Hannah says both consumers and food companies need to change.

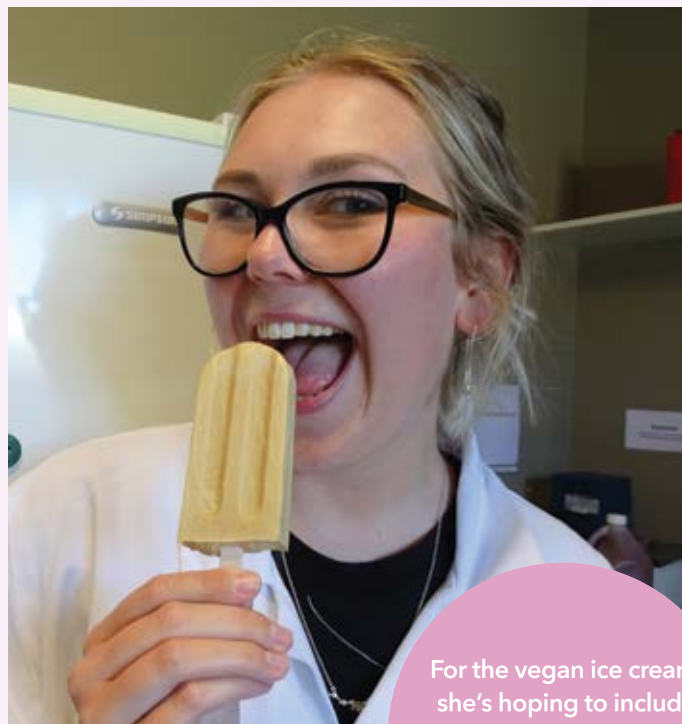
“Consumers need to become more aware of what biodegradable packaging means because currently most of it goes back into landfill. So they’re basically just spending more on cutting down trees to make biodegradable packaging. I think companies need to focus on single plastics rather than multiple plastics. There are also things like edible films to go on fruit, where fruit can be put through a bath that applies an edible film which also extends the shelf life of some products. That area could increase in the future, but it is a cost-benefit thing.”

“**Our generation is going to be the generation of change, in packaging, understanding food and what goes into food. There’s going to be a lot of change around additives and preservatives, health and wellness-based food in the future. We’re much more aware of what is going on in our food.**”

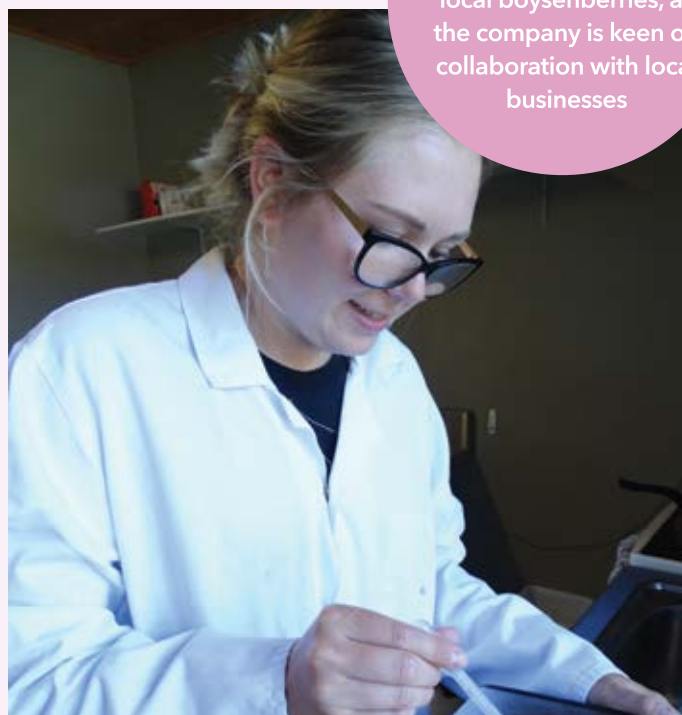
Hannah knew in her Year 12 at school that she wanted to follow a career path in food technology because it combines science and maths, as well as creativity and business. The degree required chemistry, physics and the three maths courses at school, and when her Hawke’s Bay school didn’t offer all three maths courses, she studied complex numbers externally.

Her first year at university included the same papers as a first-year engineering degree and the following years focused more on the food, with the fourth compulsory year completing a year-long project.

“The first year is heavy theory, but you need those basics before you can do fun things like create new food.”



For the vegan ice cream, she’s hoping to include local boysenberries, as the company is keen on collaboration with local businesses



Food technologist Hannah Davis gets a taste of things to come

During her training, she was part of the Aotearoa Horticulture Immersion Programme (AHIP) study trip around New Zealand’s major horticulture growing regions to broaden her horizons and knowledge of the industry. She says the experience opened her eyes to the possibilities for food technologists within the industry.

“I think horticulture is a massive part of New Zealand’s makeup and it is going to grow. So I would love to stay in the horticulture industry.” ●



Sam Shergold



The tale of a young avocado grower

Sam Shergold is an ocean lover. It's his self-confessed second home and where he's been successful in the world of surf lifesaving through Mount Maunganui Life Guard Service. And it taught him how to challenge himself and also, we suspect, self-discipline.

By Heather Woods

With lives in his hands and a passion for life saving sports, he has excelled. He also took on the World Paddle Board Championships - which he won. It was in this exhilarating world that he met his mentor, Tony Bradley, who guided him into a career at Aongatete Avocados. Tony also gave him a nudge to complete the Kellogg Rural Leadership Programme where he recently became an alumni. Sam spoke to us about what learned from the programme and how he views the lie of the land as we navigate 2021.

Making it in an avocado world

Completing a Bachelor of Business at the University of Waikato, and building up a solid background in planning and executing charity events at Tauranga Te Papa Rotary in a fundraising capacity, the world of avocados was



but a blip on Sam's future radar. But like a duck to water, Sam makes easy work of the daily grind. Aongatete Avocados manage over 80 avocado orchards producing fruit for both the domestic and export markets. They take care of everything from planting orchards to finding land for growers, orchard management, picking the fruit, packhouse management and shipping produce to supermarkets. They cover the entire supply chain process and are now looking to grow that supply chain direct to customers via their online store 'Avo Orchard'.

And it's Sam's job to travel between orchards and make sure the growers are happy. Listening to the feedback they provide and hearing their problems is critical for success, and for forward planning three, six and twelve months ahead. Client services is a critical role.




Winning the World Paddle Board Championships



Sam Shergold on the job




50-60% of the Aongatete harvest left the country via an export packhouse

Aongatete avos

As an industry, right now is a great time to be in avocados. It's been a good year with plenty of fruit on the trees and the local market price has been high (and competitive). There's also been an increased demand from the Australian market where supply has been an issue; 50-60% of the Aongatete harvest left the country via an export packhouse. But now more than ever, relationships across the board need to be strengthened, in their Asian market in particular. While not unique to avocados, the lack of flights and challenges of transporting fruit long distances means you need to be on top of your game. It's make or break time in 2021, and the outcome depends on the execution of future-proofing plans.

Survival planning

It's a good thing that Sam took on the Kellogg Rural Leadership programme when he did. The opportunity to upskill himself and focus on personal development was a genuine upside, but Sam's key takeaways from the learning were the focus on policy and government and how each applies to horticulture, and the intense networking between course attendees (plus the alumni network afterwards). Conversations were naturally created based on the mutual desire for knowledge and learning, and that has carried across into daily life and orchard management. And it was timely, given the current world climate, that labour concerns formed the basis of Sam's final project report. There's plenty of talk in the industry about labour, visa extensions and the general question seems to be how will it all play out?

Sam's gut feeling is that it will all fall into place and a solid labour strategy is achievable, but there's plenty of planning to do before implementation. And everyone's eyes will be on the kiwifruit workforce shortly to enter the country. Because when it comes to labour, there's a vast difference in work ethic between international labour (migrants who come here to work hard and earn a living) and local labour (who some say see the available jobs as not for them). Backpackers are happy to take on the work to earn a wage and then at season's end take off on their travels around the country, and Sam says they are able to make use of university students who have the time (and need the money) in between study blocks. In a normal season, they'd have a team of about 50 people, 20 of whom would be fruit pickers. This year they have only six workers from overseas.

“
Sam's gut feeling is that it will all fall into place and a solid labour strategy is achievable

So Sam and the team at Aongatete Avocados have only one choice. They must take a good hard look at how things are right now and assume for just a minute, that things won't change for the next few years. If Covid-19 sticks around and wreaks havoc with our borders it will be devastating for many, but smart planning now is critical. What are the options? What's sustainable and scalable? How will they manage labour? In this Covid-19 world, how will they survive? ●

AVO UPDATE



Living with uncertainty

By Jen Scoular : Chief Executive, NZ Avocado



Watching the news of a world captured by a global pandemic doubles my strength of feeling for New Zealand. How wonderful it felt to celebrate Christmas and New Year without restriction. How good it felt to be able to go off to the beach or campgrounds, or meet with friends.

We spent much of 2020 being nervous about planning activity, but talking to my friends and colleagues, we all got out and about very happily over the much-needed break. Many of our growers and supply chain providers continued to harvest, pack and market avocados to ensure a ready supply for consumers in New Zealand and our export markets.

Our exporters continue to face very challenging shipping conditions, with changes in schedules, delays, and very late notice of changes even after the ship has departed New Zealand all very familiar issues.

In New Zealand we harvest avocados for export from July through to late January, and for the New Zealand market we harvest throughout the whole the year, as avocados don't store much longer than a few weeks. So we are not as affected by the severe shortage of seasonal employee workers as our friends in apples, summerfruit and kiwifruit will be. We do utilise seasonal labour but are currently managing okay in our harvest and packhouse operations.

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Our exporters continue to face very challenging shipping conditions, with changes in schedules, delays, and very late notice of changes

The final volume for this year is likely to be slightly ahead of last year, and with excellent returns out of the Australian market where domestic production was low, opening up demand for avocados from New Zealand. Avocados, like most fresh fruit, are benefitting globally from consumers' increased interest in good health, with 19 vitamins and nutrients which support a healthy immune system.

“

Avocado fruit set for the 2021-22 season is looking good, although orchards in higher areas may have suffered from the sudden cool period in late spring

Avocado fruit set for the 2021-22 season is looking good, although orchards in higher areas may have suffered from the sudden cool period in late spring, which does make our very valuable bees less likely to do their work on pollination.

I strongly support the need to continue to use the Covid-19 contact tracer app. It is not hard and it only takes a few seconds. It is a tool New Zealand has to hand that will help mitigate an issue if one arises. As Nike says, Just Do It. ●



APPLES & PEARS UPDATE



Need for workers on hail affected orchards greater than ever



By Alan Pollard : Chief Executive, NZ Apples & Pears

A significant hailstorm struck the Nelson/Tasman region, and parts of Central Otago on Boxing Day 2020. In Nelson, the Motueka and Moutere areas were particularly affected.

This was no ordinary event. On top of Covid-19 and a labour shortage, it just adds another level of stress and anxiety for growers and their families, and for staff and their families.

While it may seem logical to assume that the demand for labour, both permanent and seasonal, will be less as a result of the storm, the opposite is true. The storm creates its own complexities, with a huge amount of work now needed to remove the damaged fruit from the trees, protect the damaged trees from disease risk, and do whatever is possible to salvage the orchards and ensure a crop for next season. To do this, our existing workforce, whether on the orchard or in support roles, is critical.

The best option for workers whose employers have been affected by the hail is for them to stay where they are and contribute to ensuring that those businesses can recover. The whole community depends on this.

NZ Apples & Pears is developing a platform to match workers who have some availability with growers who need additional help. Along with other horticulture leaders, we have approached the government to explore options for support.

We're committed to doing all we can to ensure that the workforce remains intact and engaged, and to ensure that businesses are best placed to recover from this event and continue to contribute to their local communities. In other adverse events the government has offered financial support, so we are keen to work with them to see what sort of relief package we can put together.

“

We're committed to doing all we can to ensure that the workforce remains intact and engaged, and to ensure that businesses are best placed to recover from this event and continue to contribute to their local communities

The Nelson region is responsible for 25% of the national apple crop, while Central Otago contributes 4%. The loss of any part of that crop is material. However, with more than 70% of the crop grown in other regions, this production along with what will still be produced in Nelson and Central Otago will ensure that domestic and global customers will still be able to enjoy New Zealand apples this coming season. ●



SUMMERFRUIT UPDATE



Rain damaged cherries

Seasonal Update

The start of 2021 has sadly not provided the clean break from Covid-19 that the summerfruit industry was hoping for.

By Richard Palmer : Chief Executive, Summerfruit NZ



Tracey at Lakes District job fair

Despite a promising crop, a great turnout of seasonal staff for harvest, and airfreight in place for cherry exports, the devastating rain event at New Year in Central Otago has had a significant effect on this season's cherry and apricot crops. The rain event was the worst that many in the region have ever seen, and at the peak of cherry harvest had a drastic effect on the crop, with an estimated 50% of the crop lost. Apricots have also been affected with some reports of 50% loss also. The weather improved with hot days mid-month allowing for harvest to recommence. It is unfortunate that the many New Zealanders who turned out to support the harvest have had the season cut short, although the new Central Otago seasonal labour coordinator, Tracey Mansfield, has worked quickly to shift workers to areas of shortage and into the vineyards a bit earlier.

Despite the weather, we have continued to export supported by airfreight schedules, many underpinned by the government's International Air Freight Capacity scheme. Importantly, Ministry of Transport officials reacted quickly to ensure capacity for cherry exports was maintained in the early New Year period, to avoid a potential double whammy to growers and exporters.

“

The domestic season has gone well with strong sales volume and pricing prior to Christmas

The domestic season has gone well with strong sales volume and pricing prior to Christmas. Overall fruit quality has been very good with a very positive uptake from consumers. Growers have responded well to the consistent message from retailers and wholesalers about the need to supply good quality fruit.

There are still a few months to go and much fruit to be picked, with the February to March labour situation still looking uncertain. To support the Central Otago region a seasonal labour coordinator was appointed last year to assist growers across the region in all sectors. Tracey Mansfield has hit the ground running and recently rolled out the Handpicked Crew Card, a discount card available for employers to give to their seasonal staff. This card has been incredibly well supported by local businesses offering deals to harvest staff.



For growers who need support with placing seasonal staff, or have not yet sought out their Crew Cards, Tracey can be contacted at seasonalcoordinator@summerfruitnz.co.nz

2021 Summerfruit NZ Progress

The events of 2020 and the preparation for this season put the Summerfruit NZ review somewhat into the background. However, contemporary events have reinforced the need for industry representatives to be well informed about their sectors and their needs; to be well connected to decision-makers; and to have capacity and relationships to work together with other groups to achieve for growers. The collective actions of the horticulture industry over the past nine months have demonstrated the value of working together for common outcomes.

Whilst sectoral nuance is important, the efficiency and effectiveness of our collaboration has delivered for growers, despite the immense challenges we face. The single-mindedness with which we have tackled issues of Covid-19 essential business operations, seasonal logistics, post-Covid recovery strategy and seasonal labour, to name but a few, led predominantly under the pan-sectoral Horticulture New Zealand umbrella, have given our sectors the best possible chance to succeed in these difficult times.



In the second quarter of 2021 we expect to see the appointment of a new permanent chief executive to take forward the Summerfruit NZ collaborative and collective approach to servicing the needs and expectations of our members. This was a key outcome from the sector review: to build scale, efficiency and effectiveness. Already we have undertaken some internal restructuring, and following this Carolena Swaneveld finished at Summerfruit NZ just prior to Christmas. Juan Rosales recently left Summerfruit NZ to take on a new role at the Ministry for Primary Industries in the biosecurity readiness and response team. Thus Juan continues the work he has been doing for Summerfruit NZ, albeit in different guise, with invaluable experience from the industry perspective. I thank both Juan and Carolena for their service to Summerfruit NZ and our growers, packers and exporters.

“

The collective actions of the horticulture industry over the past nine months have demonstrated the value of working together for common outcomes

Conference 2021

The Summerfruit NZ conference is back again in 2021, and will be held in Napier, 9-10 June at the Napier Conference Centre.



Anyone wanting to register their interest as an exhibitor or sponsor should contact our conference organiser, Karen McLean from Conference Makers Ltd, by email to karen@cml.net.nz

TECHNICAL

THE LATEST INNOVATIONS AND IMPROVEMENTS

Biosecurity

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1 From apples to bark chips - block removed mid-season

Labour crisis 2021

The Covid-19 induced labour shortage looks set to cost the apple industry in the order of \$100 million this harvest season.

By Jack Hughes : Fruition Horticulture

However, this may only be the tip of the iceberg as the flow-on effects of this financial hit kick in. In this article, we consider the industry response to this unfolding situation and recent advice being provided to policy makers.

Definitive information to help predict what might happen isn't readily available. A 2020 New Zealand Institute of Economic Research (NZIER) report to the NZ Productivity Commission *Could do better: Migration and New Zealand's frontier firms* provides some employment data to help quantify the situation (<https://nzier.org.nz/publication/could-do-better-migration-and-new-zealands-frontier-firms>).

This report estimates that the total horticultural workforce in New Zealand was around 60,000 in 2016 and that just over half of these workers were New Zealanders. The industry has grown significantly since 2016 so it can be safely assumed that at least 60,000 people are required for 'hands-on' work in 2021.

Using the available data in a ballpark forecast, its estimated that Recognised Seasonal Employer (RSE) scheme numbers will be more than 50% lower than last year while backpackers are probably 75% fewer. If optimistically, an extra 5,000 Kiwis joined the workforce, there would still be about 13,000 fewer people 'on deck' compared with last year (Table 1).

Table 1. Forecasted 2021 horticultural labour supply

Labour source	2020	2021 F	Change
RSE ¹	14,400	6,700	-53%
Backpackers ²	10,000	2,500	-75%
Kiwis ³	32,400	37,300	15%
Total	60,000	46,500	-23%

^{1,2}NZAP, pers comm. Backpackers estimated at 20% of 'point in time' NZ total. ³ Kiwis 54% of 2020 total workforce.

If the value of the apple crop (using \$828 million from 2019, *freshfacts.co.nz*) is reduced in proportion to the 23% labour force reduction, the 'hit' to the industry would be \$186 million. The financial cost would hopefully be less than this as growers direct labour to recovering the most valuable fruit. If the financial damage could be limited to about half of this amount, an immediate loss figure of \$100 million will result.

Immediate losses in value

The labour shortage affects crop value loss in a number of ways. Much of the crop adjustment (hand thinning) to optimise fruit numbers is being completed late, and some simply won't get done. As a result, both volume and quality are compromised because the crop hasn't been properly prepared.

This is just the start of loss in value. There will be lots of fruit that doesn't get picked, either on time or at all. Some blocks will be likely picked just once or twice, and later maturing, more costly to pick fruit will be left behind. Some blocks will be by-passed completely if higher value varieties mature at the same time or there are doubts about the security or level of market returns.

Another more damaging loss in value will occur as fruit that can't be picked at optimum maturity enters the supply chain. Some over-mature fruit will be rejected on the packing line but a proportion will inevitably find its way to customers who will be disappointed. Any loss of our quality reputation stands to erode the price premium which has been built up over many years.

Strangling the goose

The NZIER *Could do better* report features a 'case study on NZ horticulture' and expresses, in my view, some disturbing opinions. I'd even go so far to suggest that their recommendations, if fully enacted, would cause more damage to our horticultural industries than the pandemic.

They contend that migration policy (read the RSE scheme) is "probably applying a brake on innovation" because "excessive low-skilled migration is likely to depress productivity, by reinforcing low wage, low-productivity business models".

They surmise that current policy is "hampering the development of human capital by New Zealanders, especially those facing other challenges to employment and suppressing the gains from automation and other capital investment". The reader is left wondering if the authors have actually left their screens to visit the apple and kiwifruit industries to understand the recent changes out there and to substantiate their views.

Their possible influence on government policy is even more disconcerting. They advise "not rushing to reopen the border" but to take time and "pause and reset policy". When the border is re-opened, they recommend (abridged) that the government:

- Substantially reduce flows of people with skills that are the same or lower than the average of the local population.
- Reduce inflows of low-cost imported labour by eliminating generous employment rights for fee-paying students and working to reduce the current number of working holidaymaker visas.
- Review the Recognised Seasonal Employer scheme with a view to better balancing productivity and humanitarian objectives.

There is some attempt to present balanced views on the RSE scheme. Its achievement of a 'triple win' for migrants, their countries of origin and the destination countries is cited.

They acknowledge the praise RSE has received in development and migration literature as an exemplar of how to design a guest worker scheme. However, their concluding quotes appear to encapsulate their view:

"We are not convinced that the (RSE) scheme is a win for all New Zealanders.

It continues to be a short-term win for growers accessing cheap seasonal labour, but what about local workers, who continue to get paid low wages?"

Their low wage argument sounds inaccurate and out of date. The industry condemns the tiny minority that seek to exploit staff and incentivises locals into employment. Wages rates in horticulture have risen substantially recently and the industry pays well compared with some other sectors.

The contribution made by RSE workers and backpackers to 'NZ Inc' arguably deserves more recognition (no pun intended) than that given in the *Could do better* report. Both have strongly contributed by improving our ability to pick the right fruit at right time. As a direct result New Zealand's reputation for quality and consistency has been enhanced and our fruit industry has prospered.

IF THE VALUE OF THE APPLE CROP IS REDUCED IN PROPORTION TO THE 23% LABOUR FORCE REDUCTION, THE 'HIT' TO THE INDUSTRY WOULD BE \$186 MILLION

“The industry has grown significantly since 2016 so it can be safely assumed that at least 60,000 people are required for 'hands-on' work in 2021



2 Fruition Green Atlas Cartographer crop load heat map app

Yes, it is accepted that our competitive advantage relies on many elements including protected varieties, counter-seasonality, quality assurance (Integrated Fruit Production), but high fruit quality is fundamental.

The RSE workers have improved year on year as their knowledge and productivity has increased. They get off the plane all ready to go. Part of the reason RSEs excel is because they work as a team and motivate and support each other. They work with end goals in mind and are admirably focused on returning money back to their homelands to develop their communities. A much better situation than former reliance on aid handouts. Pastoral care and educational programmes like Vakameasina provide support and learning across a broad range of useful subjects (<http://www.vakameasina.co.nz/>).

Backpackers also create a win-win for all parties. In getting the job done they earn valuable dollars for their OEs and hopefully enjoy positive experiences in New Zealand that make them advocates for our country and future customers of our fruit.

The drive to employ more Kiwis this season has had success. There are reliable reports of teams of tertiary students who have knuckled down and earned good money (often exceeding \$25/hour) through the apple thinning season. It is a tough ask to work hard all day long especially for newbies. Admittedly, some did give up early on, but those that had reasonable stamina and the incentive to earn have done really well. Pity they'll all be back at university for the picking season.

Making the tough calls

Growers have started making tough calls already to mitigate losses that labour shortages will bring. Some blocks that have a doubtful future, even if they have a full crop on board, have been turned into wood chips mid-season. Expenditure and market risk are removed but so are future revenue streams (Photo 1).

Losing innovation momentum

The NZIER report contends our fruit industries won't innovate while they complacently rely on cheap labour. It appears to advocate a cold turkey reduction in the labour force to somehow force the innovation they believe is missing! There may be a theoretical rationale for this idea but the quiet revolution in new technology that is being rolled out suggests otherwise. On the contrary, I think our industries have a hard-wired desire to improve productivity and recent profitability is actually providing the liquidity for this to be realised.

I don't think there has ever been such effort put into the redevelopment of more capital intensive and higher productivity systems that are largely designed for better labour efficiency.

Significant investment is also being made in labour saving (or enabling) equipment, like platforms.²

The development of new 'tech' tools that improve the efficiency of labour use is being rapidly commercialised. Scanning of kiwifruit and apple blocks to count kiwifruit flower buds and apple fruitlets to produce crop density heat maps is now possible. For example, the Fruition Green Atlas Cartographer includes a cell phone GPS enabled app that allows staff to prioritise and navigate to 'hot spots'. This improves the priority and deployment of scarce labour (Photo 2).

Flow on effects

There are already reports of nursery tree cancellations as growers grapple with uncertainty and impending reduction in revenue. This means a slow-down in the development of more efficient orchards. Investment in new technology may also suffer if the industry becomes cash strapped and is forced to retrench.

If policy settings make New Zealand an unfavourable place to do business, multi-national businesses will increasingly migrate offshore.

The Covid-19 induced labour shortage looks set to hurt our fruit industries. Let's hope that government is getting balanced advice and is doing everything possible to enable our industries to bring in the harvest and continue to prosper. ●

References

- ¹ Could do better: Migration and New Zealand's frontier firms. NZIER report to the New Zealand Productivity Commission. November 2020.
- ² "Platform ready?" The Orchardist, November 2020.



Figure 1 These Scilate double leaders are planted on MM116 at 3m x 3.5m and will give 1,904 leaders per hectare from 952 trees, giving the same canopy form as 1,904 single leader pyramids on a dwarf rootstock. The key to successful double leader systems lies in maintaining a uniform leader spacing along the row

Be careful with spending

The 2021 crop is going to be an expensive one to harvest so for varieties, grades and sizes that cannot return at least \$30.00 FAS (Free Alongside Ship) it is unlikely that they will break even on their total cost of production.

By John Wilton : AgFirst

It is probable that harvest and post-harvest handling costs will be covered for well-presented main varieties such as the Gala group. It is also probable that due to hail issues there will be significant reductions in the amount of Braeburn and Scifresh available to the market, which means if the laws of supply and demand are working rationally the market prospects for these varieties this season should improve.

Yield and quality will be the key drivers of success, particularly for lower paying varieties. This is because general orchard overheads and fixed costs make up around two-thirds to three-quarters of the total on orchard production costs so the more cartons these costs can be spread over the lower production costs will be.

Orchards also need to be capital efficient, so careful consideration needs to be given to orchard establishment costs. In recent years there have been some very expensive planting systems around, with planting densities well in excess of the optimum necessary for our deep fertile soils.

Our own OrchardNet™ data on orchard performance shows that for commercial orchards the relationship between planting density and yield is rather weak once a critical threshold density of around 1,250 trees per hectare is achieved for central leaders. The conclusions from our database indicates that the sweet spot for our growing conditions is in the 1,400 to 2,000 trees per hectare range for conventional spindle bush trees on deep fertile soils.



Figure 2 This Fuji orchard is planted 2.6m x 1.8m giving 2,137 trees per hectare trained as double leaders. At these tree and leader spacings, annual extension growth only needs to be in the 20-30cm range. Annual shoot growth exceeding this range will quickly become an excess vigour problem. On this canopy about 120 fruit per leader represents a 100T/ha crop

Spreading the tree along the row using multiple leaders and possibly stronger rootstocks, enables similar canopies to single leader intensive plantings with lower tree density. Here a number of recent plantings have been made using MM116 at half the tree density of an intensive planting on a dwarf rootstock. These plantings with a double leader tree form give a similar canopy to a single leader intensive planting, with significantly lower orchard establishment cost due to less trees.

More Efficient Canopy

Experience backed up by recent published data indicates that the multi-leader configuration along the row is giving a much more efficient fruiting canopy than the single leader spindle bush systems.

Data published by G Baab entitled "Multi Year Experiences with Bibaum Trees - is it profitable?" In the *European Fruitgrowers Magazine* No11 2020 pp. 12-17 shows that Bibaum trees (double leader along the row) produce almost 10% more yield per cn_2 TCA than the single leaders' spindle, and 8% more cumulative yield per hectare over the cropping years from second leaf through to 12th year. Initial yields in the first couple of cropping years saw the Bibaum tree yields lag behind the spindle bush, but once full canopy was achieved the double leader annual yields were on average around 13% more fruit per hectare.

Bibaum tree row volumes (TRV) per hectare were considerably less in their study because the trees were further apart in the row and therefore stretched out along the row, but leaf surface area in square metres per cubic metre of TRV were 2.65 times that of the spindle bush. This gives much more efficient light exposure to leaves and fruit which probably explains the increase in yields on the double leader systems.


We have also noted that vigour is much easier to manage with multileader in row training systems.

Need to Re-think Orchard Design

It is clear that with the loss of our access to fit, experienced Recognised Seasonal Employer (RSE) scheme workers large, tall trees will quickly become uneconomic and impossible to work effectively with local labour. This is nothing new. European fruitgrowers ran into this problem around 50 years ago and it was a major driver in their adoption of intensive production systems on dwarf rootstocks.

Whether or not we see fruit picking becoming automated, it is clear that orchards of the future will become more two-dimensional in their canopy configuration, and tree height will become lower, probably around 3.5m in height so most of the tree can be easily reached from the ground or a low platform.

It is probable that between row spacings will narrow a little, perhaps down to the 2.7m to 3m range, instead of 3.3m to 3.8m between row spacings. Incidentally, we already have a number of apple orchard plantings in the 2.5m to 2.8m between row spacing where apples have been planted on vineyards and utilise the existing vineyard trellis structure.




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Figure 3 Be wary of excess vigour in young trees. The Dazzle® grafts grew strongly last season and suffered poor budbreak in their second growing season. Figure 4 Excess vigour in the first growing season can lead to poor budbreak in the second year. The two strong shoots in this tree show poor budbreak while the weak shoot just above them which terminated in a fruit bud is showing very good fruit bud development

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Tree size and vigour is largely controlled by the size and spread of the root system. Many New Zealand orchard soils are deep, and when well drained offer little resistance to root growth. This means that inter-tree root competition is not a reliable vigour control agent in our conditions, so unless you are into regular root pruning, tree spacings need to be sufficient to establish an optimum relationship between canopy volume and root volume for satisfactory vigour management.

“

Yield and quality will be the key drivers of success, particularly for lower paying varieties

Comparisons of TRV between single leaders and multileaders along the row systems show single leaders have around 1.64 times greater TRV than a double leader system. This suggests that in row spacing of multileader trees needs to be at least 1.5 times that of a single leader spacing, possibly further apart to establish a similar canopy volume to root volume relationship. This means for a dwarf rootstock we need to be looking at a 2m plus in row spacing and for more vigorous rootstocks around 3m, which incidentally, is the in row spacing we are using for double leader trees on MM116 rootstock.



Figure 5 This semi-intensive Braeburn block is highly productive but due to its tree form, it is too difficult to thin and harvest with local labour due to the ladder work required. These orchards will have to go, to be replaced by more easily worked intensive plantings such as those shown in Figures 1 and 2

Cropping Manages Branch Size and Vigour

Cropping or more particularly flowering, is your best vigour control agent. As a general rule a fruiting lateral is in its third growing season before flowering and crop load will be adequate for vigour control. This means that tree or leader spacing needs to be sufficient to accommodate at least two and a half years of annual extension growth before crop load vigour control will kick in.

Another point worth considering is that for most varieties lateral bud of one-year wood fruit is of poorer quality than older spurs or terminal shoot bud fruit, largely due to stem end russet. Therefore, the sooner fruiting terminals and good two-year and older spurs can be set up in the tree the earlier the orchard development period good commercial cropping can commence.

Experience here shows that provided there are no obvious limiting factors to tree growth, commercial cropping should commence in the second growing season after planting for trees, even on dwarfing rootstocks. To achieve this goal any useable laterals on the tree at planting should be retained provided their distribution is well balanced. Where laterals at planting are weak, or spindly, shortening them back by a third of their total length a couple of weeks after bud break will stimulate good spur development and prevent bare wood.

In recent years I have noticed among a number of varieties that poor bud break on shoots which had strong growth in their first growing season leads to problems with bare

wood and delayed bud break, which leads to increased fire blight risk. We should be very wary of stimulating excess vigour in young trees through the February to March period. At the planting densities that are fashionable today annual shoot growth more than 50 to 75cm is a potential problem anyway because the tree will quickly outgrow its allotted spay before flowering, and cropping will be sufficient to give vigour control. Remember, we are no longer planting semi-intensive orchards at 5 x 3m spacings and growing single leader tree forms so there is no need to have high branch vigour in young trees in order to fill wide spaces quickly. It is time to bring your canopy management into the 21st century.

Labour Costs are Sky Rocketing

Recent politically motivated increases in wage rates and restrictions on our access to experienced skilled RSE workers will see huge increases in on orchard labour costs, which are unlikely to be matched by productivity increases. Unless such cost increases are matched by increased productivity the result is inflation and as we operate in, as well as compete with, the global fruit industry, if we fall behind our competitors in efficiency the end result is industry stagnation at best, and in the worst-case contraction.

We can learn from the Chilean apple industry. Last time I was over there, about four years ago, their wage costs had risen ten-fold in the previous decade, but orchard gate returns for the fruit had increased only three-fold. Apple production in Chile stagnated over this period with some evidence of contraction and there was little interest among apple growers in orchard redevelopment because spending their capital elsewhere was giving better returns. The Chilean production systems had a lot of slack in them in regard to production efficiency so there was potential for them to lift productivity substantially. As far as I could see their production practices had not been adjusted as much as they could have been to counter their wage inflation problems. For instance, even though they had access to good red strains of Cripps Pink most of their orchards were still the standard strain because it was the most profitable variety on the orchard.

We need to recognise the damage rising labour costs will do to orchard viability and adjust crop husbandry practices to counter these effects. Lifting productivity and crop value is the key to achieving this goal.

Interest rates are very low at the moment, but it is inevitable that at some time in the future they will rise, so be careful with orchard development costs.

Analysis of internal rates of return among different orchard production systems shows that most of them are rather similar. This indicates that it is not the system that determines profitability, but how well the crop husbandry tasks are carried out. This is called attention to detail. ●



Dwarf mangoes Atherton Tableland, North Queensland

Biosecurity – A two-edged sword

Visitors to Nelson should pay a brief visit to the old wharf, where the names of the ships which brought the early European settlers are listed, along with the names of the passengers and of the plants and animals that they brought with them.

By Mike Nichols

Not surprisingly there is no mention of biosecurity! The first settlers of Aotearoa nearly 800 years ago also brought plants and animals with them - kumara, taro, yams, seeds of hue (bottle gourd), tī (such as tī kōuka, the cabbage tree) and aute (paper mulberry) - and dogs and rats. Unfortunately, many of the plants they brought did not survive the sea voyage or succumbed to the harsher New Zealand climate compared with tropical Hawaiki.

In 1958 when I first arrived in New Zealand by air from Sydney, I cannot recall any biosecurity, which in retrospect should have been present as on the same plane were the Wallaby Rugby team, whose boots I am sure would have soil on them! Things have changed over the years and biosecurity has now become an important part of entering New Zealand.

It is, however, a two-edged sword, because if we make it too difficult to import plants (or animals), we may well be reducing the potential for enhanced economic activity by restricting the importation of potentially valuable genetics. Genetics which could enable us to produce crops with enhanced productivity, and thus increase our ability to export fresh horticultural products to other countries.

For example, currently it is virtually impossible to import new varieties of fruit because of the limited biosecurity facilities available to ensure that the material is free from any potential pathogens, and then (of course) there is the cost.

New Zealand owes its ability to export fresh fruit and vegetables with minimal paperwork to many countries because of our freedom from a range of pathogens which are present in many countries with whom we compete.

The classic examples are fruit fly (specifically Mediterranean fruit fly (*Ceratitis capitata*), Queensland fruit fly (*Bactrocera tryoni*) and spotted wing drosophila (*Drosophila suzukii*), but there are many others.

No one would suggest that we should reduce our vigilance at the border, but there is a need to make more biosecurity space available if we are to remain competitive with our horticultural exports. This summer provides a good example. The unseasonable heavy rains in Central Otago by all reports, decimated the export cherry crop. Global warming is predicted to result in extreme weather conditions, so perhaps this was not entirely unexpected. Few growers however, have established rain shelter greenhouses, and in any case the range of dwarfing cherry rootstocks in New Zealand is (I understand) limited to two of the Gisella lines, even though there are many others in Europe.

I can recall that up to the 1950s almost all of the apples grown in New Zealand used Northern Spy as the rootstock. We now use a range of specifically developed rootstocks which were imported (mainly by the Department of Scientific & Industrial Research) at about that time and became commercial after several years of field trials.

Clearly if the cherry industry is to develop, then we need to examine the productivity that other dwarfing rootstocks can achieve. In any case we know that harvesting from ladders is nearly three times as expensive as from the ground, so not even considering the global warming risk, it makes good economic sense to grow dwarf trees.

I recently visited Northland to look at tropical fruit production and was very impressed with the potential, assuming that global warming raises average temperatures by two or three degrees, and that suitable production systems can be developed within high plastic tunnels.

We import a range of tropical fruit, but these are a potential source of numerous pathogens (particularly pests) which could spread onto other crops, and could have major implications for our two major export fruits, apples and kiwifruit.

Growing tropical fruits in New Zealand would most probably involve higher retail prices, because it is difficult to compare \$US2 a day wages with New Zealand's equivalent \$US14/hour labour costs, but better quality fruit and a local component should be helpful.

Mango is one fruit which comes to mind, but this is difficult to grow under tunnels because the trees grow too large. However dwarfing rootstocks might be the solution, and these already exist in Australia (see photo). It is just a question of importing the dwarfing rootstock.

GROWING TROPICAL FRUITS IN NEW ZEALAND WOULD MOST PROBABLY INVOLVE HIGHER RETAIL PRICES, BECAUSE IT IS DIFFICULT TO COMPARE \$US2 A DAY WAGES WITH NEW ZEALAND'S EQUIVALENT \$US14/HOUR LABOUR COSTS



Dwarf mangoes are easy to harvest

There is already considerable interest in producing bananas in Northland, Gisborne, and more recently in Hawke's Bay. Of course, there may well be difficulties in developing a more inclusive New Zealand horticultural industry, but this is really no different from Australia's policy, where banana imports are forbidden and quarantine measures limit the importation of apples from New Zealand.

New Zealand has a tremendous worldwide reputation for its apple and kiwifruit breeding programmes. But we will always have to rely on the breeding programmes of other countries for improved genetics of other crops. It is therefore important to have adequate resources to enable these to be imported safely (from a biosecurity viewpoint) but easily into the country.

Equally important is the correct selection of which genetics to import, as there is a significant cost involved in biosecurity. Strawberries are a good example of this. Almost all of the varieties grown in New Zealand are from the United States, mainly bred in California. There is no argument that the University of California are excellent breeders of strawberries, but they are developed for Californian conditions, which can best be described as having a Mediterranean climate. They have also been selected for outdoor production. New Zealand does not have a Mediterranean climate and is trending towards greenhouse production of strawberries. There are excellent strawberry varieties developed in Europe for greenhouse production, and yet these are virtually untested in New Zealand.

In the end it is a two-edged sword because for total biosecurity safety we should never import any produce, but then other countries would respond in a similar manner, and we would be unable to export anything. ●

Important reminder for growers around off-label use of products

Off-label use of crop protection products is needed to manage pests, diseases and weeds in a number of minor fruit and vegetable crops.

By Rebecca Fisher : Crop Protection Manager, Market Access Solutions

While the practice is legal, growers are responsible for ensuring that off-label use is necessary, safe and compliant. There are several important management steps that growers need to follow to ensure that the correct products are used and that residue levels on the harvested crop are within regulatory and customer limits.

Off-label use occurs when growers need to use a product to control a pest, disease or weed - but the label does not carry a claim for that crop or target organism. While the flexibility of being able to use crop protection products off-label is critical to New Zealand growers, they are unable to rely on label directions to ensure regulatory controls are complied with. Without label guidance, there is a risk that off-label use may result in exceedance of maximum residue limits (MRLs) or other compliance breaches. Results from residue testing programmes over several years show that where residue levels exceeded MRLs, these incidents were sometimes as a result of products being used off-label.

The Ministry for Primary Industries (MPI) conducts a Food Residue Surveillance Programme (FRSP) which monitors residues on a variety of foods. Residue non-compliance in this project can be as a result of off-label use where no MRL is set and the New Zealand default (of 0.1 mg/kg) applies. Or where off-label use of the product is not allowed and consequently any detection of the active is a non-compliance. MRL non-compliances can have serious and negative financial implications for growers, so ensuring that all growers understand the rules and requirements for each crop protection product used, and how to comply with all controls is important.

New Zealand Good Agricultural Practice (NZGAP) has developed a *Guideline for Off Label use of Agrichemicals in Horticulture* to provide growers with practical information which supports them to meet GAP and regulatory requirements.

The NZGAP off-label guideline has recently been updated (December 2020) and is very helpful for growers, particularly of minor crops. All growers who use products

off-label should use this guideline. It provides practical information to help growers meet regulatory requirements under the Agricultural compounds and veterinary medicines Act 1997 (ACVM), Hazardous Substances and New Organisms Act 1996 (HSNO), Health and Safety at Work Act 2015 (HSWA), and Food Act 2014.

When designing or updating spray plans, growers should carefully consider what products may need to be used off-label. The guidance document provides a simple decision tree for determining if a product can be used off-label as well as a checklist for ensuring compliance. It is recommended that growers' considerations and decision making around off-label use of a product are documented and lodged in that spray diary entry.

WorkSafe and regional plan requirements must also be met. This includes tasks such as complying with neighbour notification, buffer zones, re-entry intervals and signage requirements.

These off-label use guidelines are not an exhaustive list of all steps which growers must take to ensure regulatory compliance, particularly with regard to WorkSafe and regional council requirements, where requirements can differ from region to region and because what is a "reasonably practicable" step to take to ensure the safety of your workers and bystanders, will vary between growing operations. Whilst some WorkSafe requirements are specific such as thresholds over which signage is required, others are based around the principle of eliminating and minimising risks to health and safety so far as is reasonably practicable.



The latest version of the NZGAP Off-label Guideline can be accessed here: www.nzgap.co.nz/NZGAP_Public/Growers/Guidelines/

If you have queries, please contact NZGAP nzgap@hortnz.co.nz or your Product Group Manager. ●

Substantial investment across 40ha – two titles

This is an address which caters to a diverse range of buyers and investors due to its massive scale, locality, and future options for growth.



38 Kokopu Block Road, Maungatapere, Northland

The 12ha avocado orchard provides a solid platform to fuel further orchard expansion across the remaining vacant land or continue with the current balance of grazing and orcharding.

Whether you would like to be right at the coal face or prefer the “hands off” approach you can call on the services of local orchard contractors and advisors which work in the area making the transition into orcharding just that little bit easier.

The established Avocado orchard is split into 10 well sheltered blocks, consisting of approximately 1,556 trees at 8m x 8m spacings. With some blocks hitting a record 46 tonne/ha, the orchard is well and truly hitting its strides and this will no doubt continue well into the future with continued good management. The vendors have invested significant capital in the early years to get the orchard performing to the level it is today.

Supporting orchard infrastructure consists of a large load-out bay, four-bay Totalspan implement shed with triple roller door access, modern self-contained unit, spray filling station, and excellent internal roading.

The contour throughout the orchard and farm is flat to gentle sloping with volcanic soil types. The volcanic soils are quite versatile which offer options into other high value crops for diversification including protected cropping under tunnel houses.

The native bush is a stunning feature, with a somewhat “romance effect” as you drive through. This could certainly lend itself to a sideline business with the words “luxury” and “exclusive” thrown in the mix.

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It’s a great time to be apart of a thriving primary industry in New Zealand, especially with the Avocado industry currently experiencing massive growth in demand at both domestic and export market levels. The New Zealand Avocado Industry also provides a supportive platform to help new and existing growers achieve the best from their orcharding operations.

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