

## Employer of Choice

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of avocados

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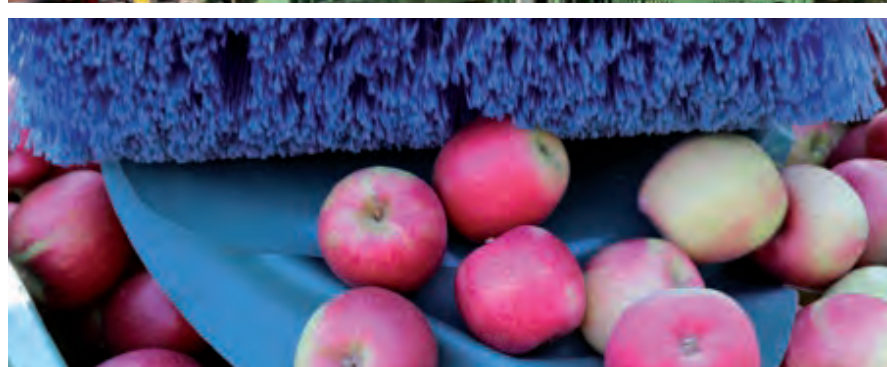
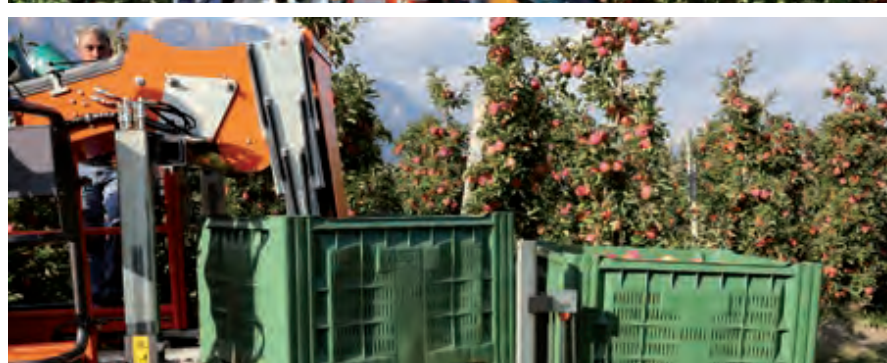
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# The changing of the guard

*This month we have the changing of the guard with our very hard-working chief executive, Mike Chapman, stepping down from the role after five and a half years, as he begins his retirement.*

By Barry O'Neil  
President : HortNZ

**I can absolutely say we have been very fortunate to have Mike's leadership. His commitment, intellect, strength and drive for results has enabled HortNZ to punch well above its weight by fully engaging and understanding grower issues, and then advocating in Wellington for the best possible outcome for growers.**

Mike began his career as a lawyer in the Royal New Zealand Navy where he reached the rank of Commander. To me, Commander Chapman is absolutely Mike, with his driven and energetic leadership style. Mike then moved to the Commerce Commission as manager of the legal team responsible for the Commission's litigation. He still holds a practicing certificate as a barrister and solicitor, something from which many of us have benefited, using our own in-house legal expert to review many rules, constitutions and contracts.

Mike's career in horticulture began in 2002 when he was appointed as chief executive of Kiwifruit New Zealand, and then chief executive of New Zealand Kiwifruit Growers Incorporated, a position he held for 10 years.

“

**Some of Mike's well-known leadership sayings include, 'One step at a time. Panic doesn't work'**

During his time in kiwifruit, Mike held various board roles including being an inaugural director of Kiwifruit Vine Health, deputy chair of Toi Ohomai Institute of Technology in Tauranga, and a council member and now director of the Primary Industry Training Organisation.



I remember Mike and I having a discussion at the Horticulture Conference in Rotorua in 2015 about how HortNZ could best support growers. My challenge to Mike was that if he wanted to see change, then he should apply for the role and make it happen. And he did just that, was appointed to the role and as they say the rest is history.

Some of Mike's well-known leadership sayings include, 'One step at a time. Panic doesn't work'. Mike has had plenty of opportunity to use this advice, including when Psa struck the kiwifruit industry. He used his approach to help guide the industry and its growers through the crisis and onto recovery.

He is also known to say 'it's the nature of a crisis that it never happens when you have time or the resources to cope'. So true!

Another saying of Mike's is, 'Have a written plan - one that's flexible and adaptable and look after everyone including yourself'. I'm unsure if Mike did so well with this last piece of advice, as he's been working very long hours, including commuting from Tauranga. Our thanks must go to his partner Judith who has supported him in the HortNZ role.

Since becoming HortNZ chief executive, Mike has focused his many talents and that never ending energy on some really significant issues for horticulture, including reforms of vocational education, Resource Management Act reforms and plan changes, labour shortages and the Recognised Seasonal Employer scheme, urbanisation and its impact on productive horticultural land and most recently, the significant challenges presented by Covid-19.

Mike's advocacy for the horticultural industry - to government, ministers and publicly - has been untiring, forceful and balanced, always with the aim of achieving



the best outcomes for growers, the New Zealand economy and the health of its people through access to nutritious, locally grown food.

As well as his communications with government and the public, Mike has consistently and clearly communicated with HortNZ growers through weekly newsletters, the *NZGrower* and *The Orchardist* magazines, and at regular grower meetings throughout the country.

Mike is also very active in social media, publishing a blog on industry issues most weeks, and has more than 15,000 followers.

People, especially growers and their welfare, are at the heart of what Mike does. One of Mike's great legacies will be the number of charities that he has established in horticulture, aimed at supporting growers along with Pasifika people when they need support the most.

When he steps down from HortNZ later this year, Mike leaves an organisation even stronger and better equipped to face whatever challenges the future brings.

A great effort Mike. We truly thank you for what you have done for both HortNZ and for horticulture and growers in New Zealand during the time you have been our chief executive. And while you would also want us to acknowledge the efforts and contribution of the wider HortNZ team, which of course we do, this time it's about you, so we also recognise the work you have done in modernising the HortNZ office and supporting what has become a great team culture.

Being the professional Mike is, he has offered to stay on in a part-time role, and we have gladly accepted his offer. Mike will drive specific projects that he is best placed to focus upon, and will help with the transition to new chief executive, Nadine Tunley. We will all have a chance to celebrate Mike's achievements at the Horticulture Conference on 5 and 6 August at Mystery Creek. So make sure you are there to help us do just that!

And onto the new guard, and we warmly welcome Nadine, who will start as our chief executive in June. Nadine comes to us well skilled and experienced in horticulture, having set up her own marketing company that was later sold to Freshmax. Before that she was chair of NZ Apples & Pears for six years, and more recently, chief executive of Oha Honey.

Nadine is a director on the board of Scales, is also on the board of Plant & Food Research, and has previously been in governance roles in Ngāi Tahu. Nadine was also a member of the Primary Sector Council.

The Board is confident that with Nadine, we have appointed the right person to lead the organisation and deliver the outcomes that HortNZ and horticulture need going forward, building on the great platform that has been established by Mike.

Ngā mihi nui. ●



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# Goals achieved

*When I started five and a half years ago at Horticulture New Zealand, I set myself a number of goals.*

By Mike Chapman  
Chief Executive : HortNZ

**The most important one was to enhance HortNZ's work for growers. HortNZ was formed under Peter Silcock's stewardship. He created an effective and high performing organisation linking together fruit, berries and vegetables into the one organisation. This was no mean achievement. What I wanted to do was to add to what Peter had achieved and take it to the next level.**

One of the traps that organisations like HortNZ can fall into is to try and do everything. My goal was to prioritise the organisation's activities, making sure we were doing what achieved the most impact for growers. Next, I wanted to ensure that HortNZ had the best possible people delivering those priorities. Our regular grower survey is and has been over the years very clear about what growers think the top three priorities are: biosecurity, labour and the environment.

To this end, establishing the career progression manager network in conjunction with NZ Apples & Pears, NZ Kiwifruit Growers Inc and NZ Avocado is a major step forward for finding motivated permanent employees. This network is soon to comprise eight career progression managers, one in each of our key growing areas, to attract New Zealanders into horticulture careers.

Key to being successful in HortNZ's top three priorities is a close working relationship with government departments and politicians. HortNZ is ideally placed to achieve that being located in Wellington. Getting involved in policy development early on is the best way to influence government outcomes. The more we work in tandem with government, the better the outcomes for growers and also for government.

The problem that governments and industry organisations face is that everyone has lots of good ideas. This can result in a scatter gun approach. What is needed is a clear vision



that determines the priorities and activities to support and achieve that vision. We have that at HortNZ, in both our vision and purpose. What we do not have is that shared vision with government. The result is that despite the best intentions, we can waste our and their resources, and duplicate and unwittingly act against each other.

My last goal was to achieve a shared vision between industry and government, and that is becoming a reality with the plant strategy. The aim is to launch this strategy at the Horticulture Conference 2021 on 5 August, for which registrations are now open.

There is no point doing all of the above activities without a world class communications programme. At the public level, it is most important to consistently nurture horticulture's social licence to operate. This is no easy task. Every available channel needs to be used, print, TV, radio and social media. This then needs to be backed up by excellent grower communications, including our high value magazines.

“

**None of this would have been achieved without the enormous support of growers**

Lifting HortNZ's communications profile was another one of my key aims and I think we have achieved that. My contribution has been my weekly blogs on current topics, which reach more than 15,000 followers through social media. I have now written more than 200 of these blogs, each talking about horticulture and our current issues. On occasion these blogs are reprinted in mainstream media, increasing their reach further.



None of this would have been achieved without the enormous support of growers. Many of you have willingly given up your time to be part of what HortNZ's strives to achieve. Your contribution is so important and helps keep us grounded. Over my time, I have worked to create a more cohesive and collaborative working relationship with our product groups. This is work in progress but I think we have taken enormous steps, working much more closely together today than we did five years ago. There has also been a focus on supporting active district associations, as they are a very important part of the work HortNZ does, for example, with councils.

The HortNZ Board has taken a highly productive strategic role and has been very supportive of my and our teams' activities. I acknowledge their strategic view and support, as nothing would have been achieved without it.

The dedication and expertise of HortNZ's staff has delivered this strategy. I am confident I have achieved my goal of building the key HortNZ teams. They are the real success story of HortNZ.

“

**My goal was to prioritise the organisation's activities, making sure we were doing what achieved the most impact for growers**

Thank you all for your support and help. I would have achieved nothing without it. I can confidently hand over my role to my successor knowing that Nadine is inheriting a high performing and very effective organisation, which is ready to be taken to the next level of achievement. ●

## The ORCHARDIST

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The Orchardist is produced by Horticulture New Zealand and is free for all levy payers. The Orchardist magazine is partially funded by a grant from the NZ Fruitgrowers' Charitable Trust to ensure all fruit growers in New Zealand receive a copy each month.

The individual comments and views in this magazine do not necessarily represent the view of Horticulture New Zealand.

ISSN 1173-3802 (Print)  
ISSN 2744-5992 (Online)



This publication uses vegetable based inks and environmentally responsible paper produced from Forest Stewardship Council® (FSC®) certified, Mixed Source pulp from Responsible Sources.



Paper produced using Elemental Chlorine Free (ECF) and manufactured under the strict ISO14001 Environmental Management System.

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# YOUR LEVY AT WORK

INDUSTRY WIDE ISSUES FOR INDUSTRY GOOD

## Natural resources and environment



### Water

#### **Hawke's Bay Regional Council's Plan Change 9 – Tūtaekurī, Ahuriri Ngaruroro Karamū (TANK) Catchments**

The focus of HortNZ's submission is about designing water policy provisions that provide sufficient flexibility to enable horticulture to continue to thrive on the plains, in a manner that achieves freshwater outcomes.

HortNZ's supports provisions that:

- drive efficient use and provide reliability of supply for existing activities
- promote well designed water harvesting, storage, augmentation and cease take thresholds, to improve freshwater outcomes, support economic well-being and increase climate change resilience
- enable crop rotation to support soil health
- recognise the importance of domestic food supply of fruit and vegetables
- recognise tangata whenua values and Māori agribusiness aspirations.

HortNZ will present expert planning, economic, hydrology, water quality, farm planning and grower evidence at the Council hearing in June.

#### **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, and for the replacement of any water permits expiring prior to 2025. The proposed plan change makes it very difficult to obtain consents for increased volumes or areas of irrigation or to obtain a consent duration longer than six years.

HortNZ sought provisions that drive efficient use and provide reliability of supply for existing activities. HortNZ considers that it should be possible for applicants to seek longer duration consents in some circumstances, particularly if longer duration consents lead to investment that drives better environmental outcomes.

The HortNZ team presented planning, hydrology and economic and grower evidence at the Environment Court Hearing in April.

“

**The proposed plan change makes it very difficult to obtain consents for increased volumes or areas of irrigation or to obtain a consent duration longer than six years**

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## Air

### Northland Regional Plan – Environment Court Hearing

The provisions within the proposed 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.

The HortNZ team presented planning, spatial and agrichemical, and grower evidence at the environment court hearing in April. A decision is expected within three months.



## Climate Change

### He Waka Eke Noa

He Waka Eke Noa is a partnership between iwi, government and primary sector to manage agricultural emissions. Agricultural greenhouse gas emissions include emissions from animals and emissions from fertiliser.

He Waka Eke Noa milestones require all farms larger than 80ha to know the amount of agricultural greenhouse emissions they produce by the end of 2022, and all farms larger than 80ha to have a plan to manage and measure emissions by the end of 2025. ●

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Winner, Heather Feetham talking to Nadine Tunley

## First woman winner at Pukekohe

*Heather Feetham rewrote the history books early in May when she became the first woman to win the Pukekohe Young Grower of the Year Competition.*

By Glenys Christian, photos by Matt Silcock

**But three young male growers who all had their eye on the award and the chance to take out national honours later in the year didn't make it easy.**

Heather, 25, said she was very honoured to win on her first attempt.

"I didn't know what to expect and there was fierce competition," she said.

"I've taken a lot away from it, identified my weaknesses which I can work on and also build my strengths."

She thanked her co-workers at T&G Fresh for getting her involved, especially former Young Horticulturalist of the Year, Ben Smith, who she said give up his time willingly to help her out.



Heather grew up in Adelaide and always liked science and the outdoors.

"I wasn't sure how to make it a career," she said.

But attending a school with an agricultural course and an onsite farm was the push she needed.

That led her to study agricultural science at Adelaide University, then she and her partner, Dave, came to New Zealand in 2017. After some time working in hospitality in Queenstown, they were keen to get back to their careers, so moved to Auckland. She found work at Pukekohe kiwifruit grower, Punchbowl, as a lab technician, then made the move to T&G Fresh working at their Favona Road facility. Now she is a covered crop manager at its GER site in Tuakau where she particularly enjoys the variety of the work involved with growing tomatoes.





Blair Wilcox was runner up and also won Best Practical

"You never have a dull day."

Heather also took out the best speech as well as the business award. For their speeches contestants were given the topic: How can we as growers react best to this fast-changing world? Heather urged growers to change their mindset from being reactive to proactive. And she used her experience on the netball court to draw a comparison.

"We don't know when someone is going to pass us the ball," she said.

“

**Every challenge holds the seeds of opportunity for growth**

"We've just got to equip ourselves with the skills to do what we have to when that happens."

Every generation has faced challenges and to adapt and thrive they all needed to be willing to explore all options and trust the young.

"Every challenge holds the seeds of opportunity for growth."

Blair Wilcox, who was named runner-up and also took out the practical award, said no one knows exactly what the future will look like, but there will be continue to be winners and losers.

"A successful and dynamic vegetable business must act and change," he said.

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STAND CAP IN HAND  
AGAINST MARKET  
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200 attended the awards dinner at the Pukekohe Indian Association Events Centre

There needs to be a genuine connection between growers and consumers, and trust must be developed where their interactions cannot be in person so there is a flow of "passion from paddock to plate."

"We must challenge ourselves to be more open."

Third placegetter, Karn Dhaliwal, a rural banker as well as owner-operator of north Waikato's Ohinewai Harvest, said vegetable growing had stood the test of time.

"We know how to hustle, to turn up on the day and deliver the goods even when there's a pandemic," he said.

“

**In the future we might be able to tell from a sensor in the palm of someone's hand what nutrients their body lacks**

"We need to collaborate more between ourselves to work more as one. We're already ringfenced as the non-farming community regards us as one. But being ringfenced by legislation is what scares me."

All growers need to speak up rather than appearing to stand cap in hand against market powers.

"If in doubt, collaborate it out."

Brydon Wood, a crop supervisor at A S Wilcox, said growers could lose out because of challenges facing their industry at present.

"But if they hunt out the opportunities they could be like Uber," he said.

That company now has 70% of a market previously dominated by taxi companies, and is providing 14 million rides worldwide every day.

Growers need to be constantly searching for the next best thing, such as vertical farming which will rely on robotics. In the future we might be able to tell from a sensor in the palm of someone's hand what nutrients their body lacks, and food containing the nutrients they need might then be automatically delivered to their door.

Charlotte Connoley, managing director of SPS Seeds, the event's gold sponsor, said it was interesting to see the varying backgrounds contestants came from.

"One event can change your career trajectory," she said.

Master of Ceremonies, Austin Singh Purewal, who was the 2019 winner and went on to take out the Vegetable Grower of the Year title, said he had a flashback to the same event that year.

"I was jobless and needed a mentor," he said.

He went to work for HortiCentre then T & G Global and used his prize money along with help from the Chinese Growers' Association to go to Australia "and look at how the big guns operate on a large scale".

"It all comes down to opportunities," he told fellow young growers.

"You come out the door with them tonight whether you take them up a day, a week or a year later." ●





Bernadine Guilleux, Heather Feetham, Barry O'Neil and Nadine Tunley



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Sam Whitelock and Golden Bay Fruit managing director Heath Wilkins look at this year's crop in the packhouse

## Phone and talk!

*Trust your gut instinct if you think someone is struggling, and get in the car and visit them or phone them for a chat.*

By Anne Hardie

That's the advice from All Black Sam Whitelock who put on his Farmstrong ambassador hat to talk with Motueka growers who had suffered brutal losses from the Boxing Day hailstorm.

One of the reasons he joined the nationwide well-being programme for the rural community was that he had witnessed challenges faced by his own family. Several years ago his parents lost a lot of their stock during a salmonella outbreak on their dairy farm and struggled with the trauma and stress it caused. He witnessed the pressures of working in an isolated environment with long hours and no time for a work-life balance.

Today he visits groups around the country in between his rugby, and having studied plant science at university, knows a thing or two about horticulture. On his fleeting Tasman visit, he wanted to know about the challenges in the region which had gone through a tough season.

“

**Apple and kiwifruit growers around the table with Sam described a year that began with the Covid-19 lockdown, followed by ongoing government regulations being thrust upon them and the challenges of international markets**

Apple and kiwifruit growers around the table with Sam described a year that began with the Covid-19 lockdown, followed by ongoing government regulations being thrust upon them and the challenges of international markets. That had all been manageable with a great crop of fruit shaping up in the orchards, until Boxing Day delivered another blow.



To have such a good crop demolished by a hailstorm left growers heartbroken, said one of them. Many were reluctant to revisit orchards after the storm because "they were toast." But they had to, because the workload in a bad year is double that of a good year. Following huge losses this year, growers said they still don't know what the crop will look like next year after the damage to trees and vines.

They also described labour as a "massive, massive concern" and feel the government is disinterested in the pressures they face. Growers have to show leadership when the going gets tough, but there is no-one for those leading growers to go to for leadership, with no support from the Ministry for Primary Industries (MPI) or other government sectors.

Sam drew on his own experience in rugby, when from being a younger player through to leadership in the sport there has been the pressure from the public to win. Sometimes players have had to find support within their group, and he suggested growers might need to look for similar solutions. If growers in leadership roles can't get support from above, such as from government, they might need to go sideways to find it, he said. That means other growers or someone who had been through those challenges in the past, and as a group, creating their own support network.

“

**One of the big things - even in top-level rugby - is making the most of the good times to outweigh those tough days**

One of the big things - even in top-level rugby - is making the most of the good times to outweigh those tough days.

"You have to make sure the enjoyable days are more than those that aren't enjoyable," he said. "As a family, making sure the lifestyle is enjoyable, because why are you doing it?"

About 20,000 people turned up last year to different Farmstrong events and Sam said people weren't interested in being lectured to, or told how to run their life, but rather in sharing stories and simply getting together to talk things through.

For that reason, he said something as simple as picking up the phone and going for a beer is a good way to get people together to talk, and by doing that, help build resilience. ●



Farmstrong's website, [www.farmstrong.co.nz](http://www.farmstrong.co.nz), shares tips from the rural sector that are supported and informed by well-being science, with the aim of helping farmers and growers cope better with the ups and downs of farming.

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# On-farm biosecurity series

*This article is the first in an on-farm biosecurity series that will feature in upcoming magazine editions.*

By Anna Rathé : Biosecurity Manager, HortNZ

BIOSECURITY  
FEATURE

## Why does the horticulture sector need to adopt good on-farm/orchard biosecurity practice?

The New Zealand horticulture industry produces high quality fresh fruit and vegetables for the domestic market and discerning international consumers. We are fortunate to be free of many of the damaging pests, pathogens and weeds that growers overseas have to manage on an ongoing basis. Adoption of good on-farm/orchard biosecurity practices is critical for the continued success of the horticulture industry. These practices can help to:

- prevent new pests, pathogens and weeds from establishing in New Zealand
- reduce the spread of pests, pathogens and weeds to new areas
- prevent pests, pathogens and weeds being introduced to your property
- aid management of pests, pathogens and weeds that are already here.

## Why do you need a biosecurity plan?

The best way to protect your property from unwanted pests, pathogens and weeds is to have good biosecurity practices in place. Creating a biosecurity plan for your property is a great way to understand your on-farm biosecurity risks and identify simple but effective everyday biosecurity practices to manage these risks.

The practices you select will be unique to your property, production methods and the surrounding environment. Initially these practices might take up extra time, but they don't have to cost a lot of money and will soon become habit. Good biosecurity practices provide ongoing day-to-day benefits, and will be invaluable if a biosecurity event were to occur. Adopting good on-farm biosecurity practices makes you a biosecurity champion!

## Preparing an on-farm biosecurity plan

In order to implement good on-farm biosecurity you need a plan. Contact your industry body to see if they have a crop specific template that you can use. If not, you can use the HortNZ template that is available online. This template outlines five key steps to preparing and implementing a biosecurity plan for your farm/orchard.

### 1 REVIEW PROPERTY MAP

It's useful to have a map of your property to help identify key features that can be factored into your biosecurity plan. Mark these features on your property map:

- Entry and exit points.
- Main roadways or parking areas and their proximity to production areas.
- Known pest, disease and weed problem areas (hot spots).
- The best places to locate biosecurity zones - checkpoints, restricted access areas or wash zones.

### 2 IDENTIFY BIOSECURITY RISKS AND MITIGATING ACTIONS

This step involves considering these biosecurity risk areas and identifying mitigating actions that are appropriate for your situation:

- Farm outputs
- Farm inputs
- People
- Vehicles and machinery
- Production and harvest practices.

We recommend you go through industry body guidance and identify risks relevant to your operation. Think about the suggested example actions and note how you plan to apply biosecurity actions on your property to best suit you. Mark key locations for mitigating actions on your property map where appropriate. We'll explore some common biosecurity risks in more detail as we continue the on-farm biosecurity series.

“

**The best way to protect your property from unwanted pests, pathogens and weeds is to have good biosecurity practices in place**



### 3 PRIORITISE

After you have identified the biosecurity practices that are relevant to your property, rank them in order of priority. If you can't implement them all at once, consider which ones are most important (activities with a higher level of risk) and then think about which can be achieved in the short term (within the current constraints of your business) and which are longer term (those requiring more time and/or resource to implement).

### 4 COMMUNICATE EXPECTATIONS

Once you have noted the risks and biosecurity actions relevant to your operation, it is important that you communicate your expectations to those who work on or visit the property. Every person who visits or works on the farm/orchard has a role in managing biosecurity risk. To ensure uptake, the practices you implement need to be clear and easy for all to follow. Consider what you expect from staff and visitors in terms of:

- their actions
- training
- record keeping
- reporting.

### 5 IMPLEMENT

Once you have completed your biosecurity plan you can go ahead and implement your selected actions. You will need to review your plan periodically to check how you are tracking and make sure it is still fit for purpose. ●



*Disclaimer: While every effort has been made to ensure the information in this publication is accurate, Horticulture New Zealand does not accept any responsibility or liability for error of fact, omission, interpretation or opinion that may be present, nor for the consequences of any decisions based on this information.*

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2020 HortNZ Leadership Programme in front of Parliament

## Leaders loving fresh start after HortNZ boost

*Every Monday, Josh Webster picks his kids up from preschool, cooks them dinner and puts them to bed.*

Words and photo by Jamie Troughton

**A year ago, this small pleasure would have been out of the question for the harvest manager, who was immersed in long days growing broccoli, lettuce and silverbeet, with the concept of life-balance just a wistful dream.**

That dream became a reality though for Josh, who was born and raised in Pukekohe, after taking part in the 2020 HortNZ Leadership Programme.

Combined over three phases – five days at Lincoln, a presentation project based from home and three days in Wellington – the programme features a range of guest speakers and topics. The Leadership Programme develops tangible leadership skills for horticulture such as strategic planning, problem solving, presenting and working with some of those big industry issues such as the labour shortage and water allocation, yet also addresses less tangible aspects around leading other people and also self-

leadership. This includes maintaining resilience. The lessons learned have already made a tangible difference, not only in Josh Webster's life but also in that of his wife Janelle and kids Zoe and Patrick.

"I used to over-commit, instead of having faith in the abilities of my staff to rise to the occasion when the pressure came on, plus I also didn't want to burden them with extra load," Josh explains.

"Now I work 10 hours a day on average, I've stood back from the "tools" more and stepped up more as a leader. I needed to recognise and appreciate more what was actually filling my cup and what was drawing from it. Long hours, work pressures and stresses need to be balanced with the things and people that recharge your batteries for your efforts to be sustainable."



Now in its 19<sup>th</sup> year, the programme – led by Sue Pickering of Develop Ltd and course facilitators Patrick Aldwell, Tony Zwart and Ian Tarbotton, explores leadership styles, learning preferences and how to 'lead yourself'.

This resonated particularly strongly with Jan Buter, who works in the pipfruit team at Turners and Growers in Hawke's Bay. He found the programme has equipped him with a number of new tools.

"For example, the need to train, trust and then delegate to workmates and staff," Jan says. "Holding up the mirror for others and not solving everyone else's problems also gives that individual the opportunity to grow their confidence in their own knowledge. Lastly, involving others in the decision making – this brings buy-in and support for when change needs to occur."

### High-powered advice

Guest speakers contributing to the programme have included former Zespri chief executive Lain Jager, social media expert Dorje McKinnon, KPMG strategist Jack Keeyes and Minister of Horticulture Damien O'Connor.

Former course graduates such as Scott Rimes and Allen Lim have also given practical, honest insights into how their leadership styles evolved.

For Elliott Lovegrove, the South Island manager for Eurogrow Potatoes Ltd, the well-being lessons from the programme were also hugely influential, while she has also picked up a couple of great tips to make her working life better.

"I've learned to take time to understand other people's perspectives and their morals before entering situations where I need to resolve a conflict," she says. "This helps me to apply a balanced approach. And using the mirror technique also allows me to support the people around me to problem solve independently."

EastPack fruit performance manager Craig Sims, really enjoyed the insights and advice given by others in the industry.

"I wrote down a number of gold one-liners from a series of fantastic guest speakers, including, but not limited to, 'sometimes lazy people come up with great ideas', 'leaders try and make everyone else around them better', 'make your business run on its own', 'check in with yourself first' and 'if you share pressure, you share accountability'. I also loved the words of a guest chief executive, who said 'my job is to lead the management team, their job is to lead the business'."

“

**I needed to recognise and appreciate more what was actually filling my cup and what was drawing from it**

The overwhelmingly positive feedback from participants however, centred on the new network they had created with like-minded, motivated and interesting new friends.

This broadens understanding of what it means to be a leader in today's rapidly changing environment and expands knowledge of the horticulture industry as a whole, while allowing participants to discover their own personal leadership styles.

### How to apply

Applications are now open for 26 places on the 2021 HortNZ Leadership Programme which, in its 19-year-history, has helped nearly 300 graduates excel in their chosen fields.

The programme is open to anyone in the horticultural industry between the ages of 22 to 55, with 20 scholarships available, covering all course fees and accommodation costs. ●



Applications for the HortNZ Leadership Programme close in June. For the application form go to [www.hortnz.co.nz/our-work/people/hortnz-leadership-programme](http://www.hortnz.co.nz/our-work/people/hortnz-leadership-programme) or contact [sue.p@developme.nz](mailto:sue.p@developme.nz).



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# Growing is in Cath's genes

*'Wild' orchard now flourishing with diversity.*

By Elaine Fisher

**Growing up in a farming family, Cath Carter intended to study Soil Science at Otago but on the advice of her teachers changed to Business Studies at Lincoln. "My teachers were convinced that horticulture would be low paid with few career prospects for women - they were wrong!"**

Parents of two young boys, Cath and her husband Matt own and run Hill Road Orchard near Gisborne, and also produce Hill Road orange juice from their own citrus.

Cath's love of growing food on the land was inspired by her dad Murray Redpath, who is among New Zealand's pioneer hazelnut growers and a recognised expert on the crop.

"Growing up in a family passionate about farming teaches you to have respect for the work and dedication it takes to farm. One school holidays Dad got me to type up translations of Italian research papers and one topic of a paper stood out in my mind for years," says Cath who is also a member of Women in Horticulture.

“

**I guess, with my family background, I was genetically meant to be a farmer**

"Later on, when I was researching improving colour and taste in squash it was those technical notes on the importance of potassium in flavour development that was the basis for my work. We were always encouraged as kids to question, look things up and try things. I guess, with my family background, I was genetically meant to be a farmer."

It was while working for the *Gisborne Herald* selling advertising for its farm pages, that Cath saw an advertisement for a fertiliser representative. "I applied, got the job and found the work really interesting. I learnt by doing and was lucky to have supportive growers, including David and Frank Briant who very bravely let me carry out trials on their crops.

"The people I worked with taught me to question everything, and that just because things had been done in a certain way, didn't mean it always had to be so."

Cath later joined Cedenco Foods growing squash. She also has experience growing grapes and tomatoes. "My favourite crop will always be cucurbits, in particular squash though."



Cath Carter

In 2010, Cath and Matt bought what she describes as a "wild and overgrown" 6.7 hectare citrus orchard. "We are slowly bringing it back to full production, using a variety of techniques, including pruning, improving fertility, and managing the historical issues in the orchard. We grow Valencia and Navel oranges but also a number of experimental crops such as blueberries, saffron, turmeric and ginger, plus whatever else looks interesting and I can squeeze in the garden."

Due to health issues, Cath has had to slow down a little. She is now focusing on setting up the NZGAP group scheme and expanding the Hill Road Juice range of products. "I have had to learn to focus on the time during the day when I am able to function effectively to get the most done in the shortest space of time. We are lucky to have staff at Hill Road who are keen to see us grow and take on extra work as we develop new products.

"I like to get things done and am not scared to put my hand up to do something new. As women we often hold back, but I believe in taking opportunities when they arise.

"What's happened with my health has thrown me a curve ball, but I have taken it as an opportunity to change my focus and take time to work on smaller projects that had been side-lined. In our industry we push ourselves with long hours and growing can be stressful. I have just taken this as a hint I need to slow down and focus on our own business and family." ●



To keep up to date with our news and activities, join our membership database by emailing [info@women-in-hort.nz](mailto:info@women-in-hort.nz). Everyone is welcome.



# Horticulture Conference 2021 will be a winner: register now

*Growers and all those associated with the horticulture industry are sure to benefit from attending the Horticulture Conference 2021: Resilience and Recovery (5–6 August 2021 at Mystery Creek).*

**"We have put together 2021's programme with everybody in our industry in mind: from growers, packhouse operators, and logistics companies, to wholesalers and retailers, and researchers," says HortNZ chief executive, Mike Chapman.**

"Labour shortages, climate adaptation, the weather, freshwater, biosecurity and farm plans are all big-ticket items for horticulture, and have been for some time. Covid-19 has added extra complexity to our industry, however, during the New Zealand-wide lockdown last year, the entire industry - with government - came together to ensure New Zealanders had fresh fruit and vegetables to eat, not just during the lockdown but in the months after it as well.

"This shows just how adaptable the horticulture industry is."

Mike says growers are facing uncertainty around labour and increased compliance.

“Also, national, regional and district plan changes mean that growers and the wider industry’s ability to plan with confidence is being eroded. This is where industry organisations like HortNZ have a role to play in advocating for growers’ continued ability to grow and prosper.

"The conference will encourage the industry to look to the future, while taking practical steps now around health and well-being, and short to medium term planning.

"I am confident that our diverse range of speakers will stimulate discussion, offering insights and perspectives as well as practical advice, from New Zealand and overseas speakers."

Mike says the length of the conference has been reduced, in keeping with current sentiments.

"What we offer you this year is quality over quantity, value for money and your investment of time. We will also be ready to move to an entirely online conference, should domestic conditions change." ●



Go to <https://conferences.co.nz/hortnz2021/> to view the full programme.

Also go to <https://conferences.co.nz/hortnz2021/> to sign up for the conference.

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Hail-damaged  
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Students from the Motueka Steiner School at pear harvest





Freshco Nelson general manager Peter O'Sullivan

COVER  
STORY

# Employer of choice

*Every seasonal worker at Freshco Nelson gets a \$500 bonus once they have worked 300 hours for the company. It's part of the company's goal of being an employer of choice.*

By Anne Hardie

**"We've tried to incentivise to get people," says general manager Peter O'Sullivan who oversees the operation that needs 75 seasonal employees as well as the 12 permanent staff to run efficiently. From the beginning of the apple harvest at its hub in Stoke, it operates 5.5 days a week and usually packs about 40,000 bins of fruit, though that's down slightly this year due to hail and size issues.**

Its location is a drawcard for seasonal staff who don't have far to travel and can bike or use public transport to get to work. Paying above the minimum wage also helps and Peter says the company decided from the start to pay more. It doesn't get to the living wage because he says that is just too much of a stretch on the company's bottom line.

The company then added a 'sign on' or 'attitude' bonus which is the \$500 bonus after 300 hours, and that is designed to retain staff and reduce turnover.



**"There's a substantial cost in retraining and turnover. You need a stable workforce."**

That was especially important to the end of April to ensure growers could get all of their crop into the coolstore. Peter says Freshco needs to keep pushing fruit out the door in containers and onto ships to make room for the incoming fruit, and the full quota of seasonal staff is essential to make that happen. Around Easter, space in the coolstore is getting tight, but once the harvest is complete and all the fruit is in the coolstore, the pressure comes off and it's not as critical if some staff don't turn up.

Another incentive to attract and retain staff was the decision to supply lunch every day.

"To me personally, it is the best incentive we've done. Even key permanent staff enjoy it and we've found that it is a benefit to the culture of the workplace and everyone



*Apples being packed in late April at Freshco Nelson*

is enjoying it. We make things that are simple, safe and a good hearty meal and they go to work in the afternoon feeling good. Some previously had a culture of two-minute noodles and if we can introduce some better eating habits, that's a great thing. And some who usually had no lunch at all now have something."

Plus, he personally thinks there is a tangible benefit of increased productivity in the afternoon.

“

**We make things that are simple, safe and a good hearty meal and they go to work in the afternoon feeling good**

Yet another incentive is a \$120 raffle on Saturday which is drawn out of the hat by those working that day.

"We went through the first couple of Saturdays with 25 sick, so we thought we'd try something."

The company still has a daily absenteeism between seven and 11 people each day and Peter says that's just a reflection of the workforce this year. But staff turnover is less than other years and he thinks that is due to the opportunities presented by the company.

It usually employs 40 Recognised Seasonal Employer (RSE) workers through the season, but 13 went home to Tonga in October and they were replaced with Supplementary Seasonal Employment (SSE) workers. The remainder of the workforce is sought on a Kiwi-first basis through Work

and Income and Peter says there have been some really good employees taken on board via that route this year. Any shortage after seeking Kiwis is topped up with people working in New Zealand with SSE visas and those with a Working Holiday Visa (WHV).

The RSE workers have a crucial role in the workforce, providing the experience to guide the new seasonal workers at the beginning of the season. In the past, the company had a significant number of returning Kiwis each year who knew the ropes at the beginning of the season. But Peter says that has got less and less over the years, probably due to the lowering unemployment rate.

"Outstanding employees go to find a full-time job and good luck to them. Sometimes it's easier to get a permanent job after you've had a (seasonal) job, so I think it assists people."

Nowadays there's only a handful of returning seasonal staff each year, which leaves a large number to train, and that is done in groups. RSE staff are the first to begin the new season and they then help train new staff, with some taking on coordinating roles.

"To have that consistency with the RSEs coming back year after year is hugely important to us," Peter says. "We have 12 permanent employees and if on day one we had 75 people to train, it would be a significant challenge," he says.

"Labour is one of our largest commitments from a financial point of view, and to get a workforce confident and efficient as soon as possible is something we strive to do."



Even bigger than labour for the company has been shipping, which has posed a “massive challenge.” Last year they had one bad shipping week when Covid-19 threw a spanner in the works, but then it got moving again and they were able to ship containers of apples out of the port as per usual.

“

**To have that consistency with the RSEs coming back year after year is hugely important to us**

This year, Freshco’s South Island regional manager Grant Osmond says there’s a lack of empty reefer containers due to all the dry goods now coming into the country since Covid-19. Added to that are the delays and uncertainty in shipping. Grant says the shipping schedule has been changing almost daily, putting pressure on the entire supply chain.

“We’ve had containers get down to port and be turned away. We have had port omissions where the vessels are so far off schedule that they decide to miss the port to catch up time.

“If we can’t ship, we can’t pack, and if there’s no empty bins the fruit stays on the trees. The shipping challenges at the



*Incentives have been used to make Fresco an employer of choice*

moment are extreme. We’ve got coolstores full of fruit and the ships are just missing ports – they’re late or not calling at all.”

From this perspective, the weather has been a very mixed blessing. Without the hail in the region, the apple crop would have been bigger and put more pressure on the coolstores and the shipping schedule. ●



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# Planning for the future: automation at Taylor Corp

*Family-owned apple growers and packers, Taylor Corporation, are driven to automate their Hawke's Bay business.*

By Rose Mannering

**Kelvin Taylor and his son Cameron have a constant eye on new technology that will enable them to cut down the number of staff required to pick and pack their crop. Their labour reducing goals could not come at a better time with the Covid-19 pandemic adding to an already tight labour market.**

Taylor Corporation is a true family enterprise; Cameron grew up in the cot alongside his mother working on the packing line, and as children all the Taylors worked on the line. Now his own 12-year-old son is unable to do the same because it contravenes Worksafe laws. Cameron worries that New Zealanders "will lose our No. 8 wire, Kiwi can do attitude".

Kelvin's grandfather first began orcharding at Longlands, near Hastings, then he was followed by his father Wally. Wally was an innovator and was the first to adopt a

complete orchard in the Don McKenzie single leader method of growing apple trees 50 years ago. He was also the first to buy a hydraulically operated tractor. "Our motto is if you are standing still, you are going backwards," says Kelvin.

Seven years ago, the Taylors began focusing on technology in their packhouse, introducing automated apple sorting. This removed the need for people on the sorting tables, as this is now all done with cameras. Colour sorters and defect sorters have become an essential part of the packing operation, and defect sorting gives an early warning of possible disorders that might be prevalent in any given season.

Kelvin says they have been waiting for technology to catch up so they can automate their packing line. "It is a couple of years away; companies like Compac, Hawk and Robotics



Plus are getting closer to the packing line automation that we want.”

So instead they focused on areas where technology was available, looking at robot stackers and self-drive forklifts.

Three autonomous mobile robots – Ottos, model 1500, were purchased from Clearpath Robotics in Canada in 2020. The driverless forklifts arrived in early 2021.

CR Automation in Hastings installed the machines, following Zoom meeting instructions from Canada. Getting the new technology operating at full capacity is still evolving, and the speed at which the Ottos work will be improved. Covid-19 implications have meant the Otto team were unable to come out to help set the machines up in the New Zealand working environment.

The packing line is designed to pack 1,800 cartons per hour and three Ottos were purchased to manage this. At the moment in the Taylors’ Taradale packing shed they are doing between 1,000 and 1,300 cartons per hour depending on the variety. Kelvin and Cameron now believe they have the new technology on site and integrated into their operation.

The next item on their automation shopping list was robot stackers; the two ABB Swedish designed machines each have the capacity to pick up four apple boxes, then three

boxes, to build full pallets ready for shipment. Each robot stacker can stack four different counts at a time, up to 900 cartons per hour. The Taylors have the robot stackers doing 80% of the stacking work, and the remaining 20% is being done by hand.

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**... they have been waiting for technology to catch up so they can automate their packing line**

The Franklin Road post-harvest facility is a busy place during the season, loading out on average 10 to 12 packed 40-foot containers a day, ready for export. Over the next few years Kelvin is keen to replace all the conventional forklifts with the self-drive Ottos, particularly this season with labour so tight; “finding enough good forklift drivers to turn up each day is near impossible” Kelvin says.

“We eventually want to get the packing line to around 20 staff; their role would be more technical, working from the control rooms, looking after machines and ensuring the packing line runs smoothly.”

In mid-May, there are 60 people working on the packing line alone, packing NZ Queen for the Chinese market, with

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Cameron and Kelvin Taylor in their Franklin Road packing shed with the robotic stacker in action

all staff required to wear masks, hats and gloves. Other staff are helping stack, and at least another 25 people are in other roles such as forklift driving and control room operation.

"We are motivated to do something going forward, this is our big mover," Cameron believes. Labour is becoming increasingly more difficult to find, and packhouses are the easiest to automate. The profile of staff employed in the packhouse will move from casual factory type positions to people with good automation and computer knowledge.

Prospects for automation out in the field, however, are still a long way off, which Cameron says is very concerning given the labour shortage in New Zealand. Kelvin believes effective robotic picking machines are still a number of years away.

With this in mind, the Taylors have been doing what they can to make harvest on the orchard more painless than the traditional centre pyramid trees which require ladders, and a good strong back to pick.

“

**the Taylors have been doing what they can to make harvest on the orchard more painless than the traditional centre pyramid trees which require ladders, and a good strong back to pick**

All new plantings which are a part of their 400 hectares of apple orchards have been developed with machine or at least machine assisted harvest in mind. They have adopted their own 'wall' system of growing apple trees, which is an intensive 2-D system.

At their new development in Valley Road, Raukawa, the tree width is kept to 400 mm down the rows, but the Taylors have kept with the more traditional row spacing of 2.8 metres between rows to allow easy access for tractors and trailers. They believe their wall system will yield up to 100 tonnes per hectare, a figure they can live with. They plan to continue utilising the new system with future plantings.

On their wall system this season, pickers did not use picking bags at all, but rather picked into trailer trains, placing the apples directly into the bins, the tractor drivers influencing the speed of picking. A crew consisted of a team of six pickers, three on each side, with each picker responsible for picking fruit in either a bottom, middle or top wire section of the wall; after a period, the crew would rotate positions. The crew were paid on a team piece rate and each person is picking at least one more bin a day using this system compared to conventional ladder picking.

They say their wall system is similar to the 2-D system developed by Plant & Food Research, the Future Orchard Production system, or FOPs, but the wall requires a lot less time in training. Laterals are laid down at the beginning, then growth is hedge-trimmed using a robust German machine, Fruit Tec's Edward 2000. Pruners still need to do



a quick walk through to reduce any upright growth with the wall system of growing.

Cameron says they have successfully converted traditional systems to the wall 2-D system in up to seven-year-old trees. They have worked in conjunction with Len Thompson from Johnny Appleseed in evolving the new system.

Kelvin believes the German hedge-trimmer is the Rolls Royce of trimmers, as it is robust and they expect it to last. They found converting four or five-year-old trees to the wall did not result in a loss in production, as fruit recovery was higher than expected. However new plantings at more intensive spacings are expected to yield even more.

Thinning is done using a Darwin, made by the same company. This machine is used at full bloom, with rubber strips rotating at high speed removing random blossoms and leaves, causing the tree to go into shock. The speed of the machine going through determines the impact on flowering and fruit numbers. This job can be highly stressful due to the brutal nature and risk involved but is highly effective when done properly. "The Europeans joke that due to the need to be brutal, you should get your neighbour to do your orchard and you do theirs."

They are looking at improving light penetration by plucking leaves off to enhance colour, using plucking machines similar to those employed in the grape industry.

"Reducing labour has definitely been our main driver; sometimes automation can be more expensive," Kelvin says. The trailer trains have enabled a wider section of labour to be used as the job is less physical.

Keeping with the family motto, they are pinning their hopes on two new varieties to which, along with Golden Bay Fruit, they hold the marketing rights. These two varieties have been developed at Plant & Food Research. At this stage they are known only by their breeding names: 93 is an early season apple, and 003 a mid-season apple.

“

**Reducing labour has definitely been our main driver; sometimes automation can be more expensive**

The Taylors have received recognition for their innovative attitude towards technology, Cameron winning the HB Horticulturalist of the Year award in 2020. All of Kelvin's children are involved in the business in some way. Cameron's sister Natalie, and her husband Steven Hartley, embraced horticulture when they returned from living in Scotland 10 years ago. Steven has since graduated with a Diploma in Horticulture Production (Fruit Production - Level 5). Steven and Natalie own their own orchard that supplies Taylor Corp, and Steven works with Taylors' orchard managers co-ordinating staff training. Kelvin's eldest daughter Claire and her husband Andrew Fisher, have worked in the management and logistics side of Taylor Corp for more than 20 years.

The packhouse offers the greatest capability to automate and they accept as with any new technology there will be teething problems. However, they are happy to continue their journey into new and ground-breaking technology, a family trait they don't plan to change. ●

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Samoan RSE workers Mikaele Pua and Tom Taofinu'u picking raspberries with Richard Bibby in Hawke's Bay

## NZGAP Contractor Standard raising the bar for worker welfare



*The NZGAP (Good Agricultural Practice) Contractor Standard is rolling out, with Thornhill being the first contractor to gain audited accreditation. Richard Bibby, manager of Thornhill contracting, says that it has already been really positive since becoming certified with the new standard.*

By Hugh Chesterman : HortNZ

**"Our clients have been really happy with the new standard," said Richard. "It gives them an extra level of confidence that we're an ethical employer and meet labour compliance standards."**

"The Contractor Standard is an extra layer of safety for our clients. It enhances our relationships with the growers that we work with because they know that all workers on their site are being treated fairly and well.

"It's not just talk; we're actually making positive changes for our staff and improving things. You can step onto an

orchard, vegetable paddock or vineyard and talk to the workers and see that we're making genuine improvements to their welfare.

"We're getting more requests from proactive growers who want to be able to tell their customers with certainty that, from paddock to plate, all their staff are treated fairly, and they meet international welfare standards."

The NZGAP Contractor Standard enables contractors to demonstrate compliance and supply services to both NZGAP and GLOBALG.A.P. certified growers. By choosing





Thornhill's Thai workers harvesting squash for Brownrigg in Hawke's Bay

to use a certified contractor, there is less due diligence burden on growers because the contractor is vetted and regularly audited to New Zealand and international worker welfare standards. NZGAP Contractor Standard certification gives growers assurance that their contractor is fully compliant.

"The Contractor Standard gives a lot of clarity between GLOBALG.A.P. and GRASP," said Richard. (GRASP is GLOBALG.A.P. Risk Assessment on Social Practice.)

"With the Contractor Standard, we're covering all of the required labour compliance – plus more with things like financial wage records – which is a big part of being a compliant contractor.

"There has been a lot of nervousness with using contractors because of people getting caught out with bad contractors. The standard gives comfort that a contractor meets welfare standards, which is backed up by a rigorous audit."

“

**There has been a lot of nervousness with using contractors because of people getting caught out with bad contractors. The standard gives comfort that a contractor meets welfare standards, which is backed up by a rigorous audit**

From the regulatory side of worker welfare, the Labour Inspectorate is also very supportive of the standard. Kevin Finnegan, a Labour Inspectorate regional manager with the Ministry of Business, Innovation and Employment (MBIE), says that the standard will raise the bar for contractors in the industry.

"It's really positive that industry is taking ownership of worker welfare," Kevin says.

"Industry initiatives like this show consumers that they can trust that no one's being exploited in the production of that produce. It helps to give all growers more awareness of how important employment standards are to the whole supply chain.

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Tongan RSE workers planting 'Rockit' apples in Hawke's Bay

"The Contractor Standard will help growers know that they only have compliant contractors on their property. This helps provide security by knowing that your supply chains aren't being corrupted.

"We're seeing consumers, particularly younger people, starting to demand sustainability and social responsibility with how they spend. MBIE has done consumer studies through Consumer NZ which shows that these values are top of mind when making purchasing decisions.

"The Contractor Standard will definitely raise the bar. It's another move in the right direction for the sector to show the consumer that they are an industry that cares about its people."

Damien Farrelly, manager of the NZGAP scheme, is delighted to see that the Contractor Standard is finally being rolled out after over a year of development with stakeholders.

"Contractors play an important role in supplying labour within the horticulture industry, so increasing trust in contractors is critical. We developed the NZGAP Contractor Standard alongside regulators and pilot contractors who helped develop this highly credible programme.

"The NZGAP Contractor Standard has very robust assurance processes around it. Contractors go through an

independent vetting step to assess their suitability, to prove they have a good track record, before acceptance to the programme. Once in the programme, they progress to the independent audit stage where they are assessed against food safety and social practice requirements.

"Growers can check the certification status of contractors on the NZGAP public register, greatly reducing the compliance burden on growers. This significantly simplifies the due diligence process and enables growers to get on with growing.

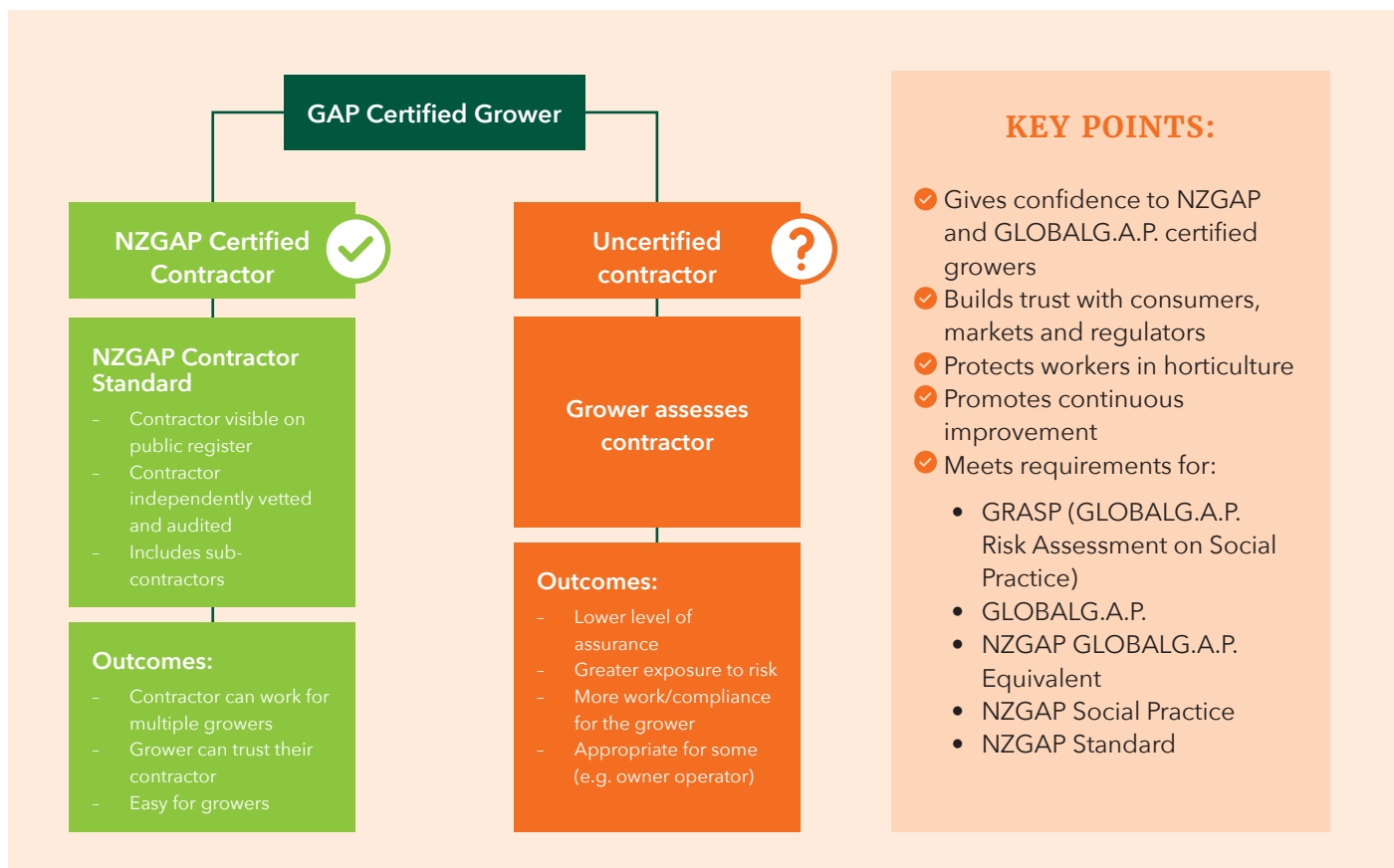
"The programme can apply to all contractors, but is primarily aimed at labour-hire contractors involved in harvest, packhouse and produce handling, agrichemical application, and fertiliser application. Growers may decide, however, that the basic due diligence process, or grower assessment, is sufficient for some contractors, especially if they are owner-operators.

"Those certified to the NZGAP Contractor Standard can demonstrate in a credible and transparent way that they are an ethical employer and meet recognised social practice standards and employment laws. In other words, that these contractors are looking after their most important resource – their people." ●



**The programme is primarily aimed at labour-hire contractors involved in harvest, packhouse and produce handling, agrichemical application, and fertiliser application**





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Hamlin Road Organic Farm team coach Sarah Hewitt

## Growing pathways

*Tucked away in South Auckland is a special type of organic farm that helps people grow while they tend the land.*

Words and photos by Helena O'Neill

**Hamlin Road Organic Farm is run by Pathways, a community-based mental health, addiction, and well-being service which offers people employment and education.**

In 2002 Pathways acquired the land and funding to start Hamlin Road Organic Farm. They brought together Pathways staff, people who used their services, whānau, business people and community members to share their ideas on how Pathways should use the land.

The farm started as an organic, free-range operation selling eggs alongside a small amount of watercress. In 2013 and 2014 the operation moved to solely horticulture.

Farm team coach Sarah Hewitt says the shift to a sole horticulture operation was not without its challenges.

"We've got clay soil here at Ardmore along with a high water table."



With good drainage and raised garden beds, between three and four acres of the five-acre site is now planted out. The orchard has 60 citrus trees along with avocado, apple, peach, pear, fig, plum, and feijoa trees.

One 50-metre and six 25-metre shade houses also offer more variation in what the farm can produce alongside its orchard and outside gardens, she says.

Two propagation houses offer plenty of opportunities for trialling different plants and growing methods.

"I love doing different trials. We're always exploring if we have the best seeds or if our practices are the best way. We will do trial beds next to each other. For example with coriander we would soak the seed in hot water, we would soak the seed in cold water, we wouldn't soak the seeds."

"We've got some covered crops and we've just started doing some mustard seeds. We've also closed down some beds and are trying to get some approved plastic that we can use."





Team at work

The farm sells its produce to Auckland wholesalers Ceres Organics and Fresh Direct, as well as at the farm gate during work hours and through its website. They are also long-standing stallholders at the weekly Clevedon Village Farmers' Market.

"The online webstore is an ever-growing business for us. It's been awesome.

"When Covid-19 hit we had an absolute influx of demand. We rebranded and created a webstore – it had been a dream of mine for years to have a webstore."

The farm has seven permanent staff who work alongside the current 18 trainees.

"We provide a transition to employment skills. It's about getting people back to thinking about work, getting work ready, all the things that come with that. An employer-employee relationship with heaps of support."

Trainees start off on a six-month contract and can stay up to 12 months. To be eligible to become a trainee, you need to live in Counties Manukau, be between the ages of 18 and 65, and have "lived experience" of mental health or addiction challenges.

"Some people just need us for a little while, a stepping stone, and then they're away."

While trainees are working on the farm, they can also study towards NZQA horticulture standards, through a partnership with Primary ITO.

Some trainees have stayed in the horticulture industry, securing local horticulture jobs, while others have moved on to very different industries, Sarah says.

"A lot of our staff members have moved up from being trainees."

For the past seven years, the farm has also run a lawn mowing business within Papakura, Papatoetoe, and Manukau, using two staff and one trainee on the mowing run.

Sally Pitts-Brown, chief executive of Pathways, says the farm is a living example of the organisation's dream to transform mental health and addictions through fostering strong, compassionate, self-supporting communities.

"Every purchase of our organic produce goes towards helping people in the local community with mental health challenges to gain valuable paid work experience, learn skills, gain qualifications and build confidence while they prepare for permanent employment elsewhere.

"We are also keen to talk to like-minded people who might want to invest in the important work that we do and help us grow new opportunities and support even more people." ●



You can order Hamlin Road Organic Farm's fresh produce from their website [www.hamlinroadfarm.co.nz](http://www.hamlinroadfarm.co.nz), stop by their roadside stall, or visit them at the Clevedon Village Farmers' Market.

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Students from the Motueka Steiner School at pear harvest

## Avenue for damaged fruit

*A plea from a local primary school led to Nelson's Chia Sisters turning hail-damaged pears into a juice that is now being sold throughout the country and has created an avenue for future hail-damaged fruit.*

By Anne Hardie

**Chia Sisters is a family business in Nelson that began making fruit drinks with chia seed back in 2012 and grew in size and diversity to a dozen staff and a mix of fruit drinks, sparkling coconut water, smoothies, and more recently their mum's homemade muesli which is delivered around the country.**

One day earlier this year, a post on their Facebook page was a plea from the Steiner School in Motueka about the possibility of turning hail-damaged fruit into juice. The school usually received proceeds from pears on the orchard next door to fund its biodynamic farm. But this year the Boxing Day hailstorm that pummelled the Motueka area left in its wake damaged fruit of no value – and it was being left on the tree.

The response from Chia Sister Chloe Van Dyke was, how can we make this juice happen? They were only talking about a small amount, so some of the team from Chia Sisters joined the school one day to pick some of the pears,



which they purchased from the school at juice value and turned into 1,000 litres of juice to sell mostly online. Artwork by one of the students and the names of those who picked the fruit grace the label on the bottles, and 20% of sales went back to the school.

That was just the start. While picking pears in the orchard, Chloe was stunned by the sheer volume of wasted fruit that would be left.

“One of the things that struck me out there was how small a dent we were making. The waste issue really hit me. But to have a bigger impact, we needed a commitment from someone to buy it.”

They had to move fast as they had a small window of opportunity to pick the pears while they were still in reasonable condition. Chloe says that first run of pear juice tasted beautiful and when they asked Countdown to come





The Chia Sisters, Florence (left) and Chloe Van Dyke



The pear juice is labelled with artwork by one of the students and includes the names of those who picked the fruit

on board with some of the hail-damaged pears still on the trees, they got the green light to turn 8 tonnes of pears into juice.

"Which is tiny in the scheme of things, but that was what we could pick at the time," Chloe says. "I was really surprised how quickly Countdown could act, but it was a food waste initiative Countdown was keen to support."

The bottled juice was distributed to 180 Countdown supermarkets around the country at the beginning of May, and about 700 bottles sold within the first week. The school gets \$1 from every bottle sold, which equates to about \$5,000 on top of the first run of pear juice.

"We've learnt how to design a process where we can act really quickly from designing a label to picking the fruit to get it into a bottle. I'd like to think that if there is hail damage in the future, there is a process we can follow; and we could do it with other fruits as well like boysenberries, kiwifruit and apples."

The special edition pressed pear juice was made in the company's solar-powered, zero-carbon juicer which is in line with the philosophy of the Chia Sisters, Chloe and Florence, of caring for the planet they live in, the communities they operate in and the people they work with. That philosophy led to the company gaining B


Corporation certification recently, which is about balancing purpose and profit. That means considering their impact on employees, customers, suppliers, community and the environment.

Chloe says all the fruit for their products is grown within a 20km radius from the factory and they continue to look for sustainable protein sources.

“

**One of the things that struck me out there was how small a dent we were making. The waste issue really hit me. But to have a bigger impact, we needed a commitment from someone to buy it**

Last year was a year of innovation at the factory after cafés closed during lockdown and juice sales dropped for a longer period. This prompted them to create a honey, lemon, ginger and turmeric hot tonic last August, which was test run online and sold out within 24 hours. It then joined the product list and by November was in supermarkets in Hong Kong. ●




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*Nikki Johnson has stepped down from NZKGI to take up the position at Zespri Global Supply (ZGS) of strategic projects manager based in Bologna, Italy*

## Water strategy and employment image among highlights for Nikki

*Italy and Zespri global supply beckon.*

By Elaine Fisher

**Helping develop a strategy to protect and enhance water resources while enabling the kiwifruit industry to grow, and raising the image of the industry as a great one to work in, are among the achievements of Nikki Johnson's five-year tenure as chief executive of New Zealand Kiwifruit Growers Inc (NZKGI) that she is particularly proud of.**

Nikki, who stepped down in April, has joined Zespri Global Supply (ZGS) as strategic projects manager based in Bologna, Italy.

While in the past, access to water has been reasonably straight forward, Nikki says government regulations, competition for water use and projected industry growth means issues around water are becoming more complex. Helping growers understand and prepare for those

challenges, was the motivation to form the strategy 'He Wai mō Āpōpō - Water for the Future'.

It is a collective approach which included input from growers, water consultants, Zespri, NZKGI, the Māori Kiwifruit Growers Forum and HortNZ.

"Five years ago, we didn't have a water strategy but when we recognised what was coming (including freshwater regulations and public perceptions) the aim was to get in front of the issues by forming a strategy.

"It was a big project which required a lot of collaboration within the industry. It's been about taking people on a journey to understand the reasons why we need a strategy; to communicate to growers the problems we are trying to solve, how we can do that and why it is so important.



"It is always better to respond proactively as you have more time to prepare. Forming the strategy has given growers the confidence that we are looking after their and the industry's interests. It also shows the public that the kiwifruit industry understands its impacts on water and is taking appropriate action."

Work which Nikki and the NZKGI team initiated to help attract labour to the kiwifruit industry more than proved its worth when the Covid-19 pandemic sent the country into lockdown just as the harvest was about to begin last year.

"Three years ago, we identified that there was a perception that jobs in the kiwifruit industry were low paid with little opportunity for advancement. We began our Labour Attraction Strategy with a big push, through media and social media campaigns, to explain the many opportunities the industry offers. We also set out to make sure people employed in the industry are respected and looked after.

"I can only say that the message is getting through and our industry is seen in a lot more positive light, which has played a big part in attracting people to work in kiwifruit in the last three seasons."

With the Labour Attraction Strategy communication channels already in place, sourcing staff to work during harvest last year and this year has not been the crisis it could have been. "Although there were still vacancies, we didn't have a massive labour shortage this season."

“

**Our industry is seen in a lot more positive light, which has played a big part in attracting people to work in kiwifruit in the last three seasons**

When Nikki joined NZKGI in 2016, it operated with just two full-time and one part-time staff member from a small office in the old Zespri building at Mount Maunganui. In 2021, the NZKGI office where seven staff work, while still modest in size, is part of the new, modern Zespri complex.

Nikki jokingly remarks that "a lot of people at Zespri may be breathing a sigh of relief at my departure because I have irritated them constantly for five years." That 'irritation' has always been with the aim of achieving better outcomes for growers.

"I have a strong sense of responsibility to growers, including ensuring they receive value for money through the levy they pay. I look through the lens of - is this the right thing for growers and will it result in the best outcome for growers?"



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Five years ago, growers paid 0.9 cent a tray in levies. They now pay 1 cent a tray. The upward movement in tray numbers has also increased the NZKGI income and capability to represent and support growers.

In the last five years NZKGI has significantly increased its advocacy on growers' behalf at government level. While Zespri's connections and influence as the country's largest horticultural exporter has played a part, NZKGI now has its own level of influence with many government ministers.

Early on in her role, and to make NZKGI more effective, Nikki established six portfolios; industry stability, performance, communications, labour and education, external relations and organisational management; giving individual staff and forum members responsibilities for portfolios which suited their skill sets.

"Our portfolios allow us to share with our growers and the public all of the work we are doing to build strong careers, raise the industry's profile within the education sector, provide support for growers, preserve the single point of entry and monitor Zespri's performance."

Almost everything which happens within the industry "comes out of left field" Nikki says. "No season is ever the same. It can be relentless. We get through one thing and that is eclipsed by another. However, that's great. It keeps everything fresh. No one will ever get bored in the NZKGI office."

“

**I have a strong sense of responsibility to growers including ensuring they receive value for money through the levy they pay**

Nikki sees the kiwifruit regulations, which give Zespri exclusive right to export New Zealand grown kiwifruit to the world (with the exception of Australia) as "a choice our growers have made to work collectively. These regulations are not available to other industries and we need to ensure they work in the interests of growers."

"Growers need to continue to see the benefits the SPE (single point of entry) brings, including from the Zespri brand and the marketing spend. It is NZKGI's role to be the voice for New Zealand's 2,800 kiwifruit growers, providing practical support and acting as an advocate for the industry at government level."

After five years learning about the kiwifruit industry (and admitting there's still a lot she doesn't know) Nikki felt she couldn't walk away from it. "As I move on to my role in Zespri Global Supply I am pleased to still be working for New Zealand growers, just in a different capacity. It has been a privilege working for New Zealand's kiwifruit growers and it has delivered many opportunities, experiences, and challenges."

“

**If there is ever a good time to step away then it is probably now. NZKGI has a strong identity, strong leadership and a team of outstanding, committed staff that will continue to represent growers' interests**

After five years of constant challenges Nikki is now facing two immediate new ones – learning Italian, and venturing from New Zealand's safe Covid-19 "bubble" to the outside world.

"I'm having regular Italian language lessons and hope to have a Covid vaccination before I leave."

Reflecting on five years as NZKGI's chief executive Nikki says: "If there is ever a good time to step away then it is probably now. NZKGI has a strong identity, strong leadership and a team of outstanding, committed staff that will continue to represent growers' interests."

NZKGI chairman Mark Mayston says Nikki has provided strategic leadership on a plethora of issues, including Zespri performance reporting, labour access, compliance and regulatory change.

"Nikki has also vastly improved NZKGI's relationship at the local and national government level and received funding for two positions to coordinate the labour and education portfolio, negotiated increases in the Recognised Seasonal Employer (RSE) scheme cap as well as successfully negotiated through the 2020 Covid-19 lockdown and its aftermath. This has all been done with only an 18% increase in levy income (2016-2019).

"Nikki's job has certainly not been plain sailing. Growers require NZKGI to be nimble and responsive to mitigate risk and deliver success for growers throughout the industry's steep growth trajectory."

Colin Bond, who is NZKGI's new chief executive, has an impressive track record over the past 22 years with ANZ bank, particularly in his most recent role as regional manager – commercial and agriculture. He also owns a kiwifruit orchard. ●

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Angie and Duncan by de Ley are developing a Zespri SunGold organic orchard on the site of a former avocado orchard near Katikati in the Bay of Plenty

# Avocado orchard converted to organic gold kiwifruit

*Organic conversion about ‘doing the right thing’.*

By Elaine Fisher

**It’s bold to purchase a mature, productive avocado orchard, remove all the trees and begin the extensive and expensive conversion to kiwifruit, but that’s exactly what a Bay of Plenty couple have done.**

Late last year Angie and Duncan by de Ley bought an 8.75ha orchard just north of Katikati, harvested the fruit then brought in men and machines to fell and remove the trees and grind out the stumps.

Within weeks another team arrived to begin preparing the site for the installation of support structures for what will be a new organic Zespri SunGold orchard.

The motivations are many. Duncan’s long and successful career as a coach for Rowing New Zealand had been impacted by the travel restrictions of Covid-19 so he was keen for another interest and project.

Angie, whose own successful career has been in radiology,



shared the new project goals. Together they believe growing kiwifruit organically is also the right thing to do.

Their search for the best land and location to do that eventually led to the avocado orchard, favoured because it has a reliable source of water, mature shelter and enjoys a coastal climate.

“We observed this area for six months and due to its contour and position, there is not a lot of wind here, but we will put in more shelter over time,” says Duncan.

Even more than all the site’s advantages was a desire to do the right thing by the environment, spurred on by the views of their adult children, Anneke, Janette and David (especially Janette).

“Our children are highly aware of the environment and climate change, which is something we share, so we decided we needed to put our money where our mouth



Ryan McDonnell (left) is the by de Ley orchard manager, working closely with Seeka organic category manager Jon Merrick

is and do something positive – that was very much the momentum behind our decision,” says Angie.

So committed were they to the project that Angie and Duncan invested in the orchard and its conversion even before they had secured a Zespri licence to grow Organic SunGold.

However, by April the couple’s tender for budwood had been successful and planting will begin in July. The young gold vines will be grafted onto Bruno rootstock in 6ha. The balance of the orchard includes a small block of Hayward green kiwifruit, currently in transition to organic status, and 60 younger avocado trees, the fruit from which will be for the local market.

“We planted organic radish seeds to help condition the soil and have organic grass seed mix on order to be sown soon,” says Duncan. Radish plants can perform ‘bio-tillage’ by growing large taproots which disturbs soil in the upper 20cm or deeper, helping to alleviate compaction issues.

The orchard’s soil is sandy loam, fertile and free draining. With the combination of a great site, a reliable water source for irrigation and the proven performance of SunGold, Duncan says making the investment was a ‘no brainer’ and he and Angie are confident the orchard will perform well.

“I have wanted to be involved in an organic project for some time as after all we are custodians for the environment.”

Angie and Duncan are not newcomers to kiwifruit orcharding. The couple, who for 20 years had been dairy farming both in the North and South Islands, bought their first orchard, also near Katikati, in 1997 after Duncan suffered a serious back injury.

“As a result of the injury and subsequent surgery, dairying became just too hard,” says Angie. The Oamaru farm was

sold and the couple, with three young children, moved to the Bay of Plenty to be closer to family and to seek out new opportunities.

“We looked at a number of options, but kiwifruit appealed, probably because growing something on the land was familiar. We are very happy with the change in lifestyle. You can’t leave cows, but you have more flexibility with time out from kiwifruit,” Angie says.

Despite their 24 years of orcharding experience, Angie and Duncan admit to being relative novices when it comes to growing kiwifruit organically so have actively researched and sought out information and advice.

“Glenn Roberts has been a friend and orchard mentor for over 20 years and his passion for organic kiwifruit growing is inspiring for both Angie and myself. He has given us access to his organic orchards to give us valuable learning opportunities in this transition time,” says Duncan.

The couple have also employed experienced organic grower and manager Ryan McDonnell as their orchard manager and are working closely with Seeka organic category manager Jon Merrick.

Angie is responsible for the BioGro organic certification process, something she hasn’t found too daunting. “In radiology I did a lot of work in compliance so the BioGro process has not been too difficult. Viv Cruickshank, the BioGro auditor did the audit and has been very helpful in pointing out what we had to do.”

Finding the right people to guide them is important to the success of their orchard, but Duncan and Angie say opinions on how best to grow kiwifruit organically often differ. In the end it will be up to them to assimilate all the information from different sources and make the decisions they believe best suit their operation.

Despite organic growing of a wide range of crops becoming more prevalent, and Zespri actively encouraging orchardists to grow SunGold organically, Jon and Ryan say organic horticulture is far from mainstream.

“Most growers who have made the change to organics get asked if they are alright, as for many conventional growers making the change is not seen as the logical thing to do,” says Jon.

That’s partly because they believe organic orchards are not highly productive. “But Seeka has packed organic gold orchards producing over 17,000 trays per hectare this season, with one being close to 20,000 trays per hectare.”

The average yield for conventional orchards is around 16,000 trays per hectare, but in 2020 one gold orchard produced 27,000 trays per hectare.





Jon says those who have taken up the latest Zespri organic licences are mainly smaller orchards, not the large commercial operations which are motivated by high tray numbers.

There are reasons for the misconception that organic orchards produce less than conventional, largely because, says Jon, many organic kiwifruit orchards are in locations and at altitudes where even conventional orchards struggle to produce high tray numbers. "They will never be top performing orchards."

On the other hand, he believes the by de Ley orchard, in its prime location and with expert management, should in three years' time have a full canopy growing BioGro certificated organic fruit.

Organic orcharding is not an easy option, and to be profitable, organic growers need total commitment to what they do, says Jon.

"The biggest mistake many new organic growers make is they don't think before going into the orchard and may for instance use non-certified products which could lose them their organic licence." To avoid that happening Duncan has removed all conventional products from his orchard shed.

Ryan, who expects the orchard to produce 6,000 to 7,000 trays a hectare within three years, slowly building to full production of over 17,000 trays, says he has encountered negative attitudes to organic growing.

“

**I have wanted to be involved in an organic project for some time as after all we are custodians for the environment**

"When I go to commercial grower meetings I'm often the only organic grower there, and still get comments about wearing sandals and shorts. Organics is still seen by many as witch-doctoring and many conventional growers see nothing wrong with their growing methods."

One of the biggest challenges facing the by de Ley orchard in its early development will be from phytophthora root rot, a fungal disease caused by the pathogen *Phytophthora cinnamomi*. "This is a major concern. We need to get the young vines up and running as fast as we can so they can cope with the infection which will be left in the soil until all the old root material from the avocados has decayed."

For Ryan organic orcharding must be economically and environmentally sustainable. "This orchard is a commercial operation and as such is a monoculture, not a permaculture. But we may introduce some other plant species such as comfrey at the end of rows to improve soil condition."

He's not keen on growing plants to encourage beneficial insects though. "Beneficial insects need a pest population to feed on and markets like Japan and China have zero

tolerance for pests on fruit." Ryan would rather control the pests with organic products such as oils and *Bacillus thuringiensis*, (Btk) sprays. And fortunately, while attitudes to organic growing may not have improved, the availability of effective organic products certainly has. "The range of new products coming into organics now is brilliant. There are organic oils, coppers, fungicides and a Psa-V product too but sometimes they are in short supply as so many conventional guys are now buying them."

Angie and Duncan, happy there are so many tools in their organic toolbox, are eagerly awaiting the arrival of their SunGold budwood, marking the beginning of an orchard they hope will enhance the environment and provide a legacy for their children and grandchildren. ●

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*More than 20 years after starting their journey to develop the “Rolls Royces” of avocados, Judi and David Grey of Avogrey Orchard have secured the Plant Variety Rights for the green-skin GreyStar and Eclipse varieties, and expect to have a third, Titan, locked down by the middle of this year*

## Tyres to the tarmac as ‘Rolls Royces’ of avocados hit the road

*A dream to market “the best avocados in the world” has taken a giant leap with plant rights secured and a business plan in place to make the trees available around the country.*

Words and photos by Kristine Walsh

**Five years after applying for Plant Variety Rights, David and Judi Grey of Avogrey Orchard last year received confirmation for their Avogrey green-skin GreyStar (April 2018) and Eclipse (May 2020) varieties, and expect to have a third (also green-skin) variety, Titan, locked down by the middle of this year.**

But while confirmation from the New Zealand Intellectual Property Office is new, the journey towards taking

the three varieties to market is well on track. There are already more than 4,000 trees on order or in the ground, and orders for trees for 2022 are already close to closing.

It is exciting times for growers David and Judi, but they say they are going to stick with the business of growing avocados, while leaving others to do the business of doing business.

In that regard, while they are fielding interest from as far afield as Australia

and South Africa, their initial focus is on New Zealand growers.

With Gisborne nursery Riversun on board as sole propagator, Avogrey Heritage Trust has signed a deal with MG Marketing to handle both the tree sales and the distribution of the resulting fruit.

“We already had a deal with MG Marketing to take our own fruit to market so it was a natural extension of that,” David says.





David Grey is delighted with the level of production already seen on his three-year-old GreyStar trees (on Bounty rootstock) and according to his wife Judi, "the potential in terms of both quality and productivity is huge"

"For them, it was all about the quality of the product, and when (product development manager) Michael Breitmeyer asked for a teaspoon to finish the avocado we had given him to taste, we knew he was hooked."

“

**...when Michael asked for a teaspoon to finish the avocado we had given him to taste, we knew he was hooked**

Meanwhile, for the Greys, their sons are working together for the Trust. Eldest son Paul is looking after the legals, while middle son Philip takes care of the social media and publicity.

"All three of our sons are high achievers in their own professions and were never really interested in taking over the orchard, but in this way they can still help realise the dream," David says.

"While the orchard is still our business, the new trees come under the Heritage Trust which is a way for us to leave a meaningful legacy for our children and grandchildren."

And the creation of that legacy comes at an opportune time: 2021 marks 100 years since David's grandfather, Charles Grey (1876-1959), planted the country's first avocado trees at his Waimarae Orchard at Ormond, just north of Gisborne.

Just under 50 years after that, in 1968, David and Judi established their

12.9ha Avogrey Orchard at nearby Waerenga-a-Hika where, though they grow produce from citrus to tamarillos, avocados have always been their true passion.

Then some 30 years after that the Greys started developing their trio of new varieties with the aim of creating the "Rolls Royces" of avocados



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*Orchardists David and Judi Grey have been astounded by the level of production already seen on their three-year-old GreyStar trees (on Bounty rootstock)*

well-fruited trees with produce that keeps great, cuts great, and looks great with a creamy, nutty taste “that knocks existing varieties out of the park”.

Back then, in the late 1990s, the Greys followed the advice of a scientist from the University of California by working with the Sharwil variety, aiming to build on its already phenomenal taste by developing high-yield, healthy trees.

The result? The three new varieties of GreyStar, Eclipse and Titan, so named because of their “out of this world” flavour.



According to the Greys, all three of the new varieties fruit young and fruit heavily.

“We are still measuring productivity, but as an example, we have a 12-year-old GreyStar that even after thinning produced 330 kilograms in one harvest, more than three times what you might expect from a Hass of the same age,” Judi says.

“Even if you have alternate years of full production – which is to be expected – that is a phenomenal yield, so the potential in terms of both quality and productivity is huge.”

The couple admit there could be a small barrier in educating consumers that the new green-skin fruit are not unripe, they are just different.

“But on the other side of the coin, buyers in markets like China see the green skin as being a sign of freshness and good nutrition and are very attracted to it,” David says.

As for that all-important taste, it has taken David and Judi years to decide which of the three new varieties is their favourite, with the recent decision that the Eclipse nips home by a nose.

“That is something we are really proud of, that the quality is so high across all three,” says David. “Each brings its own benefits in terms of season and things like that, but for us, taste is always the kicker.”

The proof, they say, is in the planting, and David is putting his money where his mouth is with a spring 2022 order for a mix of 125 trees of the three new varieties to add to those already on his own orchard, sacrificing some older Hass and Reed trees that have had their day.

“

**Each brings its own benefits in terms of season and things like that, but for us, taste is always the kicker**

Already well into their 70s, David and Judi say they plan to “live forever” if need be to see their varieties thrive both at home and elsewhere around the country and the world.

“As long as we can stay here, we are happy to keep on keeping on,” David says. “The icing on the cake is being able to share our dream.”



## Titan's pollinator status 'a huge bonus'

More than two decades after they began developing their new green-skin avocado varieties, David and Judi Grey know more about them than anyone, but even they have been in for a bit of a surprise.

"It was only last spring when studying the flowers during blossom that we realised the Titan was a B-type pollinator, which was a huge bonus," David says. "Pollinators are often seen as being producers of lower-quality fruit as that is not their primary role, but with the Titan you get the best of both worlds – a cross-pollinator and a marketable fruit of top quality."

That has been worked into the grower information about the three Avogrey "superstar" varieties, which are exclusively propagated by Riversun in Gisborne.

- With its rich, nutty flavour and creamy texture, the **GreyStar** (12-15cm) was developed from the premium Sharwil avocado and is a reliable producer of large, small-stoned green-skin fruit that cuts well with no stringiness. Cropping from an early age and with an upright habit, the GreyStar produces fruit that is mature on the tree between December and March. Weight averages 400g.
- Also offering superb eating and resistance to ripening disorders, the **Eclipse** (12-15cm) offers traits of both the Sharwil and possibly Reed, with ovate fruit that hangs on the tree exceptionally well from April through to June and beyond. Weight averages 400g.
- Again with Sharwil as its reference, the B-type **Titan** (12-17cm) can as its name suggests, weigh up to 700g and has a relatively small stone offering a large proportion of flesh for its size. The Titan balances quantity with quality, with the rich, nutty flavour of its parent stock, and is mature on the tree from November to January.



## Avocado industry shows good growth

According to the New Zealand Horticulture Export Authority, the country's avocado industry continues to expand, with over 2,000 growers, largely across the Bay of Plenty and up to Northland

Between them, those growers currently produce 2% of the global supply from over 4,000 hectares of trees, making this country the ninth largest international avocado exporter.

"The industry is in a position of growth and development with reported returns for the 2019/20 season of \$154 million, an increase on the previous year of \$10 million," says the NZHEA.

"The 2019/20 season saw export volumes rise to 3.8 million 5.5-kg trays (an increase of 26 percent on the previous season) with Asian markets including Thailand, South Korea, Singapore and Taiwan receiving 35 percent more volume, meeting the industry's objective to grow priority markets in Asia.

"Exporters anticipate that 4.4 million trays will be exported in 2020/21 as growth in global demand is being met with a significant growth in supply, attributed to the investment made across the growing regions."

At home, the NZHEA says a record 70 million avocados (worth over \$50 million) were sold on the domestic market in 2019/20, crediting that growth to an increased focus from consumers on health and wellness.

And it says there is more growth to come, NZ Avocado having won the bid to host the four-yearly 2023 World Avocado Congress.

"This will be the first time New Zealand has hosted the event and is an endorsement of the view of New Zealand's place in the global avocado industry." (New Zealand Horticulture: Barriers to our Export Trade 2020, p. 48). ●



*Like its stablemates, the creamy, flavoursome GreyStar cuts well even after a couple of weeks in the refrigerator*



*Supie founder, Sarah Balle, wants to cut food wastage by reducing the number of steps from producer to consumer*

## Supie springs to life

*Sarah Balle grew up on a Pukekohe vegetable farm and saw for herself the increasing wastage involved in getting produce to consumers.*

By Glenys Christian

**So two years ago she decided to focus full-time on setting up Supie, an online supermarket aiming to cut waste by linking producers and consumers more closely. It was launched in Auckland in May, with plans to roll it out progressively to the rest of the country as demand grows.**

"I've been around the industry my entire life, so quality healthy and affordable food has always been a passion of mine," she says.

While Sarah trained and worked as an accountant, she's had exposure to the family business Balle Brothers, throughout her life, as her father, Kevin, is one of the seven brothers. Her siblings have now all ventured out into their own vegetable growing enterprises.

"Predictably I spent school holidays as I was growing up in the paddocks, clipping and bagging onions, of which I still have fond memories."

She was determined to make buying and selling food in New Zealand fair and transparent by reducing the

middlemen, giving consumers a better way to shop for food online. And her solution she believes will help reduce food waste and the impact it has on the environment along with helping to tackle food poverty.

The idea of Supie came from a growing frustration at seeing first-hand how much food was wasted as a large amount of growers' produce didn't reach the exacting standards of supermarkets, as well as seeing the small margins growers achieved.

"Year after year nothing was being done," she says.

There's an estimated 14 million kilograms of food waste in New Zealand annually, and with half of that coming from fruit and vegetables that means \$1 billion worth is being thrown away. The carbon emissions created from dumping it in landfill would take an estimated 150,000 cars being removed from our roads to offset. And it is believed 170,000 New Zealand children are currently living in food poverty.



Sarah says that to truly make an impact and change for good, Supie wanted to flip the traditional supermarket model on its head.

"To do this, from day one our focus is entirely on our partners and customers."

She has worked hard to build trusted relationships directly with local growers, farmers and food producers, spending the past 18 months travelling the country talking to them while sourcing products from over 100 of them for her online store.

"They care a lot about quality, transparency, and hold sustainable values at heart," she says.

"They are people who are dedicated to bringing you the highest quality and freshest food you can get - and New Zealand vegetable growers understand this more than anyone."

That support means Supie can offer some of the best vegetables grown in the country to those who join as members. And she believes the website could break down the traditional barriers around how conventional supermarkets treat smaller New Zealand producers and brands.

"We welcome and allow smaller brands and artisans to sell their products without jumping through lengthy hoops, and with 100% transparency on the margin," she says.

"Not only does this help local businesses reach new consumers, it gives Kiwis access to locally made products that they typically can't get at the larger traditional supermarkets."

She doesn't believe Supie will be in competition with their food delivery services or those of meal kit delivery companies such as Hello Fresh and My Food Bag.

"We don't look at what traditional supermarkets or food delivery companies are doing in the space," she says.

"The similarity is simply that we're based online and we deliver food to our customers' doors."

Supie's warehouse has been set up in South Auckland where personal shoppers will pack customers' orders as they come in for the over 2,500 items stocked at present.

Sarah says being member-based means Supie is able to grow sustainably as a company from regional through to national coverage.

"We have big plans and have mapped out how this may look over the next five to 10 years, although they're still under wraps." ●

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# EXECUTIVE SUMMARY

This 'Executive Summary' is an excerpt from a report titled **New Zealand Horticulture – Barriers to Our Export Trade 2020**, which is commissioned every two years by the NZ Horticulture Export Authority (HEA). This report was released to industry stakeholders in December 2020. Refer HEA website [www.hea.co.nz](http://www.hea.co.nz) for further information.

## New Zealand's horticultural exports were worth \$4.521 billion in 2020 increasing \$903 million (25%) from 2018.

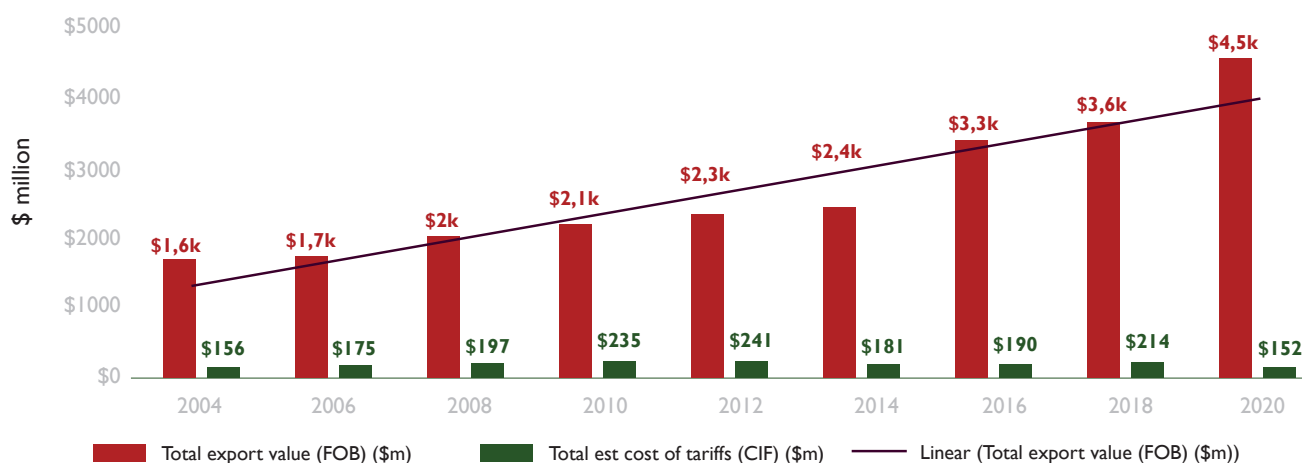
The continuing growth trajectory in horticultural exports is shown in Figure 2.1. Kiwifruit and apples are the dominant horticultural crops accounting for 75% of the total export value in 2020. Kiwifruit accounts for over \$2.5 billion (56%) of the value of horticultural exports. Based on 2020 values, onions, potatoes, and avocados are ranked third, fourth and fifth respectively, as the most valuable horticultural exports. Onions increased 59% between 2018 and 2020, surpassing potatoes and avocados. Potato exports decreased 11%, while avocados increased 14.6% in 2020.

The total **cost of tariffs** on horticultural exports decreased 29% to \$152 million in 2020 from \$214 million in 2018, based on approximate CIF (cost, insurance, and freight) value (refer to Table 3.1). This is despite a 25% increase in the total value of trade over this period. The drop in tariff costs is primarily because bilateral or regional free trade agreements have removed tariffs in many of New Zealand's key markets such as China, Japan, Malaysia, South Korea, Taiwan and Vietnam. Tariffs now account for an average of 3.4% of the value of horticultural trade, which is down from 5.9% in 2018.

Tariffs estimated on horticultural exports to the EU cost the New Zealand industry at least \$61 million (FOB) (or an estimated \$97m CIF) in 2020. For context, this is almost 59% of the total cost of tariffs (\$96 million based on FOB, which converts to \$152 million based on CIF) for all horticulture exports to all markets. India (\$22.8 million) and Japan (\$5.2 million) accounted for 29% of the \$96 million estimated cost of tariffs.

On a localised basis, the estimated loss of income for the 5,000 commercial growers averages \$30,400, down from \$42,800 in 2018.

**FIGURE 2.1** New Zealand horticulture export values and tariffs paid, 2004 to 2020.





Simon Hegarty, Chief Executive,  
New Zealand Horticulture Export Authority (HEA)  
and Market Access Solutionz (MAS)

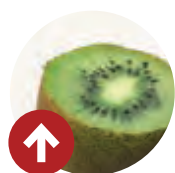
The EU remains New Zealand's most valuable export market ahead of Japan and China. Export earnings between 2018 and 2020 rose 13.6%. With the exception of 2012, the EU has been the top ranked market destination each year since the first report in 2004.

In 2019 and 2020 Japan was the second largest market, moving above China in third place. Australia and Taiwan are placed fourth and fifth, respectively. The USA and South Korea retain sixth and seventh positions. Vietnam has moved from tenth to eighth, showing steady growth, with export value doubling between 2018 and 2020. The Vietnamese market is now valued at \$124 million and ranks above Hong Kong and Thailand.

Over the longer 10-year timeframe, China and Vietnam have been the big upward movers, while exports to Japan and Taiwan have doubled. The EU market has increased by more than 50% however, Australia has only shown modest growth.

Asian economies continue to grow in importance. ASEAN member countries, especially Indonesia, Malaysia, the Philippines, Thailand, Singapore, and Vietnam were collectively worth \$425 million in 2020, an increase of \$150 million from 2018.

#### CHANGES IN THE EXPORT PROFILE OF SOME EXPORT PRODUCTS, COMPARED WITH 2018:



**Kiwifruit** exports exceeded \$2.5 billion in 2020, representing a 36% increase in value from 2018. Kiwifruit continues to achieve increased returns of \$3,989 per tonne in 2020. Much of the growth is a 69% increase in export value to \$670 million to Japan. Japan has replaced the EU as the number one export market.



**Apple** exports were \$881 million in 2020, this is a \$147 million (20%) increase. Most of the growth has been to China which increased 104% to \$155 million, and to Vietnam which increased 117% to \$89 million.



**Onion** exports increased nearly 60% to be worth \$147 million in 2020 and has positioned onions as the third most valuable horticultural export behind kiwifruit and apples, and as the most valuable exported vegetable crop. The EU remains the most important market for New Zealand export onions which increased 68% to \$66 million.



**Potato** exports totalled \$118 million in 2020, a \$15 million (11%) decrease from 2018. Frozen potatoes accounted for 83% of export value. Australia remains the largest export market for frozen potato products, accounting for 60% of exports by value.



**Avocado** exports increased nearly 15% in value to be worth \$112.5 million in 2020.



**Buttercup squash** exports decreased to \$51 million in 2020 after remaining steady at \$56 to \$60 million between 2016 and 2019. This decrease may reflect the use of industry data to determine 2020 export figures.



**Cherry** exports declined by 39% to \$51.3 million in 2020 due to weather related production declines. Up to 2018, there has been steady growth in cherry exports.

## EXECUTIVE SUMMARY

## TOP 25 MARKETS ACCOUNTING FOR 98% OF EXPORT EARNINGS



- |                             |                          |
|-----------------------------|--------------------------|
| 1. EUROPEAN UNION           | 14. UNITED ARAB EMIRATES |
| 2. JAPAN                    | 15. CANADA               |
| 3. CHINA AND HONG KONG      | 16. FIJI                 |
| 4. AUSTRALIA                | 17. RUSSIA               |
| 5. TAIWAN                   | 18. PHILIPPINES          |
| 6. UNITED STATES OF AMERICA | 19. FRENCH POLYNESIA     |
| 7. SOUTH KOREA              | 20. NEW CALEDONIA        |
| 8. VIETNAM                  | 21. MEXICO               |
| 9. THAILAND                 | 22. SAUDI ARABIA         |
| 10. SINGAPORE               | 23. KUWAIT               |
| 11. INDONESIA               | 24. PAPUA NEW GUINEA     |
| 12. MALAYSIA                | 25. BRAZIL               |
| 13. INDIA                   |                          |

## Free trade agreement progress

At the time of writing, New Zealand has 12 FTAs in operation. Since the 2018 report, the CPTPP entered into force on 30 December 2018. Under the CPTPP, New Zealand exporters gained preferential access into Japan for the first time. It is also New Zealand's first FTA with Canada, Mexico and Peru. Under CPTPP an estimated 80% of tariffs to Japan have been eliminated. Tariffs on products entering Japan in 2020 are estimated to have cost approximately \$5.2 million, which is significantly down from \$36 million in 2018. Apples and some other products are still subject to tariffs, though the tariff on apples will phase out to zero by 2028. The 25 markets highlighted in this report account for 98% of export earnings, of these, 13 have increased in FOB value while actual or percentage of tariffs have decreased or are nil (refer Table 7.1.1, Section 7.1).

## Standout high tariff markets

Tariffs into India are exceptionally high, averaging 43% on horticultural exports and costing \$22.8 million in 2020. As a percentage of export value this is the highest tariff burden of any market and partially explains the narrow range of products exported to India. Tariffs of 30 to 50% remain in place for most commodities, which presents a significant barrier to trade. These high tariff rates highlight the value to horticulture of progressing the New Zealand-India Free Trade Agreement, in tandem with the RCEP agreement, and the potential for India to become a top horticulture export destination if tariffs can be reduced.

The EU is New Zealand's largest trading partner for which there is not currently a FTA. New Zealand and the EU have been formally negotiating a FTA since June 2018 with the ambition of completing negotiations within two years. Brexit negotiations and the global pandemic have pushed out these timeframes.

## Rising non-tariff measures

Previous reports have drawn attention to the range of non-tariff measures (NTM's) that include sanitary and phytosanitary (SPS) barriers. While it is acknowledged that under the various international agreements and treaties (viz. the WTO Agreement on the Application of Sanitary and Phytosanitary Measures – SPS Agreement, and the FAO International Plant Protection Convention – IPPC) countries have a right to apply the level of plant health protection it deems appropriate, any measures required should as far as possible be based on the analysis and assessment of objective scientific data. Such measures should not be misused for protectionist purposes that could result in unnecessary barriers to international trade.

In Chapter 7, NTMs are listed for each of the countries discussed in this report. A notably lengthening list of NTMs outlined in Section 7.3 is gaining prominence across a range of countries such as delays in assessing access requests, import quotas, additional import licensing requirements, extensive carton/product labelling requirements, pre-shipment inspections, and a lack of recognition of existing verification certification.

Country policies of processing only one or two access requests at a time is a particularly limiting and frustrating mechanism. In some cases, the economics of complying with phytosanitary requirements can make trade unviable, and extensive delays in obtaining phytosanitary inspection due to countries requiring on-arrival inspection of consignments are rising. Where specific products have access to a market, the cost of maintaining that access is rising and likely to require additional resourcing.



## 2020 TARIFFS TO JAPAN COSTS (APPROX)



## NZ EXPORTS TO EU ATTRACTED



### Lack of registered agrichemical label claims for minor crops.

Trading partners' food safety concerns relating to agricultural chemical residues remain a significant barrier to expanding New Zealand's horticulture exports. Even when food safety concerns do not exist, when an overseas regulator prohibits use of a product for environmental, worker, or other concerns, the associated MRLs (maximum residue limits) are often revoked. To enable continued and expanded market access, growers need to be able to access new agrichemicals that are favoured by trading partners.

Access to new agricultural chemical active ingredients is an issue especially for minor crops in New Zealand. Older chemicals (such as organophosphate and carbamates) have or are being phased out with a lack of new chemicals being registered in New Zealand as replacement products. The few new chemicals that are registered have usually taken a very long time to proceed through the regulatory process, and sometimes have very conservative controls set for their use limiting the situations in which they can be effective. This presents pest and disease, and weed management issues as a barrier to export growth as growers do not have access to the latest sustainable pest management options. In other countries, horticultural sectors are large enough to justify investment by industry or crop protection companies, or there are ongoing government-funded programmes to assist minor crop sectors. New Zealand does not yet have a minor crop programme in place to deal with these issues. This leads to lost market opportunities due to a lack of MRLs set for minor crops in export markets.

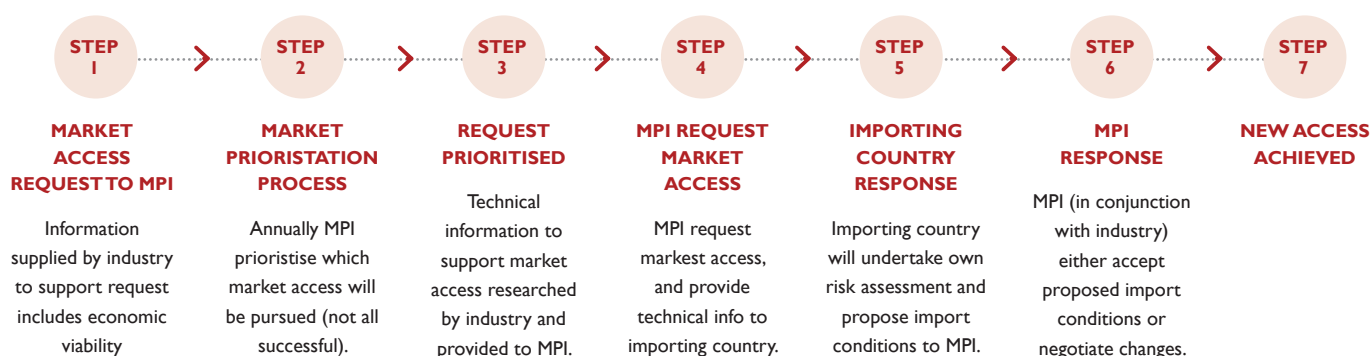
The use of products that do not have an MRL or import tolerance set in the importing country presents residue issues that are usually managed by either avoiding the use of these control options for produce destined for certain markets, or by implementing long withholding periods to ensure residues are not detectable. This impedes the ability to sustainably manage pests and disease issues, and can affect yield and quality.

Less reliance on older chemicals, more MRLs in importing countries, and increased and more timely access to pest management options would enable growers to maximise their food safety value proposition, providing an opportunity for export growth in all sectors.



## EXECUTIVE SUMMARY

The stages and process for a market access request through MPI. This can often be long and may take many years.



## New market access

The process for achieving new market access is a significant hurdle for many horticultural product groups. The steps involved in making a new market access request are summarised in Section 5.5. There are a wide range of criteria assessed and this can often be complicated and take many years. The level of detailed technical information required to be provided by product groups to support market access requests is a considerable burden, and beyond the capability of many of New Zealand's smaller horticultural product groups. Such applications require substantial financial investment and technical expertise. In most instances this is funded by the specific industry. The demands for new market access are large and also places a greater pressure on limited MPI resources, and as a consequence MPI has limited ability to progress market access applications. Industry must also pay MPI-associated costs which are charged under a 'cost recovery' mechanism of \$125 per hour. Aside from the technical aspects, a new market access request may also encounter non-technical opposition within the importing country which can impact on progress.

## Changing state of the horticultural sector

The profile of the horticultural sector continues to evolve. Many horticultural industries have experienced a degree of consolidation from the mid-2000s with several industries now having fewer growers but larger operations. This is evidenced by many horticultural product groups reporting smaller numbers of growers with a similar production area, and in some cases production area has increased.

This consolidation has been driven by a range of factors, primarily economic, whereby compliance (worker safety, food safety, and environmental compliance), and production (labour, utilities, transport and machinery) costs are increasing. Larger scale operations tend to be more insulated from these costs due to economies of scale compared with individual smaller grower operations. This has the collective effect of forcing small growers out of business, or selling their operations to larger grower businesses.

Exports of horticultural products continue to grow and tariff barriers continue to reduce through the successful negotiation and implementation of FTAs. However, the rise of other non-tariff measures remains a significant concern to the industry and a drag on progress. A further concern to arise over the last five years has been the geo-political environment with an obvious swing to more nationalistic and isolationist policies. History suggests that protectionist trade policies will likely become more prominent in the international trading environment faced by New Zealand's horticulture exporters.



The application process for achieving new market access requires substantial financial investment and technical expertise.





Retail shopping during Covid-19 pandemic.

The global Covid-19 pandemic has impacted trade from early 2020 on a scale not previously encountered. In the timeframe of this report the actual horticultural trade figures for the year ended 30 June 2020 were up year on year by 7%. This could have been significantly higher had there not been trade disruption from March 2020. While Covid-19 has resulted in no formal restrictions on market access for the majority of exported and imported goods, it is placing significant pressure on global supply chains, disrupting trade flows, consumption patterns, investment and market development initiatives and in some cases leading to in-market policy shifts that will have long-term consequences for trading nations.



Tariff barriers are reducing through successful negotiation and implementation of FTAs.

## SUMMERFRUIT UPDATE

# Summerfruit NZ Chairman to step down after conference



Departing Summerfruit NZ Chairman, Tim Jones

***Summerfruit NZ Chairman Tim Jones has announced that he will be stepping down as chair and from the Summerfruit NZ Board at the end of the Growing Strong conference this month.***

Tim will have been on the board for 13 years, serving as chairman for the last six years following former chairman Gary Bennetts' departure in 2016.

"I remember when Tim was coming up through the board and became vice chair when I was the chairman," Gary Bennetts said. "He is a great strategic thinker, and he gave me tremendous help and support as the chairman. Tim's a real industry man with his heart in the right place. He's been unselfish with his time and has done a lot for the industry."

Originally from Wellington, Tim had his first taste of horticulture in the Horowhenua and then went on to study at Massey University before heading off to travel overseas.

On his return home he moved to Central Otago and has lived there ever since. He began working at Molyneux (now 45 South) in 1994 when they were growing large volumes of peaches and nectarines, and went through the transformation of the orchard to where it is today – 100% cherries.

Today Tim is the chief executive at 45 South which owns and manages over 400ha of cherry orchards, as well as packing and marketing cherries for export to China, South East Asia and the United States. He is also a member of the Central Otago Fruitgrowers' Association and a director of Seasonal Solutions.

When asked what he likes about being in the industry, Tim doesn't hesitate. "Working with a committed and passionate group of people to produce a great product that can be enjoyed both here and overseas. And Central Otago is a pretty great place to live."

Reflecting on his time as chairman, during which time Summerfruit NZ underwent an industry review, Tim has mixed feelings. "I can't say that every minute has been enjoyable and rewarding – there have been some tough times and hard decisions to be made, but the collaboration we have seen and encouraged in recent times is hopefully the direction this organisation will continue with in the future."

Over the last, difficult 2020-21 season, Tim was fully involved with helping the industry find solutions for its freight and labour issues, and acknowledges there is still much to be done to attract and retain the next generation of growers and industry leaders too. "Providing a pathway and encouraging some slightly younger growers to become involved is something that we all need to work hard on achieving. It is up to everyone in this industry to foster and encourage the youth who show an interest in horticulture and provide a pathway for a career – not just a job."

Tim would like to thank everyone who contributed towards the success of the industry for their support and encouragement. He is especially appreciative of the work carried out by not only the Summerfruit NZ team, but also his fellow board directors whose efforts he feels go unrecognised much of the time. "The time you spend on industry matters is often time you don't get to spend on your business and with your family. Your willingness to put yourself forward and contribute to industry good functions is to be applauded."

In the future Tim is looking forward to spending a bit more time at home and hopefully going skiing and taking bike rides with his family. There may even be time to get out of his office and on to the orchard a little more and maybe "picking up a pair of secateurs every now and again ... that's if the orchard crew will let me out there!" ●



## AVO UPDATE



# Full steam ahead

By Jen Scoular : Chief Executive, NZ Avocado



*Like many other horticulture industries, the avocado industry is running full steam ahead into a period of growth.*

The success of avocados here and globally in recent years, has resulted in considerable investment into new plantings in New Zealand, and our existing orchards are showing measurable increases in productivity. This increasing volume of New Zealand avocados presents a great opportunity to contribute to New Zealand's economic growth moving forward, but the industry, like the rest of horticulture, needs continued government support to ensure we have the labour and skills to make the most of that opportunity.

The avocado industry doesn't have as great a need for Recognised Seasonal Employer (RSE) scheme workers as other horticulture sectors, but we certainly use backpackers and migrant labour, and with a considerable crop forecast for the 2021 season our growers and packers will be short of labour while there are so few overseas visitors in the country.

We are in the middle of the biggest crisis this generation of New Zealanders has ever faced. Here in New Zealand we happen to be sitting in the land of opportunity because we are pretty much Covid-19 free, but we are weary because in everything we do it is so much harder to make an economic gain for our sector, for New Zealand or for ourselves.

Avocado exporters had an incredibly difficult year in 2020, but still managed to deliver a great value result to growers. Avocados have to get to export markets in less than 30 days, and globally the freight sector is a mess.

Ships arrive late or not at all, timetables change, ports suddenly drop off the route so a container of avocados intended for Seoul in Korea ends up without a market plan, in Shanghai, China. Time matters for the fragile, delicious avocado. Delays lessen quality, and long-term delays mean avocados exit the container having already turned themselves into guacamole. That might sound delicious (especially if the container also carries tomato and coriander...) but it really is not good.

“

**If the country is looking to horticulture to help employ more New Zealanders, growth of the sector should be the primary objective. This requires continued support and investment at all levels, including government**

Growth is being constrained across horticulture because of a shortage of labour, and the government is keen to ensure that wages increase for New Zealanders. Now is not a good time to stall the amount of labour available to growth sectors like horticulture, it just does not make sense. If the country is looking to horticulture to help employ more New Zealanders, growth of the sector should be the primary objective. This requires continued support and investment at all levels, including government. ●

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# TECHNICAL

THE LATEST INNOVATIONS AND IMPROVEMENTS

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John Wilton on the job

# Last harvest: W.J.Q. (John) Wilton

B 18 July, 1940 – D 29 April, 2021

By Rose Mannering

**It is hard to sum up in a few short words the effect John Wilton has had on the horticultural industry in New Zealand.**

John has been calculating how to get the best performance out of an apple tree for more than 60 years. For close to 40 years he wrote a monthly column for this magazine, *The Orchardist*, and with some pride he would note the articles were never repeated.

He would know. With a near photographic memory, he was like a walking encyclopaedia when it came to fruitgrowing. He worked hard to attain the knowledge he had, spending long hours in first the DSIR library at Mt Albert in Auckland, then later at the NZ Apples and Pears library in Hastings.

He reviewed research findings from around the world, then distilled this back into a form which could be digested by New Zealand growers. One quick look at his desk makes it clear: he relied on his enormous capacity to read and



remember material, and definitely not his filing system!

His one-liners were legendary, and he would never be guilty of one of his favourites: *Empty desk, empty mind.*

He died at the age of 81, after a battle with cancer. Even from his hospital bed one week before his death, he was going through leaf tests and recommending a fertiliser programme with Carl Fairey, one of his many lifetime clients. An unfinished article for the next edition of *The Orchardist* was by his bedside, a review of the season that has just been.

John grew up on a farm near Bideford in Wairarapa with his parents and one younger brother Richard. John was the academic one, who loved his books and reading at an early age. He graduated with a Bachelor of Agricultural Science majoring in horticulture from Lincoln College (he

would have wanted you to know that – far better than a Massey degree). On graduating, he took on an advisory role with the Ministry of Agriculture, and he maintained a technology transfer role for the rest of his life.

His advisory work took him to Motueka. He was there when a chance seedling, later to become the variety we all know as Braeburn was discovered. He played an instrumental role in the commercialisation of this variety and worked on overcoming issues like bitter pit. Braeburn would ultimately become a great success, and the largest variety grown in New Zealand for a time.

“

**His one-liners were legendary, and he would never be guilty of one of his favourites: Empty desk, empty mind**

His wisdom was not restricted to apples and pears, he also advised on peaches, cherries, plums, apricots and kiwifruit.

Then he was posted to Mt Albert in Auckland and at the tender age of 42 bachelor John finally met the love of his life, Cherry. They were married in 1982 and have enjoyed the past 40 or so years together.

John was promoted to National Deciduous Fruit Specialist at the relatively young age of just 34 or 35 years old in 1975. As another industry stalwart John Paynter recalls, at that time the apple industry in New Zealand was in trouble.

On the one hand, the industry was starting to expand, and based on leadership from Dr Don McKenzie, growers were planting semi-dwarf apples on MM106. While there was much enthusiasm for this strategy, the industry was broke.

“The board was in debt, the board owed money to the growers and the growers were in debt. The infamous Massey report of 1976 concluded that the New Zealand pipfruit industry in its current form was no longer viable.”

A drought in Europe in 1976 gave growers a much-needed breathing space. Paynter recalls John Wilton would play a key role over the following years as New Zealand growers learned how to compete against rising volumes from countries like Chile, South Africa and Argentina where production costs were low. “He played a key role in taking the industry performance to another level.”

John Paynter, a grower and NZ Apple and Pear Marketing Board member himself, was constantly amazed just how many people overseas knew John Wilton. “In a former life, while on international marketing trips, I had the privilege of

visiting many universities, advisory services, growers and nurseries. It always amazed me how well John Wilton was known and how often his name came up.”

John Wilton’s tireless efforts to iron out the many difficulties in growing the New Zealand-bred variety Pacific Rose led him to quip that advising on the subject funded the goal of his second great love for European cars, a BMW. He introduced girdling to manage the strong biennial bearing habit of Pacific Rose.

In 1987, John moved to the heart of deciduous fruitgrowing in Hawke’s Bay as the government took the first steps toward commercialising the advisory service. He was a founding partner of AgFirst consultants in 1995 and remained in this role right up to the end.

Friend and AgFirst colleague Ross Wilson says John had an incredible brain; he could read heavy scientific papers and convert them to grower language, and then remember them. “We are all really going to miss that encyclopaedic brain.”

He was acutely aware that 95% of the apple research in the world happened outside of New Zealand; he worked hard to keep abreast of new technology.

Ross recalls he had a great passion for travel, and there was barely a country he had not been to. Places like East Maling in the United Kingdom, the home of most rootstocks still in use in the industry today would be on John’s calling card.

Chemical thinning was one area where he played a vital role in adopting new chemicals and techniques. He introduced Metimeton and Ethrel to New Zealand; he ran several trials to test how chemicals would perform here. He was renowned for his “incredible chemical thinning cocktails.”

**John Wilton is remembered for his deadpan humour, and his love of cars, red wine and travel. He will be sorely missed not only by his wife Cherry and his family, but also by the wider horticultural industry.**

“

**With a near photographic memory, he was like a walking encyclopaedia when it came to fruitgrowing**

He was awarded the Joe Bell Trophy for service to the industry by the Hawke’s Bay Fruitgrowers Association in 2007, then in 2015 became the recipient of the industry’s highest award, the Bledisloe Cup. HortNZ president at the time, Julian Raine, said John’s global client base enabled him to “think at new levels.”

John Wilton is remembered for his deadpan humour, and his love of cars, red wine and travel. He will be sorely missed not only by his wife Cherry and his family, but also by the wider horticultural industry. ●



### John's final article for *The Orchardist*

This was John Wilton's partially written final article for *The Orchardist*.

Unfortunately with his health deteriorating, he never had the chance to finish it.



*John Wilton presented with the industry's premier award, the Bledisloe Cup, by Primary Industries Minister Nathan Guy, in 2015*

# Attention to detail throughout the season is the key to a sustainable orchard business

*Within the orchard gate, around 70% of costs should be considered orchard overheads which are incurred by most of the orchard irrespective of variety. Only the direct harvest costs for each block or variety should be considered a direct cost on that variety.*

By John Wilton

**As around 70% of the business costs should be viewed as overheads, the most effective way to reduce production costs is to spread these costs over as much revenue as possible. Yield plays an important role in this equation, but so does price obtained for the fruit. Neither can be considered in isolation of one another. In the big picture, orchard revenue is the key component, in other words yield times price which equals revenue.**

Attention to detail is the key to getting this equation right. Because pipfruit and summerfruit are perennial crops, attention to detail is a whole-year requirement, if not a

multi-year requirement. In the case of pipfruit, the fruiting units in the tree need to be at least three years old to produce a quality piece of fruit. Some summerfruit, such as peach and nectarine, which fruit on last season short growth have shorter fruiting wood lifespans.

In general terms, high performing orchards require continuous attention to detail with adequate supply of well-motivated skilled staff to achieve the high standard of crop husbandry necessary to achieve optimum results.

## METSERVICE UPDATE

# Outlook for winter

By Georgina Griffiths : Meteorologist, MetService



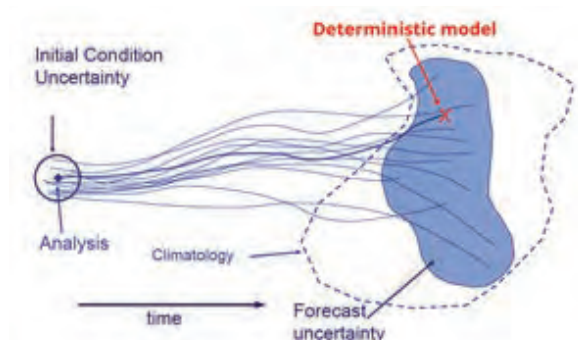
## The basics about long-range forecasting

Every grower worth their salt knows you can look at as many weather models as you like (any model, of any variety and of any resolution), and you *still* cannot get a totally accurate weather forecast beyond day five or six in New Zealand.

Things start to diverge, either in timing or in detail, or both, beyond about day five. For example, the active front moving up country is predicted to stall in the Hawke's Bay region on Saturday – but wait, hang on, some models push it into Gisborne. But wait, other models show the front moves slower than this – maybe we're looking at Sunday for that front? Which is hardly useful if you're in Gisborne and wanting to plan for a dry-weather activity on Sunday...

You can't run a single (deterministic) weather model out in time indefinitely (Figure 1). The model errors at initialisation (capturing what is happening now) grow and grow in the weather forecast model ... until the forecast becomes very uncertain (effectively useless) at some point in time.

MetService handles this uncertainty at initialisation in a very clever way. We use an ensemble (group) of models, all initialising slightly differently. The general idea is to 'shake up the initial conditions' of a group of models, and see what happens. This gives an idea of forecast uncertainty. Importantly, the *ensemble mean* (average) shows predictive skill well beyond the five to six-day window – week 2 and week 3 information can be used effectively, as long as there is an experienced meteorologist in the driving seat who is



**Figure 1:** The concept of ensemble forecasting to assess uncertainty

assessing what weather drivers are in play, and knows when the model output looks robust and reliable.

The same concept applies to seasonal (three-month) forecasts, noting that the ensemble models are tuned more towards the underlying (slower) climate drivers.

Our usual weather drivers for New Zealand over timescales of weeks to months are:

- ENSO (El Nino Southern Oscillation)
- the Southern Ocean
- the Tasman Sea
- blocking Highs.

## So what are the ensembles hinting at for winter?

After a stormy and unsettled April, the first 10 days of May saw a blocking High produce a run of very dry weather across New Zealand. However, around the middle of May volatile weather returned, with mobile weather systems and frequent fronts affecting the country between 10-18 May (as well as some low snow).

Looking ahead to winter (June to August as a whole), neutral ENSO conditions are expected in the tropical Pacific Ocean (meaning neither La Niña nor El Niño in place). The primary drivers that will impact New Zealand are expected to be the **Tasman Sea**, and the **Southern Ocean**.

For winter (June to August as a whole), lower than normal pressures are signalled over Tasmania and extending into both the Tasman Sea, and the Southern Ocean near New Zealand. That means that both areas are forecast to run 'active' (stormy), meaning that we should expect to see a *higher than usual* number of fronts and lows in both the Tasman Sea and Southern Ocean this winter.

In short, we're in for a wild winter, folks – for the first time in several years.

## Rain or shine,

### stay informed on the MetService Rural Weather App.

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For all regions, a relatively mild winter is forecast though temperature wise (Table 1). Note that this 'warmer and wetter' signal does NOT rule out heavy snowfall events, and of course any time we see a winter High staying put for a couple of days, expect the usual frosty conditions. For many areas, a wetter than usual winter is forecast - but there are some exceptions (Table 2).



You can contact MetService long-range forecasters at [consult@metservice.com](mailto:consult@metservice.com) if you would like to purchase a long-range prediction for your area. ●

**Table 1: Predicted monthly temperature anomaly for June-August, for selected locations.**

Monthly temperature anomaly (C)	Jun-21	Jul-21	Aug-21
Kerikeri	0.5	0.3	0.3
Dargaville	0.6	0.3	0.4
Whangarei	0.5	0.3	0.3
Wellsford	0.6	0.3	0.4
Auckland	0.6	0.4	0.4
Whitianga	0.5	0.4	0.3
Waihi	0.5	0.4	0.4
Morrinsville	0.6	0.4	0.4
Matamata	0.6	0.4	0.4
Te Awamutu	0.6	0.4	0.4
Tokoroa	0.6	0.4	0.4
Tauranga	0.6	0.4	0.4
Rotorua	0.6	0.4	0.4
Taupo	0.7	0.4	0.4
Taumarunui	0.7	0.4	0.4
National Park	0.7	0.4	0.4
Ohakune	0.7	0.4	0.4
Waiouru	0.7	0.5	0.4
New Plymouth	0.7	0.4	0.4
Stratford	0.7	0.4	0.4
Hawera	0.7	0.4	0.4
Palmerston North	0.7	0.4	0.4
Dannevirke	0.7	0.4	0.4
Carterton	0.7	0.4	0.5
Nelson	0.7	0.5	0.5
Blenheim	0.8	0.5	0.5
St Arnaud	0.9	0.8	0.7
Murchison	0.8	0.8	0.7
Westport	0.8	0.7	0.6
Hokitika	0.8	0.7	0.6
Reefton	0.8	0.7	0.6
Hanmer Springs	0.9	0.9	0.9
Tekapo	1.0	1.0	1.0
Pukaki	1.0	1.0	0.9
Omarama	1.0	1.0	1.0
Cromwell	1.2	1.1	0.9
Alexandra	1.1	1.3	1.1
Ranfurly	1.1	1.3	1.1
Roxburgh	1.0	1.2	1.0
Wanaka	0.8	1.0	0.9
Queenstown	1.1	0.9	0.8
Culverden	0.9	0.8	0.8
Christchurch	0.8	0.8	0.8
Ashburton	0.8	0.8	0.8
Dunedin	0.7	0.8	0.7
Lumsden	1.0	0.9	0.8
Gore	0.6	0.8	0.7
Invercargill	0.6	0.7	0.6

**Table 2: Predicted monthly rainfall anomaly for June-August, for selected locations.**

Monthly rainfall anomaly (% above/below normal)	Jun-21	Jul-21	Aug-21
Kerikeri	15%	6%	14%
Dargaville	11%	4%	9%
Whangarei	3%	1%	11%
Wellsford	3%	0%	9%
Auckland	6%	0%	17%
Whitianga	8%	1%	8%
Waihi	9%	2%	7%
Morrinsville	8%	0%	7%
Matamata	8%	2%	7%
Te Awamutu	5%	1%	5%
Tokoroa	10%	1%	5%
Tauranga	11%	0%	6%
Rotorua	10%	3%	7%
Taupo	10%	-1%	4%
Taumarunui	20%	-4%	6%
National Park	2%	-5%	-2%
Ohakune	3%	-7%	-6%
Waiouru	-1%	-11%	-6%
Waiouru	6%	0%	-3%
Stratford	5%	0%	-2%
Hawera	7%	0%	-4%
Palmerston North	0%	-6%	-11%
Dannevirke	5%	-3%	-6%
Carterton	17%	3%	-3%
Nelson	26%	20%	15%
Blenheim	15%	15%	9%
St Arnaud	5%	1%	3%
Murchison	10%	-4%	1%
Westport	11%	4%	12%
Hokitika	20%	4%	9%
Reefton	15%	-2%	9%
Hanmer Springs	1%	-1%	-3%
Tekapo	20%	28%	-2%
Pukaki	13%	19%	-1%
Omarama	10%	24%	0%
Cromwell	5%	12%	-4%
Alexandra	4%	15%	-2%
Ranfurly	5%	20%	2%
Roxburgh	-1%	6%	-1%
Wanaka	-1%	5%	2%
Queenstown	4%	-4%	-7%
Culverden	7%	4%	0%
Christchurch	22%	22%	8%
Ashburton	16%	17%	6%
Dunedin	3%	15%	11%
Lumsden	0%	3%	-4%
Gore	-5%	-1%	-4%
Invercargill	1%	2%	0%

# A time for reflection and review

*Winter is the ideal time to sit back and consider the results of the previous season and plan for the future.*

By Sandy Scarrow : Fruition Horticulture (BOP) Ltd

In this article I discuss some of those things to reflect on, and some tools that you may find useful in deciding on what to do based on this reflection. The important thing is to not over-react and base future decisions on the results of just one season. Take a longer view when analysing the results.

## Yield

Yield is a significant driver of performance on any orchard. Lifting yield is most often seen as the most reliable way of lifting orchard performance. Analysis of bin counts from your individual blocks, or simply walking through the orchard and observing where the fruit was carried, may provide insights into what might be holding areas of the orchard up.

Have a look at the data in front of you and consider your observations from the walk. There may be some simple things you can do such as topping a large shelter on the northern boundary, treating an area impacted by root rot disease or making sure the replacement vines or trees that you introduced earlier are getting properly trained.

Analyse data from the season to determine the components of yield. Where did things work well and where did things go wrong? A radar graph can provide this information in a simple to understand format.

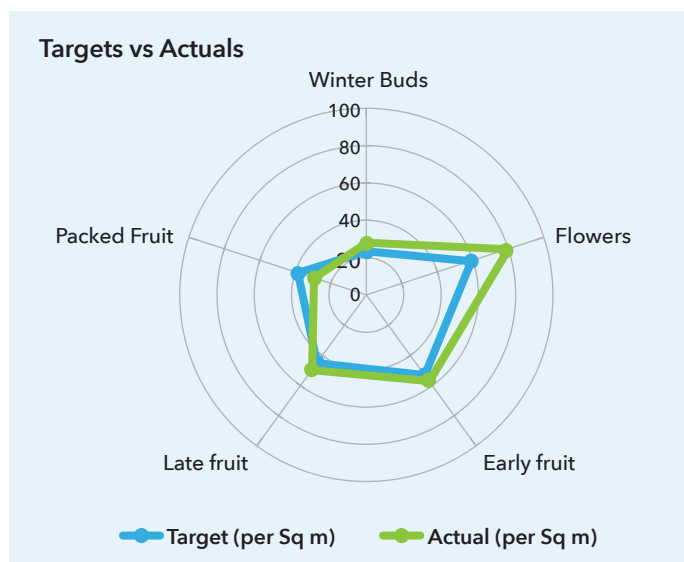


Figure 1: Spider graph of target vs actual components of yield

Figure 1 provides an example of a radar graph showing the actual versus target components of yield over the growing season for a kiwifruit orchard. What this graph shows us is that according to the monitoring, the orchard was on track through the season. The 'wheels fell off' with the harvest of fewer export fruit. The reject rate, including a large number of low dry matter rejects, impacted significantly on this orchard. It also alerts us to the monitoring system. Are we counting a representative range of vines and are we counting a large enough sample? The answer in this case to both of these questions may be no.

Notwithstanding potential improvements to the monitoring system, the graph shows that over the season we were on track. The strategies used to achieve the targeted winter buds, flowers and fruitlets and late fruit worked. We can then dig a bit deeper to analyse whether we achieved these target numbers on time. The low dry matter in the fruit may be due to carrying too many reject fruit late into the season. With access to labour being a constant issue for many this season, timeliness of activities may have been an issue. Critically analyse these aspects to see what improvements can be made for future years.

## Fruit Quality

While yield is a significant driver of orchard gate return, fruit quality can also impact on the returns achieved. This year in the kiwifruit industry dry matter, a large part of the fruit payments equations, was seriously impacted in some orchards. The reasons for this are still not clear and quite a bit of thought is going into an analysis of this to ensure that these same problems don't impact in the future. Reasons suggested include:

- ⊗ The low sunshine hours in late summer.
- ⊗ Overhead shelter cutting out light in an already low light season.
- ⊗ Carrying too much fruit.
- ⊗ Modifications made by Zespri to the maturity clearance system.

There will be other thoughts as to what happened.

Our team have done some analysis of the season to date for the Te Puke weather station. The data doesn't support



## Te Puke Weather Summary Apr-21

### Rainfall

Monthly rainfall	Long-term Average
<b>134.6mm</b> ▼	<b>182.4mm</b>
Rain days	Long-term Average
<b>12 days</b> ▲	<b>11.4 days</b>

### Temperature

Monthly Maximum	Long-term Average
<b>24.0 oC</b> ▼	<b>24.5 oC</b>
Monthly average	Long-term Average
<b>15.9 oC</b> ▲	<b>15.7 oC</b>
Monthly Minimum	Long-term Average
<b>11.0 oC</b> ▲	<b>10.7 oC</b>

### Solar Radiation

Monthly Average	Long-term Average
<b>11.5 MJ/m2</b> ▲	<b>11.4 MJ/m2</b>

### Growing Degree Days

Monthly Total	Long-term Average Total
<b>178 days</b> ▲	<b>165 days</b>
Accumulated GDD	Long-term Average Accumulated
<b>1707 days</b> ▲	<b>1631 days</b>

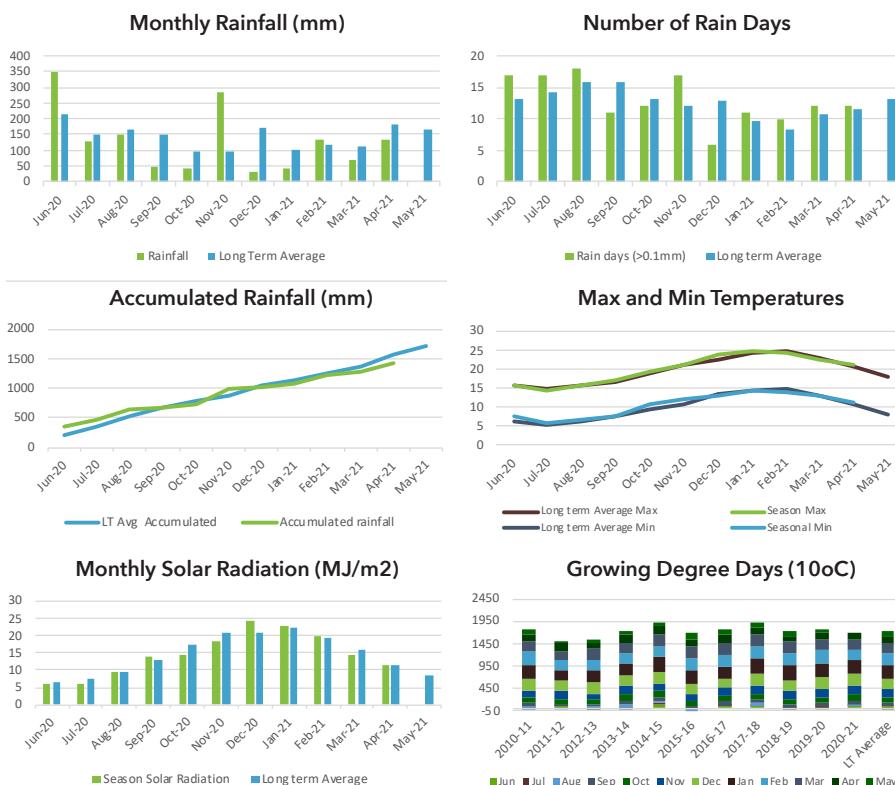


Figure 2: Seasonal weather data for Te Puke (Source: Fruition Horticulture (BOP) Ltd based on NIWA data)

a climatic explanation to the results achieved. Apart from being drier, the season was very close to normal. Solar radiation for December, January and February was actually higher than the long-term average. This also stands to reason as there are some fantastic results out there from orchards experiencing similar weather patterns. Maybe we just don't appreciate how good the previous two years have been relative to the long-term average.

One thing that we have observed is the lower dry matter result under overhead netted canopies. Erecting the overhead canopies was a strategy many growers adopted as a means of reducing wind damage and hence reducing the risk of Psa infection in crops. It may be timely to review whether the overhead canopy is still the right thing for your orchard. Gold3 canopies are a lot more mature now and the risk of wind damage has reduced as a result.

Analysis of reject results is another useful thing to do at this time of year. What was the major cause of the rejects? Is there something that could be done to reduce the cause of rejects? An analysis I saw recently highlighted the damage the sprayer had caused to fruit as it went through applying sprays. While it seems a costly exercise, bungying up shoots that are hanging in the way of the sprayer can reduce this needless loss. Another is looking at ways in which to reduce blemish. Timely thinning or thoughtful removal of fruit in bunches that are most likely to be blemished by rubbing against an orchard structure will reduce some of these

losses. It may however, be necessary to invest heavily in artificial shelter to reduce this risk.

One orchard I worked on had significant losses in their Gold3 crop as a result of wind damage. Blemish levels were round 10% of the entire crop. The financial benefits of reducing the levels of blemish by improving the shelter, can be assessed using a partial budget. We assume here that at least 5% of the blemish suffered on the orchard could be prevented by putting in a row of artificial shelter across the block. So what is the impact on the orchard if you don't make a change, compared to the costs and benefits of making the change? Obviously, the process requires making a number of assumptions about yield improvements, income per tray and the cost of making the change. I show the workings below.

Partial Budget Component	Without Change	With Change
Expected Yield	14,000 trays per ha	14,700 trays per ha
Additional Trays	0 trays	700 trays
Income per tray (\$)	\$12.00	\$12.00
Benefit of Change	\$0	\$8,400
Cost of Change (50 metres @ \$150/m)	\$0	\$7,000
<b>Net Benefit</b>		<b>\$1,400</b>

In this simple example, it is clear that there is an immediate benefit, \$1,400 per ha, from erecting the additional row of shelter. What is more, this benefit will accrue for the life of the shelter.

“

**There may be some simple things you can do such as topping a large shelter on the northern boundary, treating an area impacted by root rot disease or making sure the replacement vines or trees that you introduced earlier are getting properly trained**

While still a useful tool, the decision to make significant expenditure using a partial budget is much more difficult if you are analysing the impact of preventing something that happens less frequently such as frost, hail or drought. To analyse the impact of these events, an assumption needs to be made about the risk of these events happening, and then the partial budget constructed. I can speak from personal experience from the orchard I own. The 2019–20 growing season was extremely dry where we are. The impact of this was a 50% reduction in yield in the Hayward area where we were unable to irrigate. This is a significant loss, but it is not a loss that one can expect to occur every year. To construct a partial budget, an assumption needs to be made on how often you expect these losses. The data on the impacts of climate change should also be considered. It is expected that this summer dry is going to occur more often. If we assume it is likely to occur every 5 years, we can assume a 10% impact on yield every year (50% times the 20% annual risk). This can then be plugged into the partial budget along with the potential saving and cost of installing a bore. This is presented below.

Partial Budget Component	Without Change	With Change
Expected Yield	12,000 trays per ha	13,200 trays per ha
Additional Trays	0 trays	1,200 trays
Income per tray (\$)	\$6.50	\$6.50
Benefit of Change		\$7,800
• Income		\$3,000
• Reduced water rates		
<b>Total Annual Benefit of Change</b>		<b>\$10,800</b>
Cost of Change		\$120,000
• Bore and power to site		
<b>Payback Period (Total cost divided by annual benefit)</b>		<b>11 years</b>

In the periodic risk calculation, the investment in the bore takes 11 years to repay. This is referred to as the “pay back period”. Eleven years is a relatively long time to wait to receive the benefits of this investment. Some may say too long.

But the partial budget only takes into account the financial benefits of making the change. Another significant issue to consider are the less quantifiable aspects of making the change. The peace of mind of knowing that you are able to irrigate your orchard when the next drought arrives will also be significant. To capture these non-financial benefits it may be useful to brainstorm, as a team, the pros and cons of making the change.

### Harvest Decisions

As I write this article, we are still in the middle of the kiwifruit harvest. The harvest of the Gold3 crops is just about at an end. The season has been particularly difficult. Labour has been difficult to get and those who have worked the season have worked extremely long hours to get through everything.

It is useful to reflect on whether you made the correct harvest decisions. When doing so, also reflect on the big picture. Harvest is not just about the results you achieve as an orchardist. It is also about the smooth flow of fruit into the packhouse, at optimal quality, to meet immediate market requirements or maybe to store for many months.

“

**Despite the variability of the season and the market, it is always useful to review seasonal activities and decisions to determine whether better decisions could be made in the future**

There are some growers this year who doggedly held off picking in the hope of getting some of the smaller size fruit cleared for harvest. If this was you, think critically as to whether this was the best decision. Waiting for that final 5% of your crop to clear may have put the entire crop at risk.

In summary, this has been a year like no other – as most years seem to be! Despite the variability of the season and the market, it is always useful to review seasonal activities and decisions to determine whether better decisions could be made in the future. Also, for kiwifruit growers particularly, these are the good times. While there is the cash available it is worthwhile making those long-term investments that build resilience into your system. Whether this be in orchard infrastructure or investing in professional development of yourself and/or your staff, the benefits will be felt in the future. ●



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*When you need water, you need water, and that's where Vortex Water Bladders come in.  
At critical times water is like gold and our bladders provide a very cost effective  
and easy solution to storing water for when it is really needed.*



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- Stored in a bladder, water is not subject to the amount of evaporation caused by the sun and wind as it would be in an open pond or tank.
- Water is fully enclosed in a bladder, which keeps it clean and free from foreign matter, and from interference by birds and animals.
- A bladder is a better option than an open pond from a health and safety point of view, and does not need to be fenced.
- Bladders come in a wide range of sizes to suit your requirements
- Bladders can be relocated as required.

Vortex Bladders are very easy to install. They can be packed up and stored or moved to another location, which is a big plus if they are not needed all year round. With a low profile they blend into their surroundings on your property, and can be easily landscaped in to minimise their visual impact.

No building permits or consents are required when installing the bladders. All they need is a level 100mm sand base.

Vortex Bladders are made of technical textile coated PVC with anti-UV treatment. They are assembled by high frequency welding which gives them great strength and resistance.

Vortex Bladders come with valves, reinforced corners, overflow fitting, a filling elbow, and an inspection hatch. All of these are pre-assembled in the factory to avoid any risk of leakage. ●

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# Scholarship winner's keen involvement in horticulture

*The 2021 recipient of the Massey University Fruitfed Supplies Horticulture Scholarship, Dylan Hall, has grown up surrounded by horticultural crops in Gisborne. His family grow apples and citrus fruit, and Dylan, who is now in his last year of study completing a Bachelor of AgriCommerce majoring in International Business, is looking to build his own career.*

His initiative within the industry has been recognised by the Fruitfed Supplies management team. "We awarded Dylan this year's scholarship as we wanted to recognise his proactive involvement in horticulture and his eagerness to gain experience in all aspects of a horticultural business," says Duncan Fletcher, National Manager Fruitfed Supplies.

Discussing his scholarship win and recent work within horticulture, Dylan's enthusiasm and determination to make his mark on the industry is obvious. Last summer in Gisborne, he was approached by a couple of growers to help graft oranges and mandarins. He also used an empty block of land on his family's orchard to grow watermelons and rockmelons for the first time, harvesting in early February.

"I've grown up around perennial crops so I thought I'd try growing an annual. It was awesome to take responsibility for both growing a crop and marketing it after harvest. We sold the melons locally and nationally, including some at farmers' markets in Auckland, plus I got support from local horticultural marketing companies who helped me sell and distribute the melons around the country."

Now back at Massey and immersed in his studies for the year, Dylan is vice president of the Massey Horticulture Society. In this role Dylan helps to organise events for members, with his focus on establishing a connection between students and the horticultural industry as he feels it is vital for young people to get involved in the industry to help future-proof it.

Last year, Dylan got the opportunity to join 14 other students on the Aotearoa Horticultural Immersion Programme, led by Massey Business School and New Zealand Apples & Pears Incorporated. "We spent two weeks travelling the country, visiting horticultural businesses, meeting key industry members and gaining an insight into the innovative ways people are growing crops. It was an invaluable experience."



Dylan Hall is the 2021 recipient of the Massey University Fruitfed Supplies Horticulture Scholarship

Looking to the future Dylan is interested in both the marketing and technical aspects of horticulture. "Having been involved in the growing side of horticulture my whole life, I'd love to stay involved in this part of the industry. Apples and kiwifruit are my favourite crops as new varieties and growing systems are being developed all the time which I find really interesting. I would also like to get more exposure to marketing, having enjoyed learning it at university." ●

## Fruitfed Supplies

Visit [fruitfedsupplies.co.nz](https://fruitfedsupplies.co.nz) to find out more about Fruitfed Supplies' range of products and services, or to find a store near you.

*Fruitfed Supplies is a trading division of PGG Wrightson Ltd (PGW). PGW and the writer do not warrant the information's accuracy, quality, outcome or fitness for any purpose.*



# ThermoMax – frost protection

*Frost. If ever a word was guaranteed to cause anxiety and stress to commercial orchardists and home gardeners, that word is frost.*

The level of danger posed to orchardists from frost is best illustrated by the lengths growers go to attempting to neutralise or lessen its effects, and the costs involved. From hiring helicopters through to giant fans and irrigation systems, there is an array of anti-frost measures available. Most are expensive and their benefits vary.

Among the products available in the anti-frost battle is ThermoMax, and it has been doing a very good job for commercial growers for the past 19 seasons. ThermoMax is marketed by BdMax Ltd, who have been producing a range of organic horticultural sprays since the early 1990s. ThermoMax underwent independent testing and evaluation by HortResearch in 2002 (for full results see [www.bdmax.co.nz](http://www.bdmax.co.nz)), and has been shown in the field to provide up to 99% protection from frosts down to -2C when applied as directed. In colder temperatures down to -4C, ThermoMax has also shown greater levels of protection than would otherwise have been obtained. In these lower colder temperatures frost control is more effective when ThermoMax is used as part of a combined anti-frost product attack. It combines with all other products except urea. Being a liquid, application is easy. Just add it to your spraying round.

From modest beginnings in 2002, ThermoMax use has grown to now being used in a large number of orchards and gardens throughout the country. Avocado, kiwifruit, blueberry, tamarillo and even the bromeliad growers, are the main users. However, it is effective with most crops. Citrus, grapes, pipfruit and stonefruit all benefit.

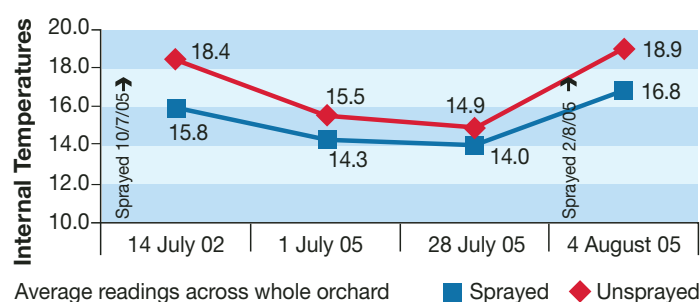
In addition to being relatively inexpensive when compared with other anti-frost measures, costing on average, \$240/ha for 9 weeks' protection, ThermoMax also provides secondary benefits, such as more compact flowering and a shortened growing season. This is due to the better spring starts achieved by the internal warming it creates within the plant.

ThermoMax is a non-chemical, Bio-Gro certified product, exempt from the Agricultural Compounds & Veterinary Medicines Act (ACVM). It leaves no residues and has no withholding periods. ThermoMax is applied after being diluted with water, by a normal agricultural sprayer and is totally environmentally friendly. It is also on the Zespri approved products list. ●

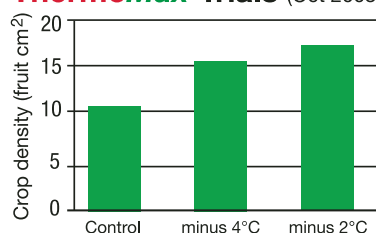


## The effect of ThermoMax on Avocados

### Internal Temperature Trial



### ThermoMax Trials (Oct 2003)



HortResearch trials have shown ThermoMax increased fruit set on apples by 50% at -2°C and 33% at -4°C frost. (See trial report on [www.bdmax.co.nz](http://www.bdmax.co.nz))

While ThermoMax is available online, it can also be obtained through Farmlands and Hortcentre throughout the Bay of Plenty, Waikato, Auckland and Gisborne regions. There are two short 'common questions' videos available on the website [www.bdmax.co.nz](http://www.bdmax.co.nz) or call direct on 0800 735 859 or email [bdmax@xtra.co.nz](mailto:bdmax@xtra.co.nz).

# ABC Software Spray Diary front foots spraying demands

*There is much more to ABC Software's Spray Diary than record keeping. A module within ABCgrower, it is used to plan, instruct and record spray applications, bringing efficiencies to your spray regime.*

**ABCgrower is a cloud-based software tool used for digitally collecting on-orchard work that is gaining traction with horticulturists around New Zealand and Australia.**

The Spray Diary is easy to use, with intuitive navigation and clear instructions. When creating a spray instruction, all chemical quantities are automatically calculated for the operator. Warnings are given if the planned spray violates chemical rules such as repeat applications. Information such as earliest harvest date is also given.

Full visibility to all chemical applications can be easily obtained while in the orchard using a smartphone. This allows for a quick review of chemicals applied to blocks of interest. Additional information such as operator, weather conditions and time of the day are all available on the smartphone.

Sally Jolly is agronomist and assistant farm manager for Smart Berries, one of Australia's largest berry operations. It has two operators spraying almost every day covering over 100ha of fruit and has been using the Spray Diary since last year.

"I've been able to set it up to suit us specifically. It's easy to change, to delete and unlike our previous system, the search function has been a real game changer. We can simply search by block, chemical, active, or any other filter and we can see what was applied and when. It's a huge time saver.

"It's also brilliant that it calculates rates automatically, water rates, nozzles, actives, the lot, one click and it's all there. And it allows us to easily spray different blocks, or split blocks, that need the same formula of inputs without impacting workers in the field."

ABCgrower Spray Diary also manages inventory and stock control of both chemical and non-chemical products. Chemical stock inventory is automatically reduced once spraying is completed.

Receipt of inwards goods and stock adjustments automatically update inventory. Reconciliation of stock quantities by stock location can be done directly on a smartphone.



*Spray Diary is a module within ABCgrower that is a paperless way to better performance*

There are many chemical compliance obligations an orchardist must meet. This is made easy with ABCgrower Spray Diary. With the click of a button, reports are available to meet audit and compliance demands.

## **BREAKING NEWS – Onsite Log to be launched**

ABCgrower's new module, Onsite Log, is meeting both the health and safety, and time and attendance requirements to know who is on site, visitors and workers, and where they are.

It allows workers and visitors to log in and out of the orchard and packhouse easily, with the worker's logging activities able to automatically set paid start and finish times.

For time and attendance verification, a photo can be taken on worker log in and log out. Facial recognition is currently being trialled, which will negate the need for the worker to say who they are.

Watch this space... ●

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# Pick of the crop

*Bay of Plenty Tractors were very proud to deliver ten new orchard tractors to Seeka in early March. The Landini 2-Series were their tractor of choice for its strength and capabilities and small stature to best suit their needs.*



**It is certainly the largest order BOP Tractors territory manager, Gina Provic, has received in her job to date.**

These strong compact tractors will be used to pull bin trailers thanks to the Landini 2-Series Yanmar 45hp engine and four-wheel-drive capabilities, making this job a breeze for the drivers.

The new tractors were a part of Seeka's upgrade, replacing the many two-wheel-drive tractors being used previously, which under their health and safety guidelines were no longer deemed a safe code of practice.

The Landini 2-Series should not be mistaken for it being a little tractor, despite its compact size. "In all aspects it's simply an ag tractor in a specialist compact dimension," says BOP Tractors general manager Gayne Carroll.

"These have a 16 x 16 shuttle transmission with four-wheel braking and an unbraked tow capacity of 1,500kgs, to comfortably meet the safety requirements set by Seeka."

Being fitted on large 360mm wide 20" diameter wheel equipment allows for excellent traction, especially on steep inclines, and with the seating lowered still gives a very low seat height of just 730mm.

The job will not stop at pulling bin trailers. Due to the capabilities and versatility of the Landini Series-2, after picking season these tractors can then be utilised for other orchard maintenance work like mowing or spraying, and can even be fitted with a front-end loader if required.

Part of the installation for this number of tractors with Seeka was a very successful and important Health & Safety presentation day where BOP Tractors representative, James Schofield, went over the daily checks they should be doing along with the safe driving and operation of the tractor with the Seeka operators. "A very successful morning with a big turnout," Gayne says.

BOP Tractors is pleased to have an association with Seeka throughout the Bay of Plenty, where Landini has become a leading player in the kiwifruit sector. ●



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