

A cherry Christmas

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A regular advertorial section of new products and services. This publication does not endorse the products or services featured here.

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Cover image: Thomas Green Photography

2022 – what a year!

Well, it seems that 2022 is nearly done, and I don't know about you, but I am really happy to see the end of it!

By Barry O'Neil : HortNZ president

And while during the year we have been pushed to our limits by Covid-19 restrictions, labour shortages, climate events, and the government's multiple and uncoordinated policy changes, there have actually been some surprisingly good wins for horticulture, in amongst all this craziness.

Getting the Recognised Seasonal Employer (RSE) scheme numbers increased to 19,000 was a fantastic outcome in an environment where the unions were trying their hardest to discredit the scheme, and when some Pacifica Nations were wanting to put the handbrakes on sending their workers to New Zealand. A huge amount of effort went into achieving this outcome, Horticulture New Zealand working closely with product groups – effort well invested and appreciated.

We also once again have Working Holiday Visas being issued. While no one is expecting we will reach pre-Covid levels in 2023, we can hopefully put a dent in the seasonal shortages, especially if we work together and focus on attracting workers here.

“
Another win during the year has been the development of the Aotearoa Horticulture Action Plan

Something we may have forgotten is Country of Origin labelling, which came into effect in February, making it mandatory for businesses to disclose where amongst other things fresh fruit and vegetables come from. This is so consumers have a choice if they wish to support local growers or purchase imported produce.

The requirement to disclose country of origin applies to single-ingredient fruit, vegetables, fish, seafood, and meat that is no more than minimally processed. From May 2023, the regulations will also apply to frozen food in the same categories.

HortNZ battled for years to get government to support this

policy. Even when successive governments and officials tried to squash our efforts, we persisted as we knew it was needed for our growers and our consumers, and we finally got this government's support.

Protecting highly productive land has been another long-standing policy battle, which HortNZ has been leading, based on the knowledge that if we can't stop houses, concrete, and asphalt spreading further onto our elite soils, we won't be able to amongst other things maintain fresh vegetable supplies for New Zealanders. While this has been a challenging discussion, as we also recognise and respect individual property rights, this was the correct policy to support from a country and future food security perspective.

The National Policy Statement for Highly Productive Land was released in September. It will provide clear guidance to councils about what they need to be doing to protect elite soils so that they can remain productive.

Another win during the year has been the development of the Aotearoa Horticulture Action Plan, something growers may not have huge visibility of. The development of the action plan was horticulture industry-led and government enabled, in order to support our industry to reach the 'Fit for a Better World' target to improve grower margins and double the farm gate value of production – from \$6 billion to \$12 billion by 2035.

We rarely have the opportunity of aligning government resources with the priorities within horticulture. Pleasingly, this action plan does just that.

It outlines a sustainable growth pathway while maximising value, optimising productivity, accelerating innovation, and attracting great people who love horticulture.

The action plan is something we all need to get behind and support as it covers the areas that need addressing for our future growth.

Climate change commitments and the He Waka Eke Noa partnership are another area of achievement for the wider food and fibre sector. While there is plenty of noise about the government's reaction to the proposal from the





partnership, the good thing is we have been working with the other primary sector representation bodies for two and a half years and collectively, have agreed a way that agriculture and horticulture can meet their obligations under the Climate Change Adaptation Bill.

Doing nothing and kicking the can down the road even further is just not an option. Recently, you will have seen reports from the United Nations Intergovernmental Panel on Climate Change that the world has already lost the opportunity to reduce global warming to an increase of only 1.5 degrees. Countries prolonging debate about what needs to be done will result in our planet reaching at least 2.5 degrees of warming, a level deemed catastrophic according to the panel.

Getting on with our commitment to reduce the impacts of climate change and stop the never-ending debate about whether what is proposed is too much, must happen. The alternative to He Waka Eke Noa is the food and fibre sectors being placed fully within the very clunky and 'one size fits all' Emissions Trading Scheme (ETS). It was good to see that the government agreed to implement He Waka Eke Noa's key recommendations for a farm-level, split-gas system for pricing agricultural emissions. As I write this article, we are still working on getting the government's support for all the other elements the partnership agreed on, including on farm sequestration.

It is really good that all the primary sectors worked proactively, and collectively agreed the best approach for New Zealand's food and fibre sectors.

Finally, HortNZ has itself been going through significant changes to improve how it delivers value to growers into the future. This has been led by our chief executive, Nadine Tunley. The full Board believes we now have a much stronger and more fit-for-purpose organisation to advocate for growers in the corridors of central and local government, something becoming increasingly important as government reach stretches even further into our businesses.

As 2022 comes to an end, we want to wish you well over the summer season. Thank you for your continued support of HortNZ, and we hope you find time to relax with family and friends.

Kia kaha. ●



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Reflections on 2022

As the year draws to a close and I look back over the past 12 months, I reflect on the significant amount of work all of the product groups have got through, both individually and more often, collectively. It is very easy to get bogged down in the negative because it has been another long and arduous year, peppered continuously with various issues including Covid-19 on top of normal weather challenges.

By Nadine Tunley : HortNZ chief executive

In January, we were subjected to Omicron lockdowns and border disruptions, both national and international. This caused further shipping disruptions, compounded the labour shortage, and thrust product groups and Horticulture New Zealand into becoming quasi travel agents for the Quarantine Free Travel (QFT) requirements from the Pacific. These superseded the previous MIQ (Managed Isolation and Quarantine) travel requirements to which we had become accustomed.

The year then rolled into the gift that kept on giving. In March, Tairāwhiti/ Gisborne and Hawke's Bay along with many other areas of the country suffered from horrific storms and rain events. At the time, the supermarket review in March was a positive event, but amidst ongoing inflationary pressures, any small positive growers might have felt quickly became a distant memory.

Then in April, the discussions about the income insurance scheme came to our attention. This is again another cost for business, with there being more questions than

answers about the scheme's true benefits. A terrible example from the proposal is why would seasonal Pacific workers have to contribute, when they cannot benefit from it; coupled with the question, is this scheme not at risk of encouraging people to exploit employment arrangements?



In the month of May there were a list of topics on the table from grower welfare (our main concern) to the ongoing media rhetoric of further food price increases, while our sector battled more weather events and the unrelenting cost increases in energy, fuel, labour and logistics. All the while, the Recognised Seasonal Employer (RSE) scheme cap increase discussions went into full swing, with no outcome for several months. Meanwhile HortNZ's environment team kept battling away on its endless list of tasks.

To keep it interesting, during these months we also saw a handful of biosecurity issues - fall armyworm and the pepino mosaic virus, followed closely by ongoing food



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safety alerts. Two communications groups across fruit and vegetables were set up to assist with informing all stakeholders of current issues and proactively managing some broader themes.

In the middle of the year, the government forecast via the *Situation and Outlook for Primary Industries (SOPI)* report revenue of \$52.2 billion to 30 June 2022, saying what an amazing job the Food and Fibre sector was doing. The question we all had was, what is our profit, as cynically we all felt like it had probably taken \$54 billion to generate that revenue.

Unity and positivity

The list is long of this year's challenges and events but as a whole, we battled through with a small yet highly performing team. Earlier in the year, I stated my focus for 2022 as being firmly on unity and positivity, as we all knew this would be another challenging year. I also said our resilience as an industry would be further tested. Well, it was.

“

As an industry, we have a highly dedicated and passionate team. Although you may not always feel that we are hearing you or considering your views, I can assure you we are

But with all challenges come opportunities and the need to reflect on the positives. While government departments grew bigger, many product groups lost staff in a tough labour market. Recruiting to fill those roles has been challenging when the country is at some of the lowest unemployment levels in history.

If we counted all of the staff in product groups across horticulture, we have approximately 76 full time equivalents (FTEs). Compare this figure to the 12,500 staff across our four main ministries - the Ministry for Primary Industries, Ministry for Business, Innovation and Employment, Ministry of Foreign Affairs and Trade, and Ministry for the Environment. This means that the ratio of government staff to horticulture staff is 158 to 1. The ratio of horticulture staff to growers is 73 to 1, so our staff do an

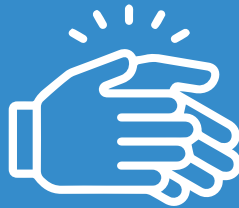
amazing job both collaboratively and individually. We have also had some great support throughout the year from other food and fibre organisations and we appreciate that as well.

As an industry, we have a highly dedicated and passionate team. Although you may not always feel that we are hearing you or considering your views, I can assure you we are. I am cognisant that it would be impossible to keep 5,500 of you all completely satisfied but we do try to reflect all feedback on the myriad of topics covered and navigate the best overall outcome.

HortNZ exists for the very purpose of engaging and advocating on your behalf. Although you would like to see us approach things a specific way sometimes, from completely ignoring the government and/or officials through to publicly battling out a position, we are the ones at the coalface and generally, we respond in a particular way because this is what we are here to do, day in and day out, for all our members.

So, a massive thank you to all the growers who engage, question and work with the various horticulture teams on the numerous topics put to us. Please continue to engage with us and provide your thoughts and feedback.

Here's hoping for a better 2023. Have a safe and happy holiday season with your families. ●



A massive thank you to all the growers who engage, question and work with the various horticulture teams on the numerous topics put to us

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Submissions to government on proposed environmental legislation

Michelle Sands : HortNZ strategy and policy manager

Governments proposal on pricing agricultural emissions

HortNZ made a joint submission with primary sector and Māori agribusiness on the government's pricing agricultural emissions recommendations.

HortNZ supports the primary sector and Māori agribusiness joint submission. HortNZ believes a balance has been struck with the recommendations within the submission, that will enable the primary sector to take climate change action, remain productive and respond to increasing market demands for climate action.

HortNZ also made a separate submission on the government's recommendations, reiterating support for the primary sector and Māori agribusiness joint submission. The HortNZ submission also reflected the views of growers, some of which differ from the position HortNZ has taken in the joint submission.

Growers hold a range of views on pricing agricultural emissions, including:

- Lack of support for pricing agricultural emissions from some growers. These growers considered the focus should be solely on emissions management. These growers were concerned about the added pressure from pricing, on growers and farmers struggling with inflation, workforce shortages and regulatory complexity
- Support from some growers for an agricultural emissions management and pricing system. These growers considered a robust system to be important to support international trade, and alignment with increasing market requirements for climate change action

- A split view on whether the point of obligation for paying for fertiliser emissions should be at the Farm Level or the ETS.

Food Waste Definition for New Zealand

HortNZ has submitted on the government's proposed definition of food waste. HortNZ has sought the following outcomes:

- A suite of national definitions for food, food loss and food waste.
 - Food: distinguishing between the edible and inedible food waste generated.
 - Food loss: capturing food loss that occurs during the post-harvest through distribution stages.
 - Food Waste: capturing food waste that occurs during the wholesale and retail stages through to household stages.
- We are concerned that the government is conflating the outcomes sought with improved food loss minimisation and waste management. We consider it necessary to be clear about the key outcomes sought. We seek that policies are assessed for effectiveness both against individual outcomes and combined outcomes. Robust analysis is necessary to optimise co-benefits, avoid unintended consequences and avoid an inequitable distribution of the costs and benefits of food loss and waste management. The three areas we consider food loss and waste policy needs to be explicitly assessed against are impacts on:
 - Reducing methane and carbon emissions, and including lifecycle greenhouse gas emissions
 - Optimising waste streams for economic benefit
 - Improving food security, including food safety, for New Zealand and the Pacific.

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Timaru District Council – Proposed District Plan

HortNZ has developed a submission on the Timaru District Plan. We seek a framework that enables horticulture within the rural environment.

HortNZ believes clarity is required to ensure appropriate horticultural production activities, such as non-soil based covered cropping and independent post-harvest facilities are located within horticultural production areas.

HortNZ believes reverse sensitivity issues needs to be addressed to enable horticultural production activities to occur in rural zones and particularly where there is new residential development occurring near zone boundaries, or at the edge of established towns.

Proposed Te Tai o Poutini District Plan

HortNZ submitted on the proposed Te Tai o Poutini District Plan. The Te Tai o Poutini Plan is a combined district Plan for the Grey, Buller and Westland District Councils. Hort NZ has sought an enabling approach to Horticulture as a potential growth industry for the West Coast. ●



PROPAGATION AMNESTY

Waimea is responsible for the management of several protected fruit tree varieties in New Zealand. These varieties are protected by Plant Variety Rights and may only be grown by authorised growers with permission from Waimea. Protected varieties that are propagated, grafted, top-worked or supplied without appropriate authorisation may be subjected to a range of consequences.

We are offering an amnesty period for any unauthorised propagation, topworking or supply of protected material until 28th February 2023.

During the amnesty period Waimea will apply the normal royalty and propagation fees that would be due. Following the amnesty period any declared or discovered propagation will be subject to a penalty rate or action under the PVR Act 1987.

Protected Varieties (non exhaustive list)

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Galaval	Kootenay
Aztec Fuji	
Candy Fuji	<i>Pears:</i>
Kingsbeer Red	Angelys
Lady in Red*	
Rosy Glow	

*For Lady In Red in North Island locations please contact LE Cooke Nurseryman Ltd.

If you have propagated or supplied material of these or other protected varieties managed by Waimea or have questions regarding this propagation amnesty please contact us.



Tel: 03 544 2700 Email: ip@wvm.co.nz



Increased volcanic activity at Mt Ruapehu earlier this year served as a timely reminder of what industry can do to ready itself in the event of a natural disaster

Managing risk: expect the unexpected

The pressures that growers face are significant. From labour shortages to compliance burdens and climate change. It is easy to stay focussed on immediate and visible risks but what about those hidden ones that we often forget?

Gabi Hidvegi : HortNZ risk policy advisor

Earlier this year New Zealand observed increased volcanic activity at Mt Ruapehu and Lake Taupo which served as a useful reminder of volcanic threats. While the tremors and volcanic unrest of Ruapehu did not result in an eruption, it does provide the horticulture industry an opportunity to evaluate the readiness of the sector in the unexpected event of an eruption or natural disaster.

As residents of a geographically diverse landscape, we must acknowledge that New Zealand lies on an active subduction zone between the Australian and Pacific tectonic plates.

Despite the ongoing unrest, an eruption is considered unlikely¹. It is possible that the unrest will result in minor eruptive activity confined to the lake basin. This may result in lahars connected to the Whangaehu River².

Horticulture around Mt Ruapehu

Horticultural production surrounding Mt Ruapehu is to the north (near Turangi) and south (greater Ohakune area). Primary crops grown in these areas include brassicas (e.g., broccoli, brussels sprouts, cabbage, cauliflower) and root crops (beetroot, carrots, parsnips, potatoes).

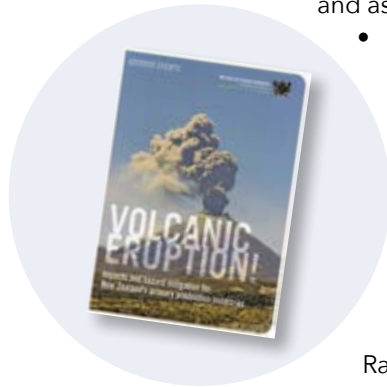
Approximately 1500-hectares of short rotation cropland exists in the immediate area³. If this cropland is entirely in vegetables, then it equates to approximately three percent of the national vegetable growing area. While this growing area is small relative to the national production area, it is important. It fills a specific gap in seasonal supply because the harvest is later than other North Island growing areas.

Eruption impacts on horticulture

The adverse impacts of a volcanic eruption to horticulture are highly dependent on a range of components such as the temperature and composition of the volcanic magma, the severity and duration of the eruption and the volcanic activity. E.g., lahars, ash, landslides etc. Wind direction and windspeed influence the direction and dispersal of erupted debris while the shape of the landscape would determine the ease of flow and movement of any lahars. Volcanic ashfall presents the biggest volcanic threat to New Zealand's primary sector and even small, explosive eruptions can distribute volcanic ash hundreds of kilometres from the volcano (Ministry for Primary Industries, 2012). The impacts of other hazards such as lahars, pyroclastic airborne deposits and volcanic gases are generally restricted to smaller areas.

The primary risks to horticultural crops are (MPI 2012):

- Inhibited transpiration and photosynthesis due to clogged leaf pores blocking sunlight
- Contamination of crops and fruit, as well as leaf blemishes - making crops unsuitable for sale and consumption



- Defoliation may occur as the weight of heavy ashfall can strip leaves and break weak branches, particularly if the ash is wet
- Acidic ash may burn plant tissue, causing death of plant buds and russet, delayed maturity, fruit and vegetable drop or impeded colour development in fruit
- Acidification of soil and water uptake due to acid rain and ashfall
 - Disruption of pollination processes which may result in reduced fruit and vegetable set and smaller or deformed fruit and vegetables
 - Access difficulties due to damaged roads etc.

Ashfall affects crops differently depending upon the type of crop, developmental stage, what time of the year eruption occurs, eruption duration and the climate⁴.

Rainfall interacting with volcanic gas within the ash plume may produce acids that fall as acid rain. Acid rain falling on plants can lead to both issues for the plant surface but also hydration issues if absorbed through the soils. Similarly, ash deposited on the ground can alter the soil chemistry, changing the acidity, nutrient and water content which can have detrimental effects to plant health and growth.

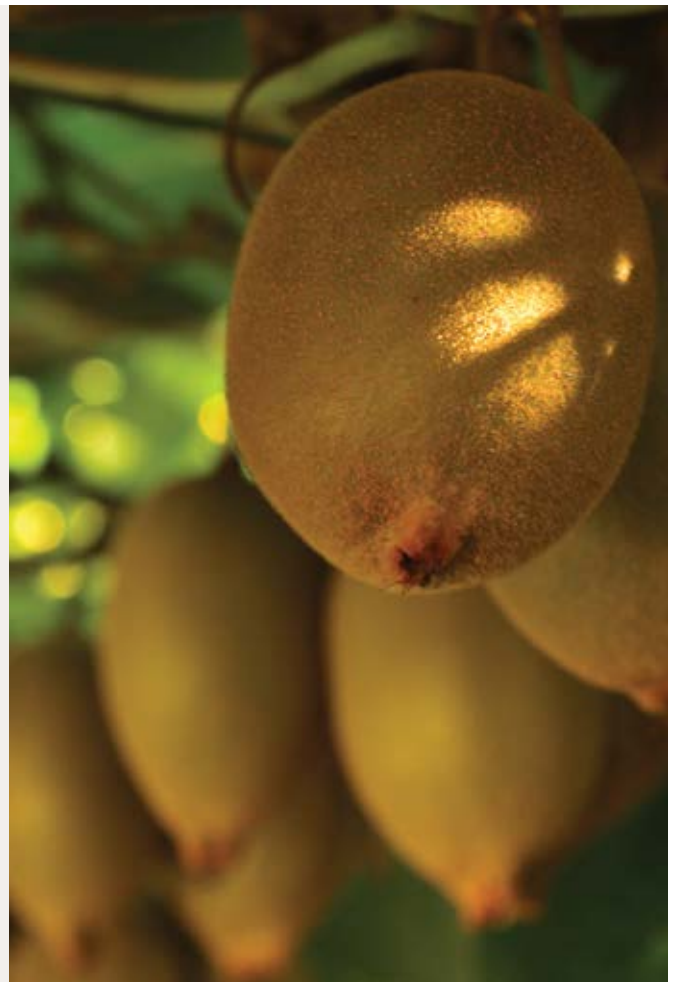


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Human health and wellbeing are also impacted by natural disasters. These events can be incredibly stressful, and recovery can take a long time, with a significant mental and financial toll. The good news is that by being proactive, getting prepared and planning, you can minimise the impacts of a volcanic eruption and reinforce your personal and business resilience.

Grower preparedness

The 2012 MPI *'Volcanic Eruption!: Impacts and hazard mitigation for New Zealand's primary production industries'* document outlines a number of recommendations that are intended to increase preparedness, mitigate against damage, and facilitate rapid recovery to full production. Many are relevant to horticulture. These include:

- ✓ Stocking up on general emergency supplies such as water, food, batteries, candles, and fuel for at least three days
- ✓ Ensuring farm insurance cover is adequate and covers crop insurance for volcanic impacts
- ✓ Maintaining a resilient power supply by checking power lines and poles are free from overhanging branches, purchasing a generator and ensuring key equipment can be run from tractor power take-offs
- ✓ Keep water distribution systems well-maintained and, have maximum storage in covered water supplies where possible
- ✓ Ensuring farms have adequate tank water storage and that stored water can be distributed if pumping facilities are disrupted, by locating tanks on top of topographic highs so water can be gravity-fed
- ✓ Taking steps to protect household water supply by installing a disconnect valve on roof-fed rainwater tanks and stockpiling bottled water.
- ✓ An air compressor in good working order is useful for cleaning ash from machinery
- ✓ Locating a site suitable for dumping ash after a clean-up and consider what can be used to cap the ash deposits - e.g., soil may prevent ash being remobilised by wind or water erosion
- ✓ Ensuring ladders, brooms, shovels, and bucket and blade attachments on tractors are on hand for cleaning up
- ✓ Stocking up on masks and goggles
- ✓ Prioritising farm activities by developing a list of facilities that must be kept operative following an eruption versus secondary operations. ●

1. <https://www.geonet.org.nz/vabs/37Ji0FE8bol0IJ80O2drv0>
2. <https://www.geonet.org.nz/vabs/37Ji0FE8bol0IJ80O2drv0>
3. <https://iris.scinfo.org.nz/layer/104400-lcdb-v50-land-cover-database-version-50-mainland-new-zealand/>
4. https://volcanoes.usgs.gov/volcanic_ash/effects_arable_crops.html

MT RUAPEHU FACTS



Ruapehu means 'pit of noise' or 'exploding pit'



Largest active volcano in New Zealand



Lake temperatures fluctuate but prolonged spikes in temperatures can signal volcanic activity

Last eruption: 2007
Result of eruption: ash, rocks and water spread across the summit, producing lahars (mudflow of volcanic material) in two valleys

Enhancing safety and wellbeing in horticulture

A project to enhance safety and wellbeing in horticulture has reached its first milestone with the release of a report that delves into what happens in horticulture workplaces.

Grow Home Safe is being predominantly funded by ACC through a Workplace Injury Prevention Grant and run by HortNZ.

"We want the horticulture industry to be the safest and most attractive primary industry in which to work in New Zealand," says Apata group compliance and safety manager, Kate Truffit. "This is the first time that we have had detailed information about injuries in the horticulture industry. This level of detail is vital to making the level of progress envisaged."

"The project is built around four objectives - **Understand > Intervene > Support > Lead**. Each objective addresses a specific problem and establishes new approaches to reduce harm."

Kate says growers and industry are right behind the drive to reduce injuries.

"The horticulture sector is diverse and complex, spanning large corporates to small family operations. We know growers face many challenges. This has been especially evident over the past few years with Covid-19."

"Most growers already have excellent track records when it comes to safety and wellbeing in the workplace. Indeed, 92 percent of those who completed the project's survey said they worked in a safe and healthy environment."

"However, the sector recognises that harm is increasing, and that new, evidence-based system wide approaches are required to decrease harm. By developing a cross-sector community of practice around safety and wellbeing, the project will enhance workplace safety and wellbeing in horticulture nationally."

"This will involve us working with ACC, WorkSafe and

similar sectors to ours to develop ways practical ways to reduce injuries and enhance wellbeing, across every aspect of commercial fruit and vegetable growing.'

“

Most growers already have excellent track records when it comes to safety and wellbeing in the workplace

Current situation

Publicly accessible accident and injury data is only made available under agriculture, making it hard to understand horticulture-specific harm rates. The horticulture sector currently makes assumptions when it comes to statistics. As a result, a vital aspect of this project has been to develop a more accurate understanding of horticulture specific data. This report is the first step to developing this better understanding.

There are multiple variables present in near misses, incidents and accidents. At present, little is known about how the different variables combine to increase or decrease the risk of harm. By developing this understanding, interventions can be much more targeted to have the highest impact.

How to get involved

If you would like to be involved in the project, or more about what we are doing, please contact HortNZ data, systems and insights manager, Emily Lake: emily.lake@hortnz.co.nz or 027 582 6655. ●



Kate Truffit,
Apata group
compliance and
safety manager



Grow Home Safe

ENABLING PEOPLE TO THRIVE

This project takes an evidence-based system-wide approach to help identify and assist in the varied safety and wellbeing issues that our Growers within the Horticulture and Viticulture sectors are facing today.

What we did

- Online workshops
- Site visits across six regions
- Health and wellbeing survey
- Analysis of ACC and WorkSafe data

Project objectives

UNDERSTAND
(current phase)

INTERVENE

SUPPORT

LEAD

What we learned

84% of respondents said they worked for organisations where safety was a priority



Horticulture has a **positive attitude** towards safety



Horticulture workers **require fewer days off** compared to construction and agriculture workers, even though horticulture has a similar proportion of claims requiring time off



Employers are engaged in keeping people safe



\$15m paid out in horticulture related ACC claims in 2021



Two thirds of respondents reported feeling levels of stress that were uncomfortable for them



This spike may be related to **minor claims and increase in sector size**



Lumbar sprains, cuts to hands and fingers, back or shoulder injuries, and eye injuries are the **most common**



One third of respondents said they had experienced incentives to work longer or quicker than is safe in the past 12 months





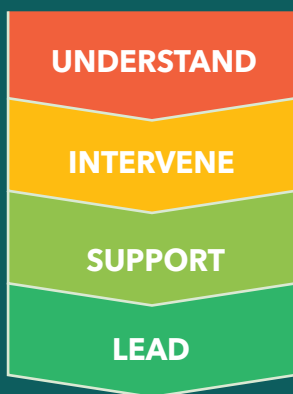
What our industry's already doing

Theme	Tools
Injury prevention & recovery	<ul style="list-style-type: none"> • Early intervention to reduce injury severity • Reducing fatigue through technology and better work patterns
Technology & equipment	<ul style="list-style-type: none"> • Improving crop varieties, growing and pruning methods • Reducing strain - for example, packing robots and electronic secateurs • App-based solutions for spreading information • Equipment to keep lone workers safe
Training & roles	<ul style="list-style-type: none"> • Health and safety training materials • Matching workers to tasks
Safety culture	<ul style="list-style-type: none"> • Toolbox meetings, walk arounds and opportunities for workers to speak up
Learnings from Covid	<ul style="list-style-type: none"> • Improved technology and more flexible work patterns

Harm hotspots

Harm hotspots identified from our system analysis

- INDUSTRY NORMS**
we work hard in a fast paced environment
- STAFF SHORTAGE**
it's hard to get and retain people
- EXTREME WEATHER**
has further pressured our people
- NON-PHYSICAL HARM**
societal issues are affecting people
- EQUIPMENT & PPE**
varied and inconsistent use
- COVID**
has exacerbated existing stress points
- REGULATIONS**
we need more sector specific material
- OHS RESOURCES**
we need more sector specific material



The next steps

The project will **build on** what is already happening.

Practical tools and initiatives will be developed to address gaps to reduce harm and keep people safe and well.

- Collecting and sharing knowledge
- Māori engagement
- Building on learnings from recent events
- Workforce development
- Building a positive safety culture
- Social and pastoral care



Find out more at www.hortnz.co.nz

YOUR INDUSTRY

ACROSS THE SECTOR — ACROSS THE COUNTRY

*'Tis the cherry
season*

Page 20





Livia Esterhazy has been appointed as the new programme director for A Lighter Touch

A different approach to growing

Livia Esterhazy, whose career includes executive roles in banking, marketing, advertising and a not-for-profit environmental organisation, is the new programme director for A Lighter Touch.

Elaine Fisher

Livia was appointed to the role in October. The game-changing multi-year partnership programme between government and industry addresses the challenge of meeting consumer demands for quality food while also being gentle on the environment.

“Food production is one of the biggest environmental issues we face globally,” Livia says. “The use of chemicals, pest management and soil health need a different approach. This is why I’m so thrilled to be joining this innovative partnership with 15 of New Zealand’s leading commercial product groups and the government all focused to transform how fruit, vegetable and arable crops are grown with a lighter environmental touch.”

The governance group of the \$25.5m, Sustainable Food and Fibre Futures Fund (SFFF) undertook an extensive

search for a high-calibre director, which resulted in Livia’s appointment.

“The programme is pleased to have been able to appoint a person of Livia’s experience and passion to lead it into its next stage, where the projects underway will start to deliver sustainable pest and disease management programmes for the commercial horticulture and arable sector,” says A Lighter Touch independent chair, Dr David Tanner.

Livia says the environment needs a lot of support.

“We all need to make changes if we are to continue to have a planet we want to live on,” she says. “But I also understand that it makes no sense to come up with programmes which are not economically viable for growers.

“A *Lighter Touch* is not about completely stopping the use

of agrichemicals. It is about a wholistic approach to pest and disease management.

"It is an exciting programme which offers huge opportunities for growers in New Zealand to show the world how food can be produced sustainably and to also meet the global pressures which are coming, including around how consumers want their food produced.

"If we are not well prepared for those changes it could be a disaster as we are a food producing nation."



A Lighter Touch is not about completely stopping the use of agrichemicals. It is about a wholistic approach to pest and disease management

Collaboration and networking among growers from different industry sectors are among the programme's strengths.

"When you bring unlikely friends to the table, magic happens," Livia says. "Bring a diverse group of growers together and it's likely many are facing the same issues and problems. It's also likely some of these have already been resolved somewhere else, but while you remain in your own silos you will never know."

There will be early adopters of the A Lighter Touch programme. Telling their stories, warts and all, will be important.

"Those stories must be honest, transparent and inspiring but not glossy comms pieces because growers are very astute and will see through that," Livia says. "It is important to share the wins and also the failures because there is much to be learnt and money saved from understanding failures."

The programme has a seven-year time frame and Livia is confident that it will meet many of its objectives in that time.

"We won't get every grower adopting A Lighter Touch within seven years, but we will be well on the way. Perhaps A Lighter Touch 'Version Two' will be required, but the ultimate aim is to make the programme redundant because the entire industry has adapted to have a lighter touch on the environment."

Livia recognises the considerable pressures growers are already under, especially from climate change regulations.

"Everything now needs to be done at a faster pace, but the knowledge around climate change is not new. If these regulations were implemented 20 years ago, they could have been introduced at a much slower pace. All of them cost money. It's not an easy time for growers. Through A Lighter Touch we aim to create change a little more slowly."



Livia, who now lives at Mapua in the Nelson Tasman District, is the daughter of a French mother and Hungarian-Australian father.

"My father was a hotelier who opened hotels around the world, so we travelled rather like a military family," she says. "I was born in India and then moved to Singapore, Korea, Pakistan, Melbourne and then Sydney. By the time I was 11 Mum said 'enough' so we stayed in Sydney."

Young Livia's career ambition was to become a commercial pilot, but a flight in the cockpit of a commercial aircraft to Bali changed her mind.

"I was totally bored."

Instead, she studied for a bachelor's degree in marketing and finance with Honours at the University of New South Wales.

What followed included diverse roles such as: Senior executive marketing communications for the Commonwealth Bank; managing director of Ogilvy & Mather in Wellington; brand manager for Kiwibank; general manager Saatchi & Saatchi; non-executive board member of The Treasury New Zealand; chair of the board of Asia Pacific Growth Strategy and most recently, chief executive of the World Wildlife Fund, New Zealand.

"Among the aspects of my new role that I know I'm really going to love is meeting growers face-to-face, learning about what they grow and how they grow it, and being part of a programme which will make a real difference to them and at the same time, the environment," Livia says.



To find out more about *A Lighter Touch*, visit: <https://a-lighter-touch.co.nz/>.



Planting trees in Mapua to increase the habitat for the Banded Rail (Moho Pereru) bird

A Lighter Touch – gentle on the environment

A *Lighter Touch* is a \$25.5 million, seven-year, programme jointly funded by government and industry. The programme will address the challenge of meeting consumer demands for safe food that is produced under sustainable pest management programmes while also being gentle on the environment. Government funding is via the Ministry for Primary Industries Sustainable Food and Fibre Futures programme.

A *Lighter Touch* will focus on understanding and better managing aspects of agroecosystems that lead to increased levels of pests and diseases, and how to integrate more sustainable crop protection practices. Understanding the agroecosystem and reducing the opportunity for pests to thrive will reduce the need for crop protection interventions.

There will be increased use of biopesticides and biological control agents, with these tools becoming embedded into crop protection programmes. Agrichemical residues in exported crops and products, overall agrichemical use and resistance risk will all be reduced and be a marketing advantage for New Zealand products.

The plant-based food sector, incorporating horticulture, arable cropping and wine production, generates over \$8 billion annually. New Zealand horticulture is valued at over \$6 billion, with \$3.4 billion in exports, produced by over 5500 commercial fruit and vegetable growers. The arable industry contributes \$1.4 billion to the economy from domestically consumed grain and food crops, and seed exports. The wine industry produces \$1.9 billion of wine for domestic and export sale, with all but \$54 million exported. ●

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Rockit™ apples were originally grown on tall-spindle systems but recently transitioned to 2D, or Future Orchard Planting Systems (FOPS)

On the hunt for growers of tiny apples

The miniature Rockit™ apple is heading south, as Hawke's Bay-based company Rockit Global seeks to increase geographical diversity in a more extreme climate.

Anne Hardie

Commercial general manager, Tom Lane, says extreme weather events are becoming the norm and it makes sense for the company to spread its risk by growing its crop in a range of locations. Tighter water regulations and the onus on growers to demonstrate good water use is also influencing the company's long-term strategy and the decision to spread the crop between regions.

Growers are already producing the miniature apple variety in Hawke's Bay and Gisborne and Tom says those regions continue to have significant growth in production. Rockit is also grown in the northern hemisphere for year-round supply.

Now, Rockit is seeking growers in Nelson and Canterbury, with strong interest from large-scale growers in Nelson who are looking at Rockit as a replacement for some of

their Jazz™, Braeburn or Gala varieties. Tom says growers are telling him the cost of production for some varieties is higher than their returns and they are looking for a different variety to plant. Rockit's orchard gate return last year was about \$200,000 per hectare which puts it at the top end of returns alongside gold kiwifruit.

"Growers are looking for high-value crops to put their resources into and after a hard season last year, there's more interest in Rockit," Tom says.

The snack-sized apples, bred from Gala and Splendour, are packaged in plastic tubes that are marketed to 30 countries. Tom says a feasibility study is being carried out for establishing a shared packhouse facility in Canterbury which would include the packaging technology. In Nelson, the packaging technology could be bolted on in an existing

packhouse. Tom says a region needs to grow 150 hectares or more of Rokit to make it worthwhile setting up. There is also the potential to ship the apples in bulk to key markets and package them there for greater efficiencies.

Enclosing the apples in plastic tubes has been a winner for the company through Covid-19 when customers focused heavily on food safety. Now the company is trialling eco-packaging, using a cellulose product - a renewable and biodegradable material made from wood pulp to create a clear, rigid film.

“The ultimate goal is to use orchard waste to produce our own packaging.”

Growing systems for the petite apple are also changing. Initially, Rokit was planted on tall-spindle growing systems, but Tom says it is now grown on 2D, or the Future Orchard Planting Systems (FOPS). Trials of the latter are proving very successful for yield and the first Rokit harvest from the system will be produced this season.

The company is evaluating full orchard management solutions for new growers in the south who may be

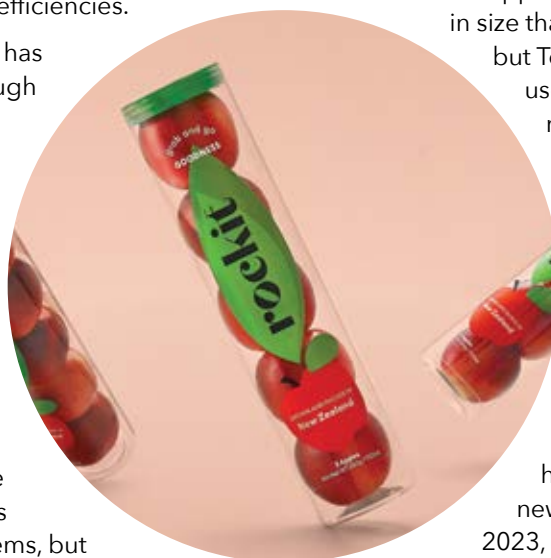
arable, sheep, beef or dairy farmers considering new income streams.

Southern apples are expected to be slightly smaller in size than their North Island counterparts, but Tom says a range of fruit sizes is useful for varying preferences between markets. China takes a significant volume of the Rokit crop and he says the variety fetched \$7.79 per kilogram there compared with other varieties averaging \$2.40 per kilogram.

The company plans to establish about 150 hectares of Rokit in the South Island over the next few years. In the North Island, it has committed 100 hectares of new plantings on the east coast for 2023, with most of the growth in Gisborne.

Across both islands, the company is targeting a further 200 hectares of trees in the ground in 2023.

Rokit Global recently scooped the supreme award at the New Zealand International Business Awards, as well as the award for best large business. ●



Rokit™ Apple uses Harvista™ 1.3 SC for harvesting at optimal maturity

Multi-award-winning company Rokit™ Apple considers Harvista “not so much a choice as a necessity”.

Chris Hurrey, GM Rokit Management Services explains: “We were trialling **Harvista™** during COVID in 2021, and with a picker crisis and the fruit maturing, it was a matter of **use Harvista and hold the crop, or risk losing it. It saved our season**”.

Chris says with a single variety a large amount of flexibility is needed to work inside the maturity window. “With RMS’s volumes doubling between 2022 and 2023, we couldn’t operate without it. **It allows us to hold fruit short or long term**, whereas the previous option was only long term.

“I’m always conservative about incorporating new technology, but this one has exceeded expectations. **It is the holy grail** in terms of what it can do – the difference between harvesting the crop at optimal maturity or outside of it.”

In terms of ROI, Chris says the value of the technology is seen in the **substantial difference in packout**.

“It’s a technology that fits with the ethos of Rokit as we are a company blazing our own path in export markets.”

Rokit also uses **SmartFresh™** to maintain fruit quality through to the consumer.



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Smithy's Pick Your Own (PYO) cherry orchard owners, Alan and Coral Smith



Cheers to cherries at Christmas

Cherries are to Christmas, what chocolate is to Easter. As is Kiwi tradition, thousands of New Zealanders will have cherries grace their table over the festive season, most of which are grown by local, dedicated growers in the South. AIMEE WILSON reports.

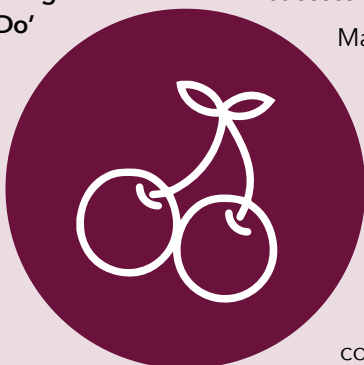
For those wanting a real taste experience of this splendid fruit, there are several orchards in Central Otago that specialise in 'Pick Your Own,' cherries - something that Trip Advisor rates as #2 of 45 'Things to Do' around Cromwell.

Cheeki Cherries, which merged with Dam Good Fruit three years ago, offers 22 cherry varieties, with 3000 trees opened to the public on Ripponvale Road for PYO.

The orchard caters largely for tourists, with a huge percentage from the Asian market. The business also offers a range of outside games and activities, for people to enjoy while having a picnic under the trees.

Owner, Martin Milne, once owned three cherry orchards

in the district - managing 6000 trees that produced 100 tonnes of fruit. With the PYO side of the business being so successful, he now only exports 10 tonnes.



Martin says some days there are 100 cars lined up in the car park and he's strategically positioned his marketing right into Queenstown Airport, so the tourists know where to go for that cherry picking experience.

Despite the demand, 2023 will mark the first year that Cheeki Cherries has had to increase its prices due to rising costs. For years you could PYO for around \$15/kg, but at \$17/kg - it's still reasonable for export quality cherries.

A little further down Ripponvale road, Smithy's PYO is a new player to the PYO cherry market.



Traditional Christmas cherries since 1864

Owners, Alan and Coral Smith, established the business in 2021, opening on Christmas day after fielding so many phone calls from holiday makers, as well as people knocking at their door, who were seeking a bite of the famed Central Otago cherry.

Last season a busload of tourists came all the way from Christchurch just for the day - the oldest being a 92-year-old lady.

"People have had their Christmas lunch and then they are bored and want something to do," Coral says.

Although popular, Alan says a PYO business can be riskier in many respects, as the fruit is exposed to the weather for longer.

"It's the old story, if it rains," he said, referring to the torrential downpours that can unpredictably wipe out a crop in one day.

The Smithy orchard has plenty of space for picnics and lounging around after your hard work and you can buy an

ice cream or a drink and talk to the friendly sheep and alpaca.

"We do try to create a relaxing atmosphere for the parents and kids," Coral says.


The espalier trees make picking even easier, with 1000 trees of large, export grade cherries available for the public to peruse.

At least 60 percent of their cherries can be picked from the ground, with ladders available for fruit that's higher up.

As well as good eating, Coral says some people pick their own cherries to make into specialty chutneys, jams and ice cream.

Another two new PYO cherry businesses will start up on Ripponvale Road in time for the 2022/23 season, as word has spread about how strong the market has become. PYO season generally starts on Christmas day and runs through until 25 January.

Further south in Roxburgh, export grower Chris Toms from



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Cousins Zac and Isla enjoy freshly picked cherries from their grandparents' orchard on Ripponvale Road

The Big Cherry will be opening his orchard in early January to PYO.

He has a huge following from the Indian and Asia communities around Otago and Southland, who come through every year for the hands-on experience.

"Some of them stay for hours and just sit under the trees and take pictures," Chris says.

“

At least 60 percent of their cherries can be picked from the ground, with ladders available for fruit that's higher up



One woman has been coming from Dunedin every season for the past 38 years, firstly with her children, and now her grandchildren.

"They love the white cherries and they're not quite so fussy about the blemishes," Chris says.

While The Big Cherry doesn't advertise PYO, when the sign goes out on the main highway in early January, Chris welcomes anyone.

There's a few health and safety requirements to adhere to - no climbing trees or pulling branches and Chris shows people the right way to pick them - but other than that, it's a pretty relaxed operation.

Back in the 1980s, the Dawson cherry variety was once the main player in the New Zealand market and the family who first introduced the variety have kept a few trees on their Conroys orchard just for the Christmas tradition.

Every December, the Taylor family share their small private collection near Alexandra with a few friends and family, who for them, the Dawson means so much at Christmas.

The PYO experience is starting to become a niche market in Central Otago, particularly for those growers living near the tourist towns of Queenstown and Wanaka.

But if you know the right person with a private orchard, or where the pockets of trees are that grow wild, it's like striking gold - and there's still plenty of that around the district too. ●



Forest Lodge Orchard is believed to be the world's first zero fossil fuel orchard operation

World's first zero fossil fuel orchard

Mike Casey, owner of the world's first zero fossil fuel orchard in Central Otago, shared his pioneering journey to fully electrify his six-hectare orchard at the New Zealand Agricultural Show in Christchurch on 10 November.

Gina McKenzie
Photography: Thomas Green

Forest Lodge Orchard's entire commercial operation - from electric frost fighting fans to irrigations, tools and vehicles - is powered by electricity and from power generated and stored on farm using solar energy and batteries.

Mike has ordered an electric tractor - a New Zealand first - which will arrive from the United States in 2023. In the meantime, he is trialling an existing tractor converted to an electric system. He says it is important not to let perfection be the enemy when it comes to making changes on orchard.

"We need to start by looking at the choices we make for things we can control like the equipment we



use on our farms," Mike says. "I have gone ahead and done everything I can do to eliminate reliance on fossil fuels, but growers can also adopt a step-by-step approach if they want to start going down the same path."

One option for gradual change is to replace older equipment at the end of its lifespan with new electric equipment, he says.

"I know that not everyone can replace everything all at once, especially if they are not starting from scratch like we did, so I think another way to look at it is when things need replacing," Mike says.



Forest Lodge Orchard prides itself on the great team of workers striving to achieve climate excellence



Forest Lodge Orchard owner, Mike Casey (left) and orchard manager, Euan White

During his presentation at the New Zealand Agricultural Show, Mike provided itemised data showing the payback periods and the amount of carbon saved for the full electrification of his orchard, including upgrades for connecting to the grid and the purchase of frost fighting fans, tractor conversion and equipment, an electric sprayer and an electric vehicle.

“

When you are determined to create real change and do it on a large scale you need to remove the blocks that might stop others from following you

“For the full electrification of everything on farm there is an incremental payback of seven years and a full payback period of 13 years,” Mike says.

The orchard harvested its first crop of fossil-fuel-free cherries last year and Mike says the key to improving the payback of electrification and solar energy is marketing a premium product which consumers are willing to pay more for and backing this up with hard evidence.

To help other growers with this, Mike has created a new certification programme, co-developed with and independently audited byASUREQuality, New Zealand’s leading food assurance provider. This certification has strict rules around fossil fuels which means that food producers must provide evidence of elimination of fossil fuels from their operations, instead of relying on offsets.

“This is a vital part of providing consumers with an authentic certification because the words ‘carbon neutral’ do not necessary mean that the consumers are getting a sustainable product,” Mike says.

One of the key barriers to Mike setting up a fully electric operation was finding an insurance product that would cover the risk of power cuts to his electric frost fighting fans during the vulnerable spring growing months when young cherries must be protected from the hard Central Otago frosts.

To be completely fossil-fuel free, Mike wanted to avoid using a diesel-powered backup generator, struggled to find an insurance provider that would protect his business against the risk to his crops posed by power cuts - until he started working with GSI Insurance Partners Christchurch director Sean Lysaght and Vero to create an innovative insurance policy that met his unique needs.

“When you are determined to create real change and do it on a large scale you need to remove the blocks that might stop others from following you,” Mike says.

“

The orchard harvested its first crop of fossil-fuel-free cherries last year

When Sean started working with Mike to create an insurance product to fit the unique circumstances, he needed to find an insurance underwriter who would be willing to think creatively about the situation.



Everything from irrigation, frost fighting fans, vehicles and tools are powered through the grid and the orchard's own power supply



Inspecting the cherries

"We approached Vero and they were willing to collaborate with us to create a new and innovative insurance policy that would cover Mike for any loss of product due to power cuts," Sean says.

After spending around 18 months fine-tuning the insurance policy which used interruption cover as a base, Sean and Vero created a solution that fits Mike's unique situation. Sean believes more growers and farmers will be seeking tailored insurance solutions in the future as they move



towards implementing sustainable farming to mitigate environmental issues.

More than 1000 growers have already visited Mike's cherry orchard. He intends to continue allowing visitors in order to encourage others to make similar changes on their farm or orchard.

"I am always keen to share what I have done with others. If we can plant a seed of change then the climate will thank us later." ●



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Hawke's Bay growers suffer worst season on recall

It rained a lot in Hawke's Bay this year, starting early on, and just kept on going. Even now the region is having regular rain. This has caused growers deep anxiety, in what must have been the wettest year many of them have seen.

Bonnie Flaws

The year had begun with anxiety about the uncertainty around labour supply, and then as the apple harvest commenced in March, a wave of Omicron hit, taking out hundreds of workers from orchards and pack houses, says Hawke's Bay Fruit Growers' Association president, Brydon Nisbet.

Some businesses' workforces were down 20 to 40 percent due to seven-day isolation requirements. Then, just as that was correcting itself, the heavy rain began, damaging apple crops. The rain went on so much that pickers couldn't get in to pick the fruit, and the longer it stayed on the tree the more it deteriorated, Brydon says.

Buyers, who test the quality, weren't happy. Knowing they could be rejected at their destination market; many apples simply weren't sent.

"Hundreds of thousands of cartons weren't sent," says Brydon. "It was the worst season I've ever had for rain.

"We go through that and then of course we had the wettest spring we've had in 50 years as well, which brings disease pressure, mainly black spot.

"It was an incredibly wet spring and there were major issues with lots of orchardists not being able to spray because of the wet. Tens of thousands of trees have been lost due to flooding - they get wet feet and the roots go rotten. I myself lost about 400 trees."

It didn't stop there. September brought a hailstorm that was so heavy it collapsed the hail nets over cherry orchards and other crops including kiwifruit were damaged. Because of the rain and the lack of pollination, stone fruit crops will be very light this year, Brydon says.

The highlight of the year, amidst all this gloom, was the cap on the number of the Recognised Seasonal Employer (RSE)

scheme workers being lifted from 16,000 to 19,000 for the 2022/23 season. There was a lot of negotiation behind the scenes between industry and bureaucrats, but this was a win for growers who are no longer talking about labour as a major issue, Brydon says.

Although more backpackers would be welcomed by growers.

Apple grower and Te Pūkenga horticultural lecturer, Steve Hartley, says Immigration New Zealand is just not processing them fast enough. Small family growers like him, with just 12 hectares of orchard, can't afford to put in purpose built RSE accommodation and therefore rely on New Zealanders and backpackers to fulfill the harvest and run the orchard.

However, the big pressure now facing growers, as they move into the new season, is rising costs.

Steve, who grows Royal Gala and Pacific Queen apples, says there are people in Hawke's Bay who are really experienced at thinning, which is just about to begin. Because of their skill level they will be paid \$30 an hour. Chemical prices have gone up by roughly 15 percent and prices for shipping and commercial interest rates are higher too - that all gets passed on to the grower.

"There is a lot of anxiety from everybody that is growing," Steve says. "The rots have hit our brand this year and that's the worry - that there will be a correction for that in the market, which means less income as well as costs going up."

His message to growers is to try to hang on for a couple of years.

Brydon says a number of smaller growers have given up and chosen instead to lease their land to big corporates,



Heavy rain damaged apple crops and meant workers couldn't get in to pick the fruit

while Wendy Dowling, of Bay Leaf organics in Haumoana, says that would be a last resort, but a possibility.

“

The highlight of the year, amidst all this gloom, was the cap on the number of the Recognised Seasonal Employer (RSE) scheme workers being lifted from 16,000 to 19,000 for the 2022/23 season

“Last season was the worst one we have ever had,” Wendy says. “We had that flooding early on, we had quite a poor pollination because of that cold yucky spring. We had a terrible primary infection of black spot which we have never really had before and then we had some insect pressure – so our crop was probably about half as much as we would have expected.”

Shipping costs to the United States were gobbling up their profits too, Wendy says, having risen from \$6000 per container pre-Covid to \$16,000 now.

The European market was not as strong as in the past due

to ‘buy local’ marketing campaigns, which were impacting Bay Leaf Organic’s business. Now, organic Italian fruit was stored almost all year for sale in Europe, so the market wasn’t as profitable.

Wendy says they are very careful about the fruit they put in a box for export. With a high-tech packhouse in the region, they were able to pre-sort the fruit for size and quality and because the volumes are known, this helps with shoring up the shipping plans.

“We don’t sell anything that hasn’t sold well historically,” she says. “Gone are the days when you used to just pick everything and pack it. We are a lot more strategic about what we do [now].”

She didn’t know any growers who were feeling optimistic about the economic environment at present, although the current crop was looking healthy and well pollinated.

On a positive note, Steve says there are lots of young people now coming through Te Pūkenga pursuing horticulture – and it wasn’t like that five years ago.

“It’s positive with the kids coming through now. We’ve got lots of people who want to be part of this industry, some really good kids and even older people in their 40s.” ●

Vailima uses Harvista™ 1.3 SC to get “better quality fruit overall”

“**Very effective and simple to use.**” Vailima Orchard’s Tristram Hody reports there is nothing complex about their use of **Harvista™**; AgroFresh’s harvest-management technology: “We do it for the product. Without it, quality would suffer and there would be fruit we wouldn’t pick.”

“We get better quality fruit overall.” Vailima was a trial partner for Harvista’s registration in New Zealand, and in the box seat when the technology was approved for commercial use in the 2021 season. According to Tristram, Harvista has delivered principal benefits as well as “side gains”.

“Given our range of varieties, Harvista allows us to spread the harvest and delay maturity so that we even up maturity and improve colour. In practice we are picking more fruit in the first pick, a benefit in terms of returns. And with the fruit on the tree longer, **we also get the ‘side gain’ of increased product size and yield.**”

Ambrosia is a leading Vailima variety, but one with potential maturity issues, and typically with a 10-day harvest window. Tristram says that using Harvista, “**We have been able to spread the 10 days to three to four weeks.**”

Harvista is applied by an orchard sprayer system, and Vailima regards it as a simple product to use. Along with this harvest-management tool, Vailima uses **SmartFresh™** as the post-harvest technology for maintaining fruit quality in storage and all the way to its customers.



Vailima Orchard is a successful fourth-generation family-owned business and at the forefront of apple technology.

Tristram Hody pictured (right) with Chris Waites in an Ambrosia block.



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Mick Ahern (left), winner of the 2022 Horticulture New Zealand Industry Service Award, receives his award from Barry O'Neil

Support for industry advocate groups more important than ever

Co-operation and collaboration between product groups and with Horticulture New Zealand has never been more important believes Mick Ahern, winner of the Horticulture New Zealand Industry Service Award for 2022.

ELAINE FISHER reports.

"Today's horticulture industry leaders have one hell of a job. That is why they need the industry's support to deal with the volume and complexity of challenge and change that the industry faces," says Mick, who has retired after 45 years of diverse and active involvement in horticulture.

"Multi-product group support and the personal knowledge and camaraderie that brings, centred around HortNZ makes a lot of sense. HortNZ can't do all that is required on its own but is the recognised go-to organisation for government agencies.

"It needs the product group people to put their shoulders in alongside the chief executive and specialist staff. This

also adds to the credibility and quality of communications with growers."

HortNZ president, Barry O'Neil, who presented Mick with the service award in September, says Mick has contributed to the development of the horticulture industry for more than four decades.

"Mick is known for his common sense and ability - after everyone else has exhausted themselves with talking - to sum up the situation and provide wise counsel, while pointing to the best, if not only, way forward."

Mick has stepped down as executive manager for Strawberries NZ and as managing director of Primary

Services Ltd - the management consulting and contracting horticultural company with an emphasis on export he founded.

The impacts of the Covid-19 pandemic, says Mick, including government-imposed restrictions on smaller fruit and vegetable retailers, wholesalers and food service outlets, plus labour issues, are still being felt by growers.

"As a rule of thumb, industry people say growers can survive two tough years in a row and maybe three in ten years," Mick says. "But after that, many will look to reduce their risk either by planting less or exiting the industry. This particularly applies to annual crops, especially vegetables. Growers are also leaving the industry as regulatory impost, age, risk-reward ratio and work ethics change."

The pandemic restrictions highlighted a deficit in practical knowledge and awareness, both by government and the public, of the level of risk growers take each day to grow fresh produce, Mick says. Government agencies also learnt a lot the hard way about produce supply chains.

The list of risks is daunting and includes, labour, weather, climate change, logistics, regulations, shipping, currency, product quality, market access, risks in-market and risk around securing payment.

Given all the risks involved, no one should expect fresh fruit and vegetables to become significantly cheaper.

"People think nothing of spending \$20 on a bottle of wine but complain when cauliflowers cost \$10 now and again. "The public needs to learn how to buy better in-store, to make what they buy last longer and above all appreciate that good, safe healthy food costs inflation impacted money to produce. In other words - cough up for produce and maybe drink less booze."

Looking ahead, Mick predicts shipping issues for export crops should improve, "although the dominant multinational providers are trying to

extend their exceptional windfall gains of last year." However, globally the freight market is moving back again.

“**The pandemic restrictions highlighted a deficit in practical knowledge and awareness, both by government and the public, of the level of risk growers take each day to grow fresh produce**

"Airfreight will take longer for exporters, until our tourist trade builds up again," Mick says. "Labour will also resolve itself frankly because it has to and as the realities of our declining balance of trade hits home.

"The world's current geopolitical tensions may offer export opportunities. We have always been opportunistic. The trick is to keep at it, sustain a sense of humour and camaraderie, look after industry bodies and their staff and fund them well to do the essential work needed. Good team morale is essential in hort."

Mick grew up at Otaki, the son of a market gardener growing mainly outdoor tomatoes. In 1975 he graduated from Victoria University with a bachelor's degree in Commerce and Administration with honours. Mick's honours case study into the background and development of the then fledgling kiwifruit industry led to his career in horticulture.

"I was taken with the idea of exporting New Zealand food products as a career," Mick says. "It seemed meaningful and so did the product. I was also broke and overseas travel paid by an employer appealed a lot.

"Exporting was the 'hot' issue of those times as New Zealand wrestled to diversify products and markets after the United Kingdom had joined the



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European Union and put the dairy industry, in particular, on the back foot. There were generous tax incentives which also made exporting exciting. You felt you were doing something important for New Zealand."

During his time in the kiwifruit industry, Mick worked with overseas customers, initially in Japan then in the United States, Canada, United Kingdom, Europe and Scandinavia.

"In the early kiwifruit years, I lived for a period in Germany and worked for a fruit importer. On returning to New Zealand we moved to Te Puke, I spent some time on logistics management of bulk charter ship loading of kiwifruit in the port of Tauranga. We also did some bananas and citrus. Then followed a focus on kabocha squash and onions exporting for which we returned to Pukekohe."

The years spent exporting onions were particularly dynamic, he says.

"We had a tight, highly motivated team. I leveraged a lot of my European kiwifruit knowledge and customer contacts into the onion business."

Mick took a position as export manager for Freshmax at a time when the apple industry was deregulating. The company also aspired to export a full range of products, including persimmons, avocados, summerfruit, passionfruit, tamarillos, kiwifruit (under collaborative marketing) as well as onions from a business Mick had started.

“The public needs to learn how to buy better in-store, to make what they buy last longer

"These were tumultuous times for apples, but I learned a lot including about the domestic market," he says. "I also decided not to rely on a single source of income again. I started my own advisory business which essentially meant I sold my management and sales time to a portfolio of clients.

"In the end, this comprised great relationships with the Bostock group, industry bodies Onions New Zealand (ONZ) and Strawberry Growers NZ (SGNZ). I was also on the board of Horticulture Export Authority (HEA) for six years as Horticulture Exporters' Council representative. These all ran in parallel for approximately ten years."

Mick joined SGNZ when the industry was wrestling with looming regulatory and internal structural demands.

"These could not be handled adequately by grower directors working flat out in their own businesses. We did some good things at SGNZ and that period gave me a lot of satisfaction and some fun.

“

Given all the risks involved, no one should expect fresh fruit and vegetables to become significantly cheaper

"I also liked the diversity of working with an export focussed product group ONZ (90 percent export), alongside a domestic focussed SGNZ (90 percent domestic), while still actively selling Bostock onions to my established European clients which included some travel mainly within Germany and [the] Netherlands but also the UK."

Mick describes working on market access as "tortuous".

"I had no idea initially it was as hard as it proved to be," he says. "This was all part of my 'Wellington learnings' phase.

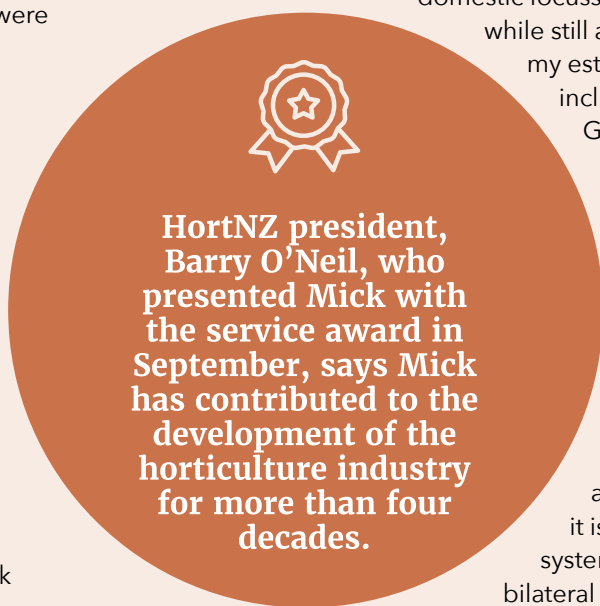
I pursued access to China for onions vigorously and we made great strides but now it is sitting idle somewhere in the system, but at least is still on the bilateral agenda.

"Along the way we got Vietnam, and lately ONZ achieved tariff free access to the UK and Europe which was great. ONZ also got Thailand over the line after waiting for several years. There was also a big reduction in the Taiwan tariff.

Market access has come to mean much more than tariffs and quotas now, which will put even more pressure on growers and for which the industry bodies will have to negotiate and 'broker' compliance with various authorities. It's a long game and continuity of management staff is accordingly important."

It's hard to imagine that Mick will completely cut ties with the horticultural industry which has consumed so much of his life. However, his intention is to focus now on family, including a recent "burst" of grandchildren.

"My wife Jan has been with me most of the journey and we are going to do a few things together we have not had time for over the years. Produce, especially exporting, places great demands on family time. It was a team effort, but I owe her a lot." ●





Banana harvest of a Honduran hybrid variety. Photo: Aaron Millar

Banana growing coming of age

Growing bananas in New Zealand has evolved from being a curious speciality for home gardeners to a productive reality for boutique growers. WENDY LAURENSEN gets an update on growing this tropical fruit.

Aaron Millar, owner of Tallyman Bananas - a Northland business that sources banana plants for growers - says growers know how to consistently grow tasty, nutrient-rich, spray-free bananas.

"We now have the opportunity to decide how we want that to develop in New Zealand," he says. "The models of monoculture banana plantations in tropical countries won't work for us. Our growing conditions and varieties that thrive here are different, our social expectations are different, and our overall awareness of healthy, locally grown food has evolved since Covid-19.

"There's a new wave of food thinking that's a real fit for our banana growing sector." So, we have the opportunity to

decide how we want that to develop in New Zealand."

The emergent banana growing model is of small growers supplying the local market with a range of banana varieties.



"We have the benefit of learning from past risks of relying on single species as with kiwifruit and Psa and of depending on distant supply chains," Aaron says. "As consumers, we're also now hungry for the story of how and where our food grows."

Founder of Tallyman Bananas and one of Northland's banana growing pioneers, Hugh Rose, says the increasing awareness of locally grown bananas is creating huge demand for both the fruit and the plants.

"People are seeing more locally grown bananas at markets and cafés from the estimated 100 hectares of plants in the ground producing about 1500 tonnes of fruit," Hugh says. "That may seem like a lot of bananas, but we import around 80,000 tonnes a year.

"Locally grown bananas are unlikely to ever replace the supermarket-bought bananas imported from countries with much lower operating costs, but they are offering different options at different price points."

Hugh and his wife Pauline put their first 200 banana plants in the ground in 2016.

"The neighbour at our previous Parua Bay property, Owen Schafli, was growing hundreds of banana laden plants nestled amongst mature manuka and I was so inspired that I asked if he was willing to share his knowledge," Hugh says. "He agreed and became my mentor and the source of our initial banana plants. I realised that local banana production could provide a source of tasty, healthy bananas plus produce lucrative rewards for regional landowners."

Hugh and Pauline Rose moved to a bigger 23-hectare property five years ago where they have expanded their banana plantation to 3000 stems of 40 varieties on four hectares. During that time Hugh has continued to advocate for the development of banana growing, plus supply the increasing demand for plants sourced from their own and other plantations.

Hugh and Pauline's property also provided the right conditions for Pauline's lotus growing passion, and space to develop a tropical paradise which is already lush with gardens and growth.

While Hugh is working his way into retirement so that he can further develop their property, he is still actively involved in helping growers establish bananas and other tropical fruit in his role as Chair of Tropical Fruit Growers of New Zealand (TFGNZ), a group formed in 2017 to explore tropical fruit production in Northland.

"We made bananas our first focus and started co-ordinating the distribution of information and banana stems to interested landowners," Hugh says. "The group has grown from 20 to 200 in just a few years. I founded Tallyman Bananas to help source banana plants for that demand.

"I realised when I turned 70 last season that I'm now less inclined to be digging up hundreds of banana plants, so it was time to pass the Tallyman business on. Aaron had the drive and the skill set for it, so I started schooling him in all things banana, and he has now taken that business over

while I continue to support him with knowledge, enquiries and contacts."

The world of banana growing is still fairly new to Aaron.

"I met Hugh when I was sourcing banana plants for a client for my Grow4U business setting up backyard edibles,"

Aaron says. "From that intro, I became hooked on bananas and began turbo-learning everything I could find on them.

"Banana plants are grown from either cut mother stems or suckers, and are best planted around October in sunny protected sites.

But Hugh often reminds us that banana leaves are very efficient solar panels and water catchers, so the plants are more forgiving than people imagine."

Even so, overcrowding and malnourishment are two key issues for the plants.

"As clumps expand, fewer nutrients result in smaller fruit so each year plantations need thinning out, tidying up and feeding," Aaron says. "Plants will fruit in about two years and that stem then dies.

Standard practice is to remove suckers, leaving each clump with just one fruiting stem plus one maturing stem, and a smaller sucker to ensure replacement."

Ideal growing conditions involve planting bananas in compost heaps, Hugh adds.

"So we're now planting them in circles with a compost feed bowl in the centre. We dig a round, shallow pit a few metres wide, fill the centre with compost then plant six or seven plants around the edge," Hugh says. "We continually add garden waste, grass clippings, spent banana leaves and animal manure or fertiliser to the centre, and the bananas convert that raw compost into good ground. Banana circles also help retain moisture and provide better stability."

Banana circles work well for up to about 200 plants, but rows are easier to manage on bigger plantations, and Aaron now has demand for individual orders of hundreds of plants.

"Planting rates are about 1000 stems per hectare and I'm really keen on the permaculture model," Aaron says. "This encourages natural soil regeneration by using resources from within the property, so on bigger plantations we recommend planting partner crops like bana grass, tithonia (Mexican sunflower) and comfrey, grown alongside the bananas to harvest and add biomass for compost."

Farm effluent is another banana nutrient source, and Aaron and Hugh are increasingly getting enquiries from dairy



Hugh and Pauline Rose on their banana and lotus property near Whangarei

farmers. Hugh's background in stock farming and market gardening brought him to the realisation that bananas could be integrated into a dairy farm's effluent system, giving the plant nutrients while also reducing effluent run-off.

"Banana plants soak up nitrates and phosphates from run-off plus they provide 18.5 tonnes of dry matter per hectare each year, so are ideal as a fodder crop to reduce the need for imported palm kernels," Hugh says. "Stock love them."

The first documented New Zealand grown banana plant dates back to 1890 in Kohukohu. Hugh says subsequent plantings were limited by unsuitable varieties, lack of plant maintenance and logistics.

"Increased banana plantings in different locations in the last few years have given growers a body of local information and the confidence to move forward," he says. "The challenge now is to scale in a way suited to our environmental and social conditions.

"Our industry has the benefit of being born from small, autonomous growers, using local resources and selling directly to the local market. I encourage growers to plant several varieties to ensure genetic diversity and protect against potential disease wipe-out, and by propagating

from locally grown mother plants we ensure plants are strong and acclimatised.

"Our country remains a Noah's Ark for plant species brought in before imposed restrictions, and some of these have disappeared in their countries of origin due to pests or disease, so there could be historical botanical treasures growing in people's backyards."

Aaron says the science of banana growing has been sourced from tropical countries, so growers here are still in the process of translating that for New Zealand's conditions.

"Questions we're exploring include the effect of winter-set fruit on taste and texture, how different varieties respond to different conditions and how best to maintain healthy soil for nutrient uptake," he says.

Aaron also points to the developing marketing and distribution infrastructure.

"There's a like-mindedness and a passion amongst boutique banana growers to share knowledge and resources and to foster direct crop-to-customer networks, but not every grower has the time or inclination to front up to markets each week, so we're now entering a new era with fresh options to explore." ●

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Tisha McCaw and Tim Paulin of 3 Kings Cherries in Clyde, Central Otago

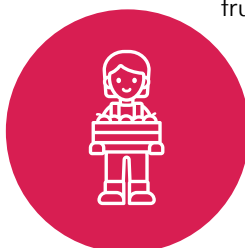
Central Otago orchardists approach new season with innovation and optimism

Central Otago orchardists had to think outside the square in terms of how they recruited their seasonal workers in 2022.

Aimee Wilson

Cut off from the international backpacker market that once comprised a good percentage of workers - particularly over the summer period - many orchardists turned to locals for help.

Some, such as CAJ Apples in Ettrick borrowed staff from Clyde Orchards once the cherry and stonefruit season had finished, to help pick and pack their pipfruit. The family-owned and operated business successfully recruited 100 percent Kiwi staff at its packhouse over winter, calling in workers from nearby surrounding towns through the Seasonal Workforce scheme that offers subsidies for travel and relocation costs.



The new 3 Kings Cherries operation, just north of Alexandra, found younger staff to work half days to help them with their inaugural harvest, investing in the future of fruit growing. Director, Tim Paulin, says they would do the same this year and allow flexibility within the younger age groups, so they could work their own hours and days to suit.

Other operations turned to technology and innovative growing techniques to ease the labour pinch.

Springvale grower and orchard consultant, Earnscy Weaver, says introducing platforms for younger and older growers made it easier for them to pick fruit.



Earnscy Weaver (left) and Tim Jones pioneered New Zealand's first UFO cherry orchards in Central Otago

"We're still picking fruit the same way we did 100 years ago - up a ladder with a heavy bag slung around your waist," Earnscy says. "Older people don't want to be up a ladder all day and I don't think it shows a lot of innovation."

New tree design meant more Upright Fruiting Offshoot (UFO) systems were being implemented on orchards, which produce readily accessible fruit and make picking easier too.

Earnscy (Weaver Horticulture) and 45 South chief executive, Tim Jones, pioneered New Zealand's first UFO cherry orchards in Central Otago and currently work with about a dozen growers in implementing the system.

They say the advantages of using UFO systems are that they help create less rain damage to the fruit - up to 50 percent - because the fruit is better protected by the leaf.

This 2022-2023 season is hoped to see a return of backpackers coming into the country, with hundreds having already signed up for seasonal work. It's good news for the summerfruit industry which has 200 orchards in Central Otago requiring over 5000 staff at the peak of harvest season.

Tim Paulin says they will employ a diverse range of backpackers from all nationalities, who will then hopefully spread the word about working on their orchard.

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Jacob Coombridge took out the Central Otago Young Grower of the Year title for 2022

“A positive word on social media is better than any advertising,” Tim says.

Also the manager of Earncleugh orchard, Fortune Fruit, Tim is recruiting 40 professional Canadian fruit pickers for the 2023 season – all of whom worked in Central Otago prior to Covid-19.

Tim Jones, chief executive of 45 South – one of New Zealand’s biggest cherry exporters – says the company only “just scraped through” with finding enough workers last season, but this year is looking much more promising.

The company has more than 500 seasonal workers signed up and a further 2000 on its waiting list for 2023. Pre-Covid, the numbers were closer to 5000.

“We’ve had a really good response from backpackers and some good conversations with Kiwis as well,” Tim says. “I think we’ve turned a corner.”

““
Other operations turned to technology and innovative growing techniques to ease the labour pinch

Summerfruit New Zealand director, Trudi Webb, says sourcing labour through Covid was difficult, and relying on local school and university students meant the pressure was on supervisors and permanent staff to pull them through.

“This coming season is looking more positive in the region

with growers having a great return rate from last year and high interest from backpackers,” Trudi says. “The seasonal space seems to be improving but until we have feet on the ground, growers are cautiously more positive.”

““

This 2022-2023 season is hoped to see a return of backpackers coming into the country

Both Trudi and Tim Jones agree the permanent work force is difficult now, as the world opens back up again, offering young people more opportunities. Replacing that younger demographic that has been lured elsewhere is proving a challenge.

Orchards, like many other primary industry operations, are also battling with rising costs and the issue of how they keep their businesses economically viable.

“All costs have significantly increased, putting a lot of strain on growers moving forward,” Trudi says.

Generally, growers are looking forward to a new season, however it has been a tough spring across Central Otago with some big frosts and then the snow event in early October.

“We have had a challenging spring to date with quite a few frosts. Most crops have seemed to come through it so far, except apricots which are looking light throughout the district,” Trudi says.

There is still plenty to celebrate this year.

Jacob Coombridge took out the Central Otago Young Grower of the Year title and competed in the Nelson finals. Jacob completed a cadetship with Seasonal Solutions early in his career and now works as an orchard supervisor on Trudi and Simon Webb's orchard.

Industry's health and safety efforts are also celebrated at the Ministry for Primary Industries Good Employer Awards, where CAJ Apples placed as a finalist in the Safe and Healthy Work Environment category. This award recognises employers who have put in place an effective health and safety programme.

The company's Roseburn Orchard in Roxburgh has seen some significant changes in its health and safety protocol over the last few years, including a simplified incident report that is more accessible and faster to fill in for the team. Workers were also provided with individual all-terrain vehicle (ATV) helmets, training on tractor driving protocol on the state highway, training to pilot vehicles for moving large machinery, and strict protocols for chemical handling and storage.

With the Spring storms now behind orchardists, Central Otago fruit growers are looking ahead to how industry will

perform in the summer months. Many southern growers are already pleased with the recent front of warm weather, ripening fruit just in time for Christmas. ●



Bees pollinate a cherry blossom on a Central Otago orchard



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Judco Nursery's collapsed tomato vines following cyclone Fili. Pictured is Matt Sowerby, nursery / harvest manager

A soggy year for Tairāwhiti growers

According to the great Irish playwright George Bernard Shaw, “the rain in Spain stays mainly in the plain.” But in 2022, it was everywhere in Gisborne, uniting growers in one soggy situation.

Kristine Walsh

Most growers from the coast to the flats to inland hill country, started the year fresh off November 2021's one-in-50-year rain event that, as well as leading to a State of Emergency, caused land damage and setbacks to planting programmes.

That was particularly bad news for maize, sweetcorn, and squash growers... and there was more to come.

As the New Year rolled on, so did the rain.

In late March there was another State of Emergency as the region was pummelled by a 250-300ml downpour – around three months' worth – in just 24 hours, followed by another week of steady rain.

That left growers just two weeks to rescue what they could before the arrival of ex-tropical Cyclone Fili, which again

ripped through hill country, devastated roading and dealt another blow to beleaguered growers.

At the time, Judco nursery harvest manager, Matt Sowerby, told *NZGrower* he was in salvage mode, trying to get as much as possible off the company's collapsed tomato vines.

With around 70 hectares of Judco's 183 hectares of tomatoes still to harvest, things were looking grim, said Matt, who was concerned about the downstream effect on local processing companies.

That was a concern confirmed by Cedenco Foods managing director, Tim Chrisp, who said that after a challenging season, the company was down more than 15 percent across its main product groups of tomatoes, sweetcorn and squash.

Gisborne produce grower, Calvin Gedye, says about 40 percent of his own crop was affected – first in the November 2021 rains, then during the downpours of March 2022 – and the winter that followed was not much better.

“To be honest, it has been absolutely brutal,” says Calvin, who grows a variety of products across the region. “Of course, the weather has been the number one impact, but we still have issues associated with supply chains, insidious cost increases and the general conditions around a Covid-19 environment.”

“
There was better news
among citrus growers
in Gisborne



Working with around 45-ha, Calvin’s growing operation is smaller, which makes him nimble enough to dodge some of the issues faced by bigger operators “who have been doing it tough.”

“But we’ve still had ongoing issues,” he says. “If you can’t get onto the paddocks to plant that sets you back and means sometimes you can’t meet your customers’ needs.

“That’s not how we like to run things and obviously, it’s not good for the bottom line. We’re all pretty worn down by it all.”

Perhaps ironically, Calvin believes the extension of the warm season caused by climate change could, for once, be the saving grace for growers.

“Wet conditions have meant things like maize have been planted late but, assuming there’s no more big events, we’re optimistic there’s going to be some successful crops coming in,” Calvin says.

As Calvin spoke, in the second week of November, the region was enduring another big downpour, taking the number of major events to five in just 12 months.

And again, it was the coastal areas north of Gisborne that were worst affected.

In its seasonal outlook for November 2022 to January 2023, NIWA (the National Institute of Water & Atmospheric Research) says the Gisborne/Tairāwhiti region can likely expect above average temperatures and humidity; near-normal or above-normal rainfall; and near-normal soil moisture levels.

That’s just a climate geek’s way of saying what Gisborne growers already know... the region really is warmer and wetter than it was before.

It’s a phenomenon already acted on by uber-grower LeaderBrand, which, after the March rain event, lost produce from buttercup squash to spinach and broccoli.

At the time construction was underway on the company’s three-hectare greenhouse at Makaraka, on the Poverty Bay Flats just out of Gisborne, with plans to have an even bigger eight-hectare greenhouse built by early next year.

As the first trial crops went into the now-operational first greenhouse, in July, LeaderBrand’s general manager of farming, Gordon McPhail, said going under cover represented a big change to current practices.

“We think this style of farming will be the way of the future,” he said.

With the memory of their 2021-2022 losses fresh in his memory, Gordon said the greenhouses would help mitigate most weather impacts and supply variations, while allowing LeaderBrand to explore more technology and farm more sustainably.

“We had a terrible couple of months of storms and loads of rain, which impacted our planting and harvesting programmes,” he said. “The goal is to have a more consistent crop supply that will ultimately ensure we can keep feeding New Zealand with healthy, fresh vegetables at a more consistent price.”

It was a challenging year too for the large grower Coxco. Managing director Omi Badsar says that on top of logistical

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issues like having a two-week shut-down at the packhouse due to Covid-19, the rain caused an overall loss of some 70-ha - about 20 percent - of their squash harvest.

Gisborne orchardists weren't as badly affected by the weather as their vegetable-growing counterparts, but they certainly didn't get off scot-free.

As well as being a major grower, particularly of apples, kiwifruit and feijoas, Kaiaponi Farms provides other growers with harvesting and packhouse facilities, so general manager Scott Wilson has his finger on many pulses.

After five great years for orchardists, he describes 2022 as being "a bit of a reality check."

"Generally, the inclement weather combined with issues around staff availability and ongoing issues with Covid impacts made it a really tough year," Scott says.

While kiwifruit harvested out of Gisborne initially looked good, hindsight revealed there had been some quality issues, which Scott says Zespri addressed before export fruit left the docks.

"But the apple industry is not quite as well co-ordinated, so a lot got away before quality issues were sorted out," he says. "Combine that with shipping complications and the door was open for more complaints and claims from importers than local apple growers have seen before."

Those challenges were reflected in the November financial update from exporter T&G Global, which said the deterioration in the quality of rain-hit Envy apples, combined with its late arrival into markets as a result of supply chain disruptions, caused quality issues and an inconsistent eating experience for consumers.

As a result, T&G said it would likely report a loss of between \$1 million and \$5 million for the financial year to 31 December 2022, in contrast to 2021's net profit of \$13.6 million.

"What we're seeing is that while growers managed to get their fruit off, the lower quality and being pinched on labour means returns will most certainly be down," says Scott. "The apple industry here is growing, but because it's been such a challenging year that was not reflected in the volumes at pack-out."

Despite multiple challenges, Scott is optimistic about 2023.

"We can certainly see the market recovering as issues related to the pandemic are improving all the time, and having regular distribution in the markets will be a useful move back towards normal.

"Generally, we're looking at 2022 as being a one-off, so we're now in reset mode. Let's just hope that, for 2023, the weather gods deliver us a better year."

There was better news among citrus growers in Gisborne.

While some blocks had come out to be replaced with apples, kiwifruit or grapes - particularly Sauvignon blanc - citrus still dominates that group of products nationwide, and Citrus New Zealand chair Wayne Hall said it had been a pretty good year.

"Wet weather created issues with ground conditions and harvest right through autumn and winter, but we've seen our best year ever for navel oranges, both in taste and returns."

Wayne said the sweetness of the fruit that got to market was largely due to Citrus NZ's BrimA maturity testing programme which, after six years, was really showing its worth.

"Customers were getting a good eating experience and disjointed import programmes gave more opportunities for local growers and marketers to get their product on the shelf," Wayne says.

Mandarins, too, were doing well - particularly the Satsuma and Afourer varieties - but faced greater competition from Australian imports.

While there were only small numbers of oranges and mandarins destined for export (and even fewer limes), that work continued with Meyer and Yen Ben lemons.

Citrus NZ executive member for export, import, post-harvest and compliance portfolios, Ian Albers, said the volume of export lemons was down by around 23 metric tonnes (around ten percent) on 2021, largely because of the respective issues with China and Russia. However, that was somewhat offset by an increase of volumes to Japan and the United States.

And while growers had done well in producing volume and quality, many Meyer lemons in particular were on the large side, which don't sell so well.

"Overall, citrus growers had a pretty good season, especially considering ongoing challenges like sourcing labour," says Wayne. "We're gradually seeing a few more backpackers around town and that's already helping out to some extent; it's going to be tough for a while.

"It's really about growers planning well to have the workers they need, when they need them, so they can push forward and continue to achieve great results." ●



Citrus New Zealand chair, Wayne Hall



Karn and Briar Dhaliwal with their dog, Pepper, on their Ohinewai blueberry orchard

Future of growing top of mind for new generation

Karn and Briar Dhaliwal have very clear goals as to where their horticultural business, Ohinewai Harvest, will go in the future. Thanks to their backgrounds working as fertiliser reps, rural bankers and agronomists, the 29-year-olds have an unwavering focus on the scale and efficiency of their operation as well as cost control.

GLENYS CHRISTIAN reports.

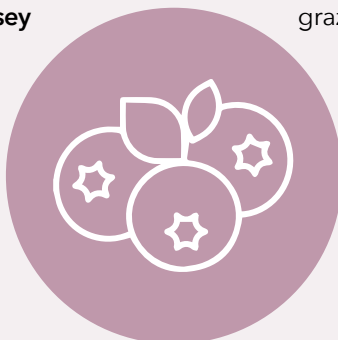
Karn comes from a dairy farming background while Briar (née Kay) is from the Hawke's Bay, where her parents are asparagus growers. The couple met at Massey University where Karn was completing a Bachelor of Commerce in farm management and Briar was finishing a Bachelor of Agricultural Science.

"But I did slip in a couple of horticultural papers," she says.

They both worked in Hawke's Bay for fertiliser companies, then in 2017, saw the eight-hectare block of land for sale opposite Karn's parents' dairy farm in Ohinewai, north Waikato.

It was in pasture and being leased to the neighbouring

dairy farm before they bought it. After moving north they took a year to decide what to grow on the land while grazing 30 head of cattle.



"We thrive off a challenge, [but] it had to be a viable business," Karn says.

They looked first at blueberries, then veered away from the idea. Kiwifruit wasn't the right crop for them to begin with either, and annual crops were ruled out because they didn't want to cultivate their fertile peat soils on a regular basis.

Karn and Briar visited a few successful blueberry orchards around the North Island and based on the information gathered they revised their decision, realising



The most recent planting of blueberries on the Dhaliwals' Ohinewai blueberry orchard

that blueberries could be a scalable and profitable crop with potential to export, and there were packhouses within half an hour's drive. The crop was also ideally suited for their peaty soil.

The couple were welcomed by existing blueberry growers, keen to have new, young blood entering the industry.

"From those visits we were also able to develop a model that would suit our situation in terms of planting density, levels of inputs, variety choice and so on," says Karn.

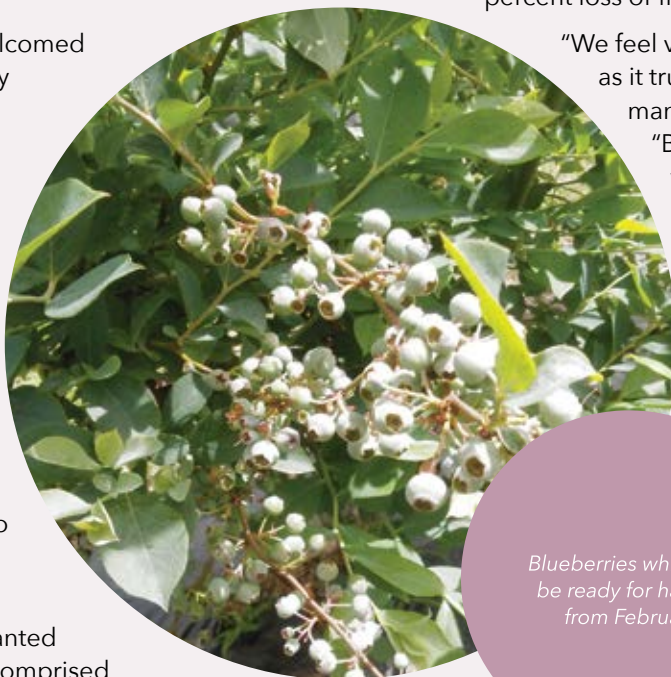
Four hectares of blueberries were planted out in winter 2020, comprised of three different varieties, Centra Blue®, Velluto Blue® and Sky Blue® - which produced seven tonnes of fruit last season destined for export to Australia. Now they have planted out another 3.5-ha while their older plants are being netted to protect from bird, hail and frost damage.

They did have some frost damage recently, but nothing on the scale of other Waikato growers. Being further north and with their plants less mature, there was only a 20 to 30 percent loss of flower.

"We feel very fortunate our losses weren't too severe as it truly has been a devastating frost event to many other growers in the Waikato," Briar says. "But it's been a learning curve and we realise we need to invest more in frost protection."

Labour is always going to be challenging. While they only required four pickers during this year's harvest, around 30 pickers will be required when their crop matures. They are working with the Ministry of Social Development (MSD) and are busy exploring the potential of attracting labour from nearby Huntly and Te Kauwhata, towns that other Waikato blueberry growers are less likely to recruit from.

But blueberries aren't the only string to their bow, with watermelons grown on leased land as well as pumpkins, and development of five-hectares of kiwifruit orchard well underway. The watermelons are grown on a different block every year - on a Te Kauwhata beef farmer and maize grower's land. One hectare was



Blueberries which will be ready for harvest from February

planted four years ago, all hand transplanted; then three-hectares in 2020, six-hectares last year and 9.5-ha this year. They have invested in one key piece of machinery at a time that would improve efficiencies and have the most impact: opting first for a mechanical transplanter, then a mechanical mulch layer.

The biodegradable mulch made from corn starch fits with the operation's sustainability goals and suits watermelons well, as the land will go back into grass. Karn and Briar do all the melon work themselves; laying the plastic mulch, transplanting and inter-row spraying until harvest where a small crew is required to get the crop off in a timely manner. It is sold locally, with the same going for the pumpkins that are grown just outside Ohinewai on another eight-hectare leased block. They started off growing butternut pumpkins, then a mix of this variety and crown pumpkins, before opting to only grow the crown pumpkins.



Delicious Ohinewai blueberries

When it comes to other young people getting into the horticulture industry, Briar bases her optimism on people always needing food. But she says diversity is also key to their business.

"If one or two of our crops aren't having a good year, hopefully the others will be," she says.

Karn believes the right mindset is paramount.

"Deal with the right people who can help you develop your business and keep challenging the status quo. Our generation is going to bring the industry forward, so it's up to people like us." ●

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Blueberries aren't the only string to their bow, with watermelons grown on leased land as well as pumpkins, and development of five-hectares of kiwifruit orchard

"We use contractors to disc, power harrow and plant the pumpkins, and then maintenance through to harvest is all us," Karn says. "Compared with our other crops it's a slow burn, and through the winter it's good for our cashflow."

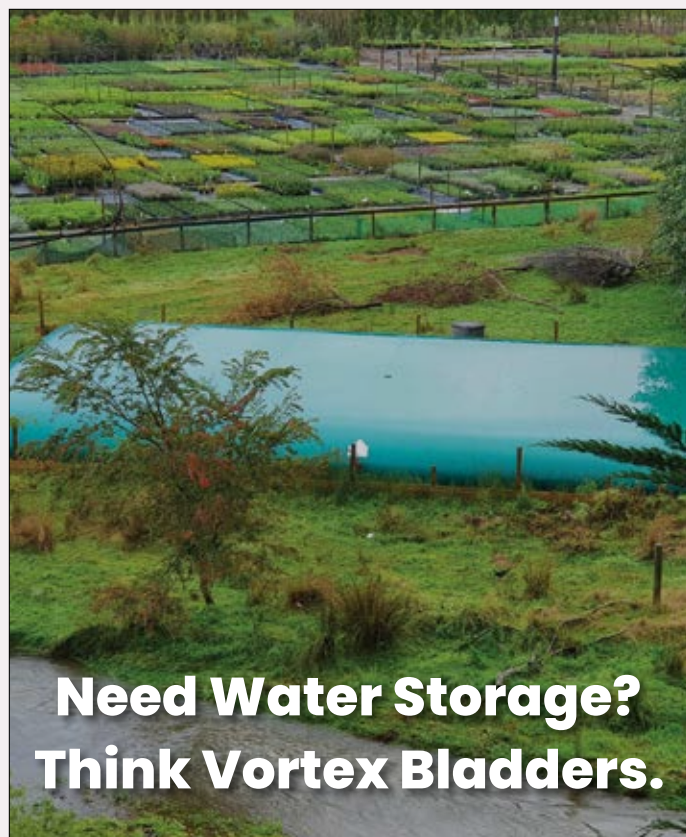
Kiwifruit plants are growing on the blueberry orchard in a nursery, ready for transplanting into the kiwifruit block and grafted over to red fruit.

"We don't do things for the short term, only things we can do for 20 years," Karn says. "And we don't listen to the talk around town but focus on the fundamentals."

Last year Karn took out third place in the Young Vegetable Grower of the Year Competition and was called on to emcee this year's award ceremony. He has also spent a year as an intern director for Vegetables NZ, getting a close-up view of how board decisions are made.

"We have got to where we are so far by sacrificing many weekends, doing late-night shifts and using annual leave to do as much of the work ourselves as possible," Briar says. "Karn isn't afraid to pick up the phone and cold call where opportunities might exist for the business, whether that's marketing of our products or finding more lease land."

Their longer-term plans are to fine-tune their operations, then bring in a manager for part of their business to help with work-life balance. Ultimately, they would like to purchase 100-ha of land, giving them the space needed to get into running dry stock and utilising their own land for annual cropping.



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Council recognition paving the way for Freshwater Farm Plans (FWFPs)

Damien Farrelly : NZGAP manager

New Zealand Good Agricultural Practice (NZGAP) is continuing to roll out the Environment Management System (EMS) as a pathway for growers to demonstrate that they meet expectations for Farm Environment Plans (FEPs) and proposed Freshwater Farm Plans (FWFPs).

There is a lot happening in this regulatory space, however growers can have confidence that NZGAP is continually working with Horticulture New Zealand (HortNZ) and regulators to seek a sensible, practical and workable pathway for delivery of FEP and FWFPs. This pathway will enable growers to meet agreed expectations via the existing GAP system, which is trusted and valued by growers and stakeholders alike.

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NZGAP certification is a cost-effective way to meet market and regulatory requirements for food safety, environmental and social practice via one integrated system that is developed with growers, for growers. Recognition of NZGAP under the Food Act 2014 is an example of this type of integrated solution which has saved growers from lots of complexity and confusion and has saved thousands of dollars in compliance costs.

A new 'catchment context' section has been added to the EMS to meet FWFP requirements, and additional tweaks will be made through the pilots to give regulators confidence that the EMS can meet their expectations. In addition to FWFPs, NZGAP is focused on attaining recognition for the key assurance steps of audit and certification that are crucial for delivery of an integrated system for growers.

There is a lot of detail and clarity still to come with FWFPs, however, it is already clear in legislation that growers with five or more hectares of horticulture, or more than 20 hectares of mixed land uses, will require an audited and certified FWFP when the regulations are 'switched on' in their region.



Canterbury

Looking to the regions, the EMS has recently been re-recognised as an Approved FEP ISO (International Organisation for Standardisation) Programme in Canterbury under Plan Change 7 of the Land and Water Regional Plan. Re-registration is required every four years so it will have to be renewed again in August 2026. Recognition means that growers who have FEP audit requirements in their consent conditions can comply with Environment Canterbury expectations via the EMS add-on. This can be audited at the same time as their usual NZGAP or GLOBALG.A.P. audit.

AsureQuality auditors are currently going through the approval process with Environment Canterbury. This will enable growers to obtain an audit in the new year when FEP audits are due for those with a current land use consent to farm or water take and use consent with FEP audit conditions.



Gisborne

Gisborne District Council also formally recognises the EMS add-on as an acceptable pathway for growers to meet their Farm Environment Plan (FEP) requirements under the Tairāwhiti Resource Management Plan (TRMP). Vegetable and cropping growers (more than one hectare) in Gisborne are now required to have an approved FEP in place. Vegetable and cropping growers also must have a five-metre cultivation setback in place, or a one metre setback with additional appropriate measures (e.g., decanting earth bund). These expectations can now be met, audited and certified via the EMS as it includes a comprehensive soil management area that

helps growers to address issues with soil erosion and sediment control.

At the time of writing, more than 8,200 hectares of fruit, vegetable and cropping growing land in Gisborne has an FEP in place via the EMS. EMS audits will be undertaken over the coming months to verify that FEPs meet the required standards. This will give confidence to council and community that growers are good custodians of the land, by demonstrating that they have appropriate systems in place, have identified environmental risks and are taking action, have appropriate measures in place, and are making progress on key issues.



Hawke's Bay

In Hawke's Bay, the proposed Plan Change 9 for Tūtaekurī, Ahuriri, Ngaruroro and Karamū (TANK) Catchments has delivered a great outcome for growers by enabling an effective pathway for delivery and audit of FWFPs via industry programmes and/or catchment collectives. This excellent policy outcome paves the way for recognition of the EMS in Hawke's Bay and provides a blueprint for regulators on how to enable recognition of credible industry assurance programmes like the NZGAP EMS add-on.



Other parts of the country

Growers in the Horowhenua, Waimea, Pukekohe and Northland are also proactively implementing the EMS in an effort to improve farm practices and reduce the environmental impact of horticulture especially in those sensitive or overallocated catchments.

It has been a long road to this point with significant resources put towards development, recognition and implementation of the EMS. These efforts are starting to bear fruit with the improved policy outcomes that we are now seeing across the regions and with central government for FWFPs.

The key message for growers is to get on the journey and/or continue to develop and implement their FEP as these forms a strong basis for FWFPs when they become required. All EMS documentation is freely available on the NZGAP website so growers can get on the journey, one step at a time, without facing any initial compliance costs for registration, audit and certification unless they proactively want to get ahead of the regulations. ●



For more information on the EMS add-on, visit the NZGAP website: www.nzgap.co.nz/EMS



Tumultuous year for the Tasman region

Appleby market gardener, Mark O'Connor, describes 2022 as a tough year.

Anne Hardie

Weeks of continuous rain through winter culminating in the August flood drenched crops and left few opportunities to sow new crops in the waterlogged soils.

The entire country was struggling to harvest crops and that kept produce prices up. Crops that were harvested were of average quality; and wet ground led to gaps in the planned crops, with the shortage of labour adding to woes.

While weather creates challenges, it is increasing costs that really worry Mark. He says his fertiliser costs have risen by 250 percent and some sprays by 100 percent. The price of diesel was 72 cents per litre in early 2020 and has now rocketed to \$2.08. Increasing compliance costs are coming and Mark expects some of the smaller growers will find it too much of a struggle to run their business.



"I think you will see some of the smaller growers getting out [of the industry] and it will leave the corporates and larger family farms," Mark says.

When the rain receded, the soil dried out - rock hard. Irrigation was turned on and another dry summer is forecast while the region waits for the Waimea Community Dam to be completed. Delays in the construction of the dam means it will not have water available this summer, and further delays are expected.

Good summer weather is on the wish list for Waimea Plains boysenberry grower, Jono Sutton. Boysenberry plants don't usually like wet winters as it affects the plant's physiology, but Jono says the health of his plants is, surprisingly, looking the best it has been in years.

Last season a wet start to harvest set the scene for the year – the end result was a 20 percent drop in expected production. That’s not uncommon for boysenberries, and Jono says it could have been a lot worse.

In late October, the first flowers on the vines were accompanied by good weather for pollination and the promise of a good future crop.

“We always expect a perfect season; aim for a perfect season,” Jono says. “But we have to manage what we are given. The conditions for growing boysenberries are a bit like a lottery.”

Meanwhile, kiwifruit growers in the Tasman region experienced a bumper harvest this year, with a record 5.2 million trays of fruit. Though the forecast pay-out has dropped, Evan Heywood from Heywood Orchards says it will still be a profitable crop.

Many kiwifruit growers were able to take up Recognised Seasonal Employer (RSE) scheme workers as they finished the apple harvest, and Evan says there was good collaboration between growers to share labour to get crops harvested.

The kiwifruit quality problems experienced this year were less of an issue in Tasman fruit. Evan says the problem is still being analysed, so he is unsure why Tasman fruit fared better.

The cold polar blast that wreaked havoc on kiwifruit crops in the North Island also made its presence felt in Tasman. About five percent of the region’s crop had damage to shoot development, with up to 50 percent of some growers’ crops affected, according to Evan.

He says it was not the typical radiation frost that forms on clear, cold nights. Instead, it was an advection frost caused by a cold air mass being moved by wind – and in this case, it moved quickly from the Antarctic. Frost-fighting systems usually protect against radiation frosts, but struggle to push against a breeze moving cold air into an orchard. Likewise, water frost-protection needs a higher water rate to protect a crop from advection frosts.

Motueka Fruitgrowers’ Association chairman, Richard Clarkson, says the frost left its mark on the Tasman’s apple industry too, with some fruit dropping on the new season’s budding crop. It follows a year that began with a stunning crop of fruit on the trees, and despite being plagued by labour issues through harvest, most growers managed to get their fruit picked and into storage.

Richard says shipping was another stumbling block for

Tasman growers which meant fruit often took longer to get to markets. Though he is hopeful shipping will improve next year, he acknowledges growers won’t know until next harvest when they try to get the crop onto ships at Port Nelson.

“

Growers are now gearing up for the coming harvests with hopes there will be more seasonal workers available to pick fruit at the optimal time

Richard says growers will need better returns next year to keep their businesses moving forward and offset the rising costs of production. Otherwise, growers will begin pulling back on spending which will have a negative impact on production.

“I think the next couple of years will be tough for growers,” he says. “Costs keep going up and up and we definitely need something in our favour.”

Apple growers are continually investing in new varieties, and Richard says the big question for growers is what to plant.

“The biggest question is what do you put in the ground? What is going to be giving you a good return in three years’ time?”

Heading into this season’s crop, the early apple varieties have been affected by cooler temperatures and cloudy days during pollination, but the sun came out and temperatures warmed up for the later varieties.

Growers are now gearing up for the coming harvests with hopes there will be more seasonal workers available to pick fruit at the optimal time. For apple growers, the added challenge will be getting ships to the port to get their crop to markets promptly. ●



Jono Sutton (left) and his father Stephen

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Women In Horticulture Tairāwhiti founding member Liarna White hopes to make a meaningful contribution to bringing women of the region together. Picture by Kristine Walsh

Women in horticulture have each other's backs

Women make up half the horticultural workforce but hold less than a fifth of leadership positions. Liarna White is among a movement of women who are stepping up as strong leaders in the industry. KRISTINE WALSH reports.

Thirty-eight-year-old Liarna White recalls all too well the feeling of being at an event and watching as questions were lobbed at the men in the room, even though women were equal partners - or even independent players - in their horticultural operations.

"That really makes women feel invisible and makes it harder for them to be empowered in a field where it is often easier for men to succeed," she says. "That's why we are focused on creating nurturing spaces that can help lead to greater empowerment for women, along with the opportunity to showcase women's skills and values."

Liarna admits she has not always been brimming with confidence, but has worked to overcome that both in her own work and in creating those spaces in which other women can grow.

Her first foray was being voted onto the industry-backed *Women in Horticulture* executive in 2021; though activities have been somewhat muted over the pandemic period.

That group was founded in 2017 in response to a study revealing that while women represented 50 percent of the horticultural workforce, they held less than 20 percent of leadership positions.

Liarna has built on that by establishing the *Women in Horticulture Tairāwhiti* group, which had its first planning meeting in June this year.

"I was actually at an event in another region when I thought the women of Gisborne could really benefit from a group like this," she says. "Because of my connections there I was happy to run with that idea, and from early on we got some amazing



women keen to help with the development of *Women in Horticulture* in Tairāwhiti."

In the months since that first get-together, the women put together a formal launch, *Sowing the Seed*, which was held at The Vines, in Gisborne this October.

"We lined up some great speakers and saw it as a chance for women to network and share their stories in a space that has been set up just for them," says Liarna. "The response was amazing. We ended up with more than 60 women from across all areas of the industry and a great range of ages and backgrounds."

That diversity meant there was lots of useful input into how the industry worked for women in the past, how it was working now and what they would like to see in the future.

“

Liarna admits she has not always been brimming with confidence, but has worked to overcome that both in her own work and in creating those spaces in which other women can grow

"A real talking point was Gen Z and their requirements in the workforce," Liarna says. "Overall, it was a beautiful day with so many women telling us how much they enjoyed it and how they'd love to engage in the future."

Liarna hopes the event gave women the confidence and connections to help them grow their careers - something she says she lacked when establishing herself in the horticulture sector.

Born in Gisborne and raised there, and in Rarotonga and Australia, she has fond memories of spending time at her

grandparents' farm up the East Coast at Tolaga Bay.

"My grandfather had a massive garden, an entire hectare of just about every vegetable you can imagine, and I loved spending school holidays there and working alongside him," Liarna says. "So, I was lucky to be introduced to horticulture at a young age."

“

It would have been great to have more support and mentorship right up to the top levels

As a school-leaver Liarna was unsure of what the future would hold, but during a 'gap year' she spent time in the United Kingdom and in Canada, where she was introduced to large-scale greenhouse growing.

"Even 20 years ago it was a massive industry, so when I returned, I decided to study horticultural science and business. It was a challenge - as well as being dyslexic I'm a total perfectionist - but I knew it was where I wanted to be."

Liarna achieved a degree in Applied Science and jobs in the industry followed, from working in packhouses - getting wide experience in a graduate role - to a stint with Kiwifruit Vine Health in the wake of the *Pseudomonas syringae pv actinidiae* (Psa) crisis.

"There weren't a lot of women around and I probably let my own insecurities hold me back," she says. "It would have been great to have more support and mentorship right up to the top levels."

Three kids - aged 12, ten and five - Liarna returned to work after having her first child but after the second decided to devote more time to overseeing the kiwifruit orchard her husband John already owned.



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Women in Horticulture Tairāwhiti's first official get together in October was a big success, with more than 60 women attending

Just before child number three arrived the couple had bought a kiwifruit orchard in Gisborne, quickly followed by two smaller lots in the region, one shared with John's oldest son from his first marriage.

John decided to leave his job with Zespri to work full-time on the family orcharding businesses, which are planted mainly in Gold kiwifruit with some of the new Red variety, and a bit of Green remaining at the Opotiki site.

The blocks of once-bare land have yielded their first crops of Gold kiwifruit this year.

The family is based in Te Puke, where Liarna is experimenting with some high-density avocado plantings. Between their orchards they spend a fair bit of time on the road.

"But we counter that by having electric cars, so we don't have those huge fuel costs," Liarna says. "That kind of sums up our attitude to everything we do... everything feels better if you know you are climate friendly and are looking after your people and your places."

Between them the family has created a horticultural success story, but Liarna says her negative internal voice - her "worst enemy" - could have scuppered her contribution.

"I took active steps to change that, probably the most effective being joining a Horticultural Immersion Programme study tour to Europe that threw us into all

sorts of environments, from packhouses to trade fairs and produce auctions," she says. "We got home just before the borders closed, so I was lucky to get an opportunity that really opened my eyes to the opportunities that are out there for women."

Liarna also worked with a life coach and says it's those lessons around positive support she hopes to share with other women in the industry.



Liarna also worked with a life coach and says it's those lessons around positive support she hopes to share with other women in the industry

"Women can struggle with self-belief, we can wrestle with totally unjustified imposter syndrome and we shouldn't," she says. "But if we do, it's great to have other women around to help us identify and work with our strengths."

Liarna hopes *Women in Horticulture Tairāwhiti* will make a meaningful contribution to bringing women of the region together, and says it's great to see younger women already joining the fold.

"It is so exciting that there are women out there willing to help and support others," she says.

Women in Horticulture Tairāwhiti encourages women to go along to meet up with fellow growers, share stories and make connections, while hearing how other local women have got to varying stages of their careers.

"Our aim is to enable women to be empowered and to excel," Liarna says. "That is at the absolute core of what we are doing." ●



Janine and Roger Southby in their hazelnut orchard at East Taieri, south of Dunedin

Hazelnut harvest full of potential

On the fertile soils of the Taieri Plains lies a fruitful hazelnut orchard run by the Southby family. HELENA O'NEILL talks to Roger and Janine Southby about their quest to provide premium hazelnuts for the local market.

Hazelnut Estate is a 5.8-ha orchard located at East Taieri, south of Dunedin. The Southby family bought the property at the end of February 2020, just weeks before the country was plunged into the first national Covid-19 lockdown.

The orchard is home to about 4700 hazelnut trees, mostly Whiteheart, with a small portion of other varieties to allow wind pollination.

"We do everything on-site: from the tree to the gate," Janine says. "We've really benefitted from both previous owners' foresight. The guy we bought the property from did a little bit of small-scale selling, stopping a year or two before he sold."



"We created a new label under Hazelnut Estate, and we can process it all the way through."

The couple is proud to run a spray-free orchard and work hard to ensure the hazelnut trees are properly nurtured and maintained, all with the mission of growing great hazelnuts.

"In the processing shed, there is a separate commercial kitchen," Roger says. "We can do all the roasting and preparation of the hazelnut chocolate spread and the flour in that commercial kitchen."

"Instead of 'paddock to plate' we call it 'tree to table'. Controlling that whole process and knowing that there are no additives, herbicides and fungicides going into the nuts."

A mere five months after buying the orchard, the Southbys were selling their hazelnuts under the Hazelnut Estate banner, mostly at the local farmers' market. Hazelnut Estate primarily sells dry roasted nuts, hazelnut chocolate spread, hazelnut flour and a small number of raw nuts.

"The previous owner used to sell at the Otago Farmers' Market [in Dunedin]. We contacted the market's management and asked if they would have us back in... that gave us a little bit of surety to know there is an existing market to enter," Roger says. "We do love it. I think it's when you get to engage with the customer knowing that you have been responsible for the growing of the nut, the processing and the packaging, and the establishment of your own label. You're also communicating with the end user; you can answer their questions and give them the information that they need. That's really satisfying for me."

Since then, they have developed a website allowing for a small number of online sales, along with attending special community markets around the lower South Island.

Running an orchard without any prior horticulture experience offers its own share of challenges – Janine is an intermediate schoolteacher and Roger is a programme manager at Otago Polytechnic's institute of sport and adventure.

Growing and harvesting aren't too laborious, Roger says, but processing the nuts is another story.

“

The couple is proud to run a spray-free orchard and work hard to ensure the hazelnut trees are properly nurtured and maintained

"It is a labour-intensive process and to fully automate that, you would need to be on the scale of growers in Italy or Oregon [in the United States] where you have hundreds of acres planted in nuts. There's no one like that in New Zealand."

Buying an existing orchard came with a requirement to develop new skills, particularly pruning.

"One of the problems that we faced when we purchased the orchard was that the trees hadn't been pruned properly for eight or nine years. So, the yield on the trees is not what it should be," Roger says. "The first harvest was down to about six-and-a-half tonnes.

"We've had to prune quite hard on the trees. There's quite a small pruning window in the middle of winter, and for the past couple I have been injured and at a limited capacity.

"That's one of our goals: to get the pruning throughout the whole orchard and get that tree health and yield back up again."

Roger says that while they do 'feed the trees,' they don't use sprays and don't have many issues with pests and diseases.

"They do seem quite a resilient tree, we don't seem to have too many issues."

Sheep keep the grass down from post-harvest until about November when a mower is used instead. Grass needs to be kept under control in order for the harvester to work properly. The harvest season usually runs from late March to late April.

"We try to do two runs through the orchard. When about 70 to 80 percent of the nuts have fallen off the tree, we will put the harvester through the orchard. Then we will monitor

the rest of the trees for when the rest of the nuts have fallen, generally within the next two to three weeks."

Nuts are sorted, placed on drying racks, and turned daily until the moisture content is around six percent. They are roasted on-site, although a small amount is left raw, and are then either packaged up or processed into hazelnut flour or hazelnut chocolate spread.

With three harvest seasons under their belt, the couple have grown in confidence and pride in their produce.

"The taste of a freshly roasted nut of the Whiteheart is really, really good. They do roast well, which makes the removal of the skin relatively easy. That's the biggest advantage, the quality of the nut," Roger says.

Janine says Whiteheart is one of the main varieties in New Zealand because it does well in lots of different climates.

According to the Hazelnut Growers' Association of New Zealand (HGANZ), Whiteheart was selected from a group of old varieties and seedling selections by Professor



Hazelnut Estate's delicious line of premium products



A spring cold snap left the orchard looking picturesque in early October

Maxine Thompson of Oregon State University during her 1981 visit. The variety became widely recommended after it performed well in a Lincoln University hazelnut trial. It has been promoted because it is seen as offering a quality advantage – specifically, a round clean kernel that blanches 100 percent over Turkish or Italian kernel varieties.

It does still have its complexities however, such as vigorous suckering, late flowering, being susceptible to big bud mites and bacterial blight. It also does not yield well in some orchards.

Janine says the association has been an excellent source of information about hazelnuts, from learning the industry's history, to troubleshooting when something goes wrong or finding out about best practice.

"It's certainly been positive [experience] with the Hazelnut Growers' Association. Especially the willingness of people who have been in the industry for a long time, particularly up North Canterbury way," Janine says. "They have been really willing to share and help us out whenever we've been a little bit puzzled about anything or at a loss."

Roger says most hazelnut growers are lifestyle or hobby orchardists, but there is scope for the development of New Zealand's commercial hazelnut industry.

"We had a presentation through the association and I think domestic production is around two percent of annual consumption. That's one of the problems that the industry does face. Most people's perception of hazelnuts is store-bought, imported nuts that could be six to eight months old, not fresh, and they think hazelnuts aren't great. But when they taste a fresh hazelnut grown in New Zealand, it's remarkable the feedback we have been getting. People are amazed."

The Southbys' operation is currently coordinated around the couple's two full-time jobs, but the grand plan is to make the hazelnut operation more profitable in future and reduce time at their other jobs.

"We're in that real balancing act to getting the business to the next level when we need to spend more time on it, but at the moment it's not generating enough money so we both have to be working full-time. It's our next focus over the next six months or so, how we get to that stage and what do we do to get there," Roger says. "We think that we have a great product: the feedback to date is that everyone loves the product. It's just a matter of getting that message out there more and growing our business." ●

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Apata avocado manager, Logan Whenuarua

A tough year for avocado growers

Based in the Bay of Plenty, Logan Whenuarua is the avocado manager for Apata.

Geoff Lewis

Photos : Trefor Ward

Apata services about 180 export avocado growers, predominantly in the western Bay of Plenty, producing between 700,000 and 800,000 5.5kg class-1 trays or 1.1 to 1.2 million trays in total in a normal year.

However, Logan says over the past couple of seasons, factors including the weather, supply chain backlogs and oversupply in the key Australian market have made business conditions difficult.

“We’re having a tough year for exports. There’s been a lot of downgraded fruit due to wind rub and blemish. The fruit needs to look presentable when it gets to market. Typically, as an industry, we would export about 70 percent, but this season we’re down to around 50 percent or worse, and this is related to the pack-out.”

The avocado season has very little downtime. The fruit flowers and sets in October, and puts on rapid growth through to March or April. It is mostly picked from August until March, in amongst seasonal activities like pruning and spraying, says Logan.



“About 60 percent of the export crop comes out of the Bay of Plenty, with the balance from the mid to far North. We use contract pickers and pick to a plan, ideally as close to the shipping date as we can. But Covid-19 related shipping disruptions mean picking schedules are unreliable and can change almost by the hour.

“We pick for multiple export markets. When we get a change to shipping schedules, the uncertain stop-start nature of the work creates difficulties with



Sixty percent of New Zealand's avocado export crop comes out of the Bay of Plenty

retaining staff and keeping good employees."

The industry has an average yield of 8 to 11 tonnes per hectare, but some growers are doing better than 20 tonnes per hectare. Picking is the biggest cost - \$70 an hour to hire a Hydralada - but a good picker can do 300 trays (1.6 tonnes) a day.

The main Asian markets are Korea and Hong Kong, along with Singapore, Malaysia, Taiwan, China, Thailand, India and Japan.

"Although we have a very small labour requirement compared to kiwifruit, avocados are a \$150 million industry compared to more than \$2 billion for kiwifruit," says Logan. "We work counter-seasonally - packhouses will pack kiwifruit and then move on to avocados.

"Australia has been our best paying market, with up to 70 percent of the avocado export crop going there. But Australia had a huge domestic supply in the 2021 year, which reduced our returns. We were supplying an oversupplied market. As a result, a lot of New Zealand product stayed on-shore and suppressed returns in the domestic market."

Logan says domestic prices are usually around \$10 to \$15 a tray, but in the 2021 year, they were \$5 to \$7 a tray. Export returns were \$7 to \$8 a tray down from a historical average of around \$20. Last season, third-grade fruit went to oil (\$2 to \$3 a tray) when usually it would go into the food service industry, but restaurants were closed due to Covid.

"A lot of growers are looking at how to reduce costs, but

this is limited. I think there is more upside in improving productivity," says Logan.

While returns were poor in 2021, the market is much more favourable this year.

This season, Australia is not over-supplied but New Zealand avocado exporters face new international competition.

"Until 2020, we were the exclusive supplier into Australia, but now Chile is in there. We have a big effort going on to develop new markets in Asia, but shipping and logistics are difficult. Because of Covid disruptions, many of our market managers haven't had the chance to meet face-to-face with their customers for a couple of years." ●



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For further information contact:
Nathan Kidd, treasurer@passionfruit.org.nz

love the goodness taste the goodness



The truffière at Te Puke Truffles had a damp opening to the truffle season

Higher costs and bad weather challenge Bay of Plenty growers

Over the past 12 months, growers across the Bay of Plenty have faced untimely bouts of bad weather at key times for their crops, adding another layer of difficulty as increasing costs put pressure on our primary producers. With the summer crop season set to begin any day now, growers in the area are hoping the weather will play ball.

Helena O'Neill

Rising costs squeezing boysenberries

Craig McNaughton's family have been growing boysenberries at Papamoa, Bay of Plenty for 35 years. His parents Barry and Lyn McNaughton started growing boysenberries on the then nine-hectare site in 1986, before scaling back to one-hectare and handing over the reins to Craig and his partner Jo Riddington who now run Iona Boysenberry Orchard.

With only a three-to-four-week harvest in 2021, it wasn't a good season for the business.



"Like most berry growers, we got hammered by bad weather prior to Christmas last year which caused a lot of damage to our crop," Craig says. "There are challenges with finding staff and the costs to produce a good crop have increased a lot, which reduces motivation."

Thankfully, the upcoming season which usually begins in the second week of December, is looking promising - although Craig knows all too well how quickly this can change.



Fresh fruit at Iona Boysenberry Orchard in Papamoa. Photo: Jo Riddington

"At the moment it's looking pretty good, but who knows what weather will be thrown at us this season," he says. "December weather has changed considerably in the last few years."

Iona Boysenberry Orchard sells ready-picked fresh berries and frozen berry packs, and opens up the property for pick-your-own.

While the berry operation is a firm favourite of locals and holidaymakers alike, with some customers travelling down from Auckland (and further afield) each year, increased costs are putting pressure on the orchard's future.

"It's not very positive. We have higher costs all around which we are reluctant to pass on to our customers, and we're not sure how long we'll continue," Craig says.



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Plenty of ups and downs

Sioeli Tu'itutu and his partner Rosie Miller have been managing Liberty Growers since January 2020. The family business located in Katikati, Western Bay of Plenty, grows six different herbs, a range of salad and leafy greens, chillies, edible flowers, microgreens, avocados, limes, lemons and a few other fruit and vegetable crops.

"Our year has been a bit like a rollercoaster, to be honest," says Sioeli. "Plenty of ups and downs. But somehow, we're still here and operating."

"Most crops did well this year, especially lettuce, microgreens and rocket. Our mint, watercress and coriander struggled a little. This was most likely caused by some infrastructure damage we took from a storm earlier on in the year."

Sioeli says the personnel structure of the family business has been one of the most significant challenges that Liberty Growers has faced over the past 10 years.

"Operating a small family business can be super tough, especially for those family members involved," he says. "Conversely, it's the family component that makes a family business so rewarding and worth the hard work, unwavering commitment, and sacrifice."

The challenges of 2022 have harboured plenty of learning opportunities, he says.

"We feel like it's going to be another challenging yet rewarding year. Hopefully, we can make some great progress in 2023. We are quietly optimistic about the future of our farm. What's happened in the last few years has shown us that instability can come about very quickly and that we need to be stronger in our tolerance for adversity."

Although the cost of production is increasing, Sioeli believes the industry will continue to adapt and continue to grow quality fruit and vegetables.

"As far as the industry is concerned, people still need to eat and have access to fresh, quality, local produce," Sioeli says. "The cost of production is significantly trending upwards, but I believe some of us in this industry will adapt and create more cost-effective and meaningful ways of growing the best possible quality produce."

Black gold harvest down

Meanwhile, it's been a busy year for truffle growers, Colin and Maureen Binns. This year saw an increased flurry of media attention on Te Puke Truffles, as the couple are very open in what has been a very secretive industry.

Maureen says that many people have contacted them this year, after Te Puke Truffles featured in *A New Zealand Food Story* with chef Ben Bayly, the *NZ Grower* magazine and more recently on *Country Calendar*.

"A lot of them want to ask us about what they need to do to grow their own trees to produce truffles," Maureen says. "We do everything we can to help people decide if this is what they want to do and if they are in the right sort of location to make it work for them."

Maureen says truffle dogs Jed and Sam are stars and they love all the truffle visitors that the couple host.

"At this time of year our visitors have various truffle treats that I prepare and Colin tells them about truffles and our truffle story," she says. "But the favourite part of each visit is for them to watch both Sam and Jed do truffle scent work."

"We were disappointed at our harvest being lower than we had expected, but in saying that we were able to deliver to our customers and for 30 or more truffle hunts that we hosted, we were always able to demonstrate Jed locating ripe truffles. I call that a success."

Each year they begin hosting visitors from late May until the season ends by early August. This year only three truffle hunts were free from wet weather.

"The rainfall we had this June and again in July was the highest amount ever recorded by us since we moved here at the beginning of 2007. The poor truffles had insufficient water when they were growing and then way too much when they were ripening."

Thankfully the Binns do not need to do any drainage work, as the soil drains really well and they have been busy aerating the soil and fertilising the truffière.

"We are looking forward to another good season in 2023 as we know there are more people now who know about truffles and want to try them," Maureen says. "And of course, the people who already know about truffles and love them, want more!"

Maureen says that while interest in New Zealand-grown truffles is increasing, she and Colin will have to accept they may only have another season or two before the work becomes too much.

"But the truffle dogs will be coming with us," she laughs. ●



Truffle puppy Sam enjoys his television debut at home in Paengaroa

Growing the industry, sustainably



By Jen Scoular : NZ Avocado chief executive

The global landscape has changed since the 2019 World Avocado Congress in Colombia. As 2023 approaches, we continue to navigate the challenges of a post-pandemic world.

A core focus for the next World Avocado Congress – taking place in Auckland from 2 – 5 April 2023 – is the changing world of avocado production, distribution and promotion. Productivity, fruit quality, post-harvest systems, global supply chains and supply and demand have been fuelling conversations around the world and raising the question: how sustainable is the global industry across environment, people and economics?

To this point, the theme for the tenth World Avocado Congress is Respectful; respect for people, respect for the environment and respect for our future. Respect for people and respect for the land play a special part in Aotearoa's identity; it underpins who we are. While the term 'sustainability' has become a trendy word in recent years, it's essential we demonstrate a committed and not tokenistic, approach.

Consumers are increasingly making more informed choices when it comes to the origins of their produce and there is real demand for products with a low ecological footprint. As an industry, we are committed to establishing verifiable sustainability credentials for avocados in New Zealand.

We stand by the robust mandatory systems across our sector. We are actively looking for continuous improvement with industry systems such as AvoGreen, supporting responsible avocado growing, and research into chemistry that is more targeted.

As a sector we are committed to biosecurity and the structure of government industry agreements. We commit at a number of levels, including governance, community activity including the Tauranga Moana Biosecurity initiative, operational agreements and supporting our own Biosecurity Plan.

Our sustainability journey started around five years ago and, with guidance from our colleagues at Zespri, we held workshops to understand what sustainability meant to our



growers. This revealed that growers weren't simply out to make money. They liked being better for the world. They valued using practices that improved soil health. They were proud to dig up a very healthy spade of dirt under their avocados. And they asked, can we utilise the avocados that don't make it to class 1 or 2? Can we collect and share those for food banks? How can we be better for our region?

To meet the need for verifiable sustainability credentials, the industry has undertaken a life cycle assessment for avocados, from nursery to market, partnering with Massey University and ThinkStep, with funding through the Primary Growth Partnership. A study of 50 avocado orchards and collection of data and modelling from nursery to two of our major markets, Australia and Korea will allow us to assess and document the sustainability attributes of the avocado supply chain, particularly our carbon and water footprint. We have an amazing opportunity to present these research findings on a world stage at the World Avocado Congress in April 2023.

What does the future of the avocado industry look like? To answer this question there needs to be collaboration across the global industry and consideration for the environment in which we grow, how we transport and sell and how we show respect for these issues.

To ensure the sustainable growth of the global avocado industry, we all need play our part in this global conversation, growers especially. Register for the congress today at wacnz2023.com. See you there. ●

TECHNICAL

THE LATEST INNOVATIONS AND IMPROVEMENTS

Ensuring
excellent fruit
quality

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How to improve fruit quality until harvest

New Zealand apples are marketed off the back of our ability to grow an excellent piece of fruit.

Jack Wilson : AgFirst Hawke's Bay

Within the regions we grow, we are more often than not blessed with the ability to produce excellent quality fruit with a large margin for error in terms of the climate. However, the 2022 season threw curveball after curveball predominately climatically and because of that, some of us got caught out.

For New Zealand to stay competitive on the world stage we need to continue to deliver premium fruit to market time and time again. This is no small feat and requires excellence from every grower, best practice post-harvest and throughout the entire supply chain.

There are several elements impacting fruit quality from now until harvest, some of them manageable and some of them not. This article will set the scene leading into the 2023 season and highlight those management practices we can use from now until harvest to improve the quality of our crop.

Climate

Throughout 2022, La Niña weather made it difficult to support the production of good, consistent, quality fruit. November saw an improvement in the weather, but the National Institute of Water and Atmospheric Research (NIWA) is forecasting a La Niña pattern into the new year too, which will have a meaningful influence on New Zealand in the coming months. As growers, we need to get our crops set up to ensure they are easily coloured and sized, potentially reducing our yield targets to achieve this.



Figure 1 Impact from one of three tropical cyclones that hit the Hawkes Bay during the 2022 harvest

What are the fruit quality targets?

What we do extremely well as New Zealand growers is produce a world class piece of fruit. But what is that? It is not only a fruit that matches the consumer's visual preference, but an eating experience that they will come back for time and time again. The key drivers to that and factors we can manage in the orchard are:

1. Colour - variety specific but this is the one that gets heads turning
2. Fruit size - some markets love it big, some love it small, knowing your target market is one of the first steps to growing an excellent piece of fruit
3. Dry matter, firmness and soluble solids - the king when it comes to the eating experience. Ideal ranges are variety specific.

Fruit quality targets are market specific, particularly fruit size. Knowing your target market is the first step to growing an excellent piece of fruit in the eyes of the consumer. So, now we know the target, what can we do to achieve it?



Figure 2 High colour Envy™ apples prepared for harvest

The fruit quality jigsaw

Fruit quality can be influenced by several different elements. Figure 3 illustrates the jigsaw of factors that influence fruit quality come harvest - some of which are fixed at planting (genetics/rootstock), some are uncontrollable (climate) and some are very manageable. Throughout this article we will cover aspects of this jigsaw and describe how you can control them to produce your target fruit quality and yield.

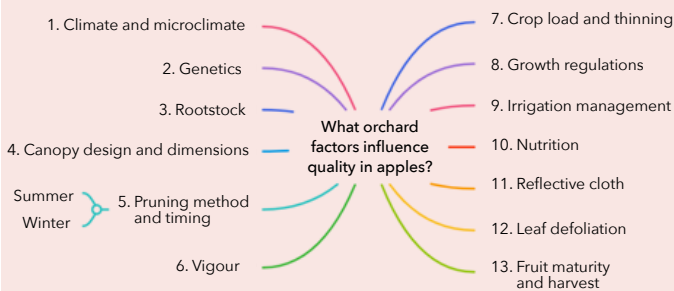


Figure 3 Fruit quality jigsaw and influences

Pruning method and timing

Pruning method and timing is a follow-on to canopy dimensions. This stage allows you to use the physiology of the tree alongside data, to set up the canopy for production of top-quality fruit. Although all winter pruning will be well and truly complete, the theory of best practice is a significant part of developing a canopy to produce excellent fruit.

Simple canopies are optimised for top quality fruit. Calm trees with low vigour and simple, single plane branches with no shortening cuts, is what one should look for to maximise fruit quality. One of the keys is to set up the tree's fruit to bud ratios in the winter. This allows for vigour control as the appropriate amount of carbohydrate is being used on only the buds you require - predominantly for fruit growth but also canopy growth in a developing block.

Summer pruning is an excellent way to improve canopy light distribution in the tree. It exposes fruit to light that otherwise would struggle to colour. Summer pruning can be done through mid-late November before the longest day of the year. This timing gives the site the best opportunity to develop a fruiting bud for the following year.



Figure 5 example of a small branch before bud:fruit ratio alteration

Canopy Design and Dimensions

There have been many articles and discussions in the last few years around new planar planting systems and how they compare to other more conventional systems. One of the key take-home messages is their ability to increase light interception and light distribution, from top to bottom of the tree. What those planar canopies do extremely well is intercept light and maintain good light distribution at 15 to 30% in the bottom of the canopy. This leads to is a good environment for the fruit to develop great colour and size.

The generic goals of canopy designs and dimensions are to:

- Intercept a minimum of 65% of available light. One of the key metrics to achieving this is to maintain the tree height to a maximum of 1 to 1.2x the row width
- Maintain good light distribution, aiming for 15 to 30% of light in lower canopy. In order to achieve this, the tree may require vigour reduction or tree training strategies
- Cropping on calm, well-spaced branches, developing a canopy with an appropriate branch density (number of branches per running metre of trunk) is key and will vary by variety
- Avoid extremely pendant branches, particularly in the lower tree (may require training up, not down), as they cause overlapping and a very poor light environment.

Figure 4 is an example of an open, tall spindle canopy, which has had a focus on keeping a good light environment from planting. Branches have been tied up to ensure they do not turn pendant. As a result, the light distribution is fit to produce excellent quality fruit, from top to bottom of the tree.

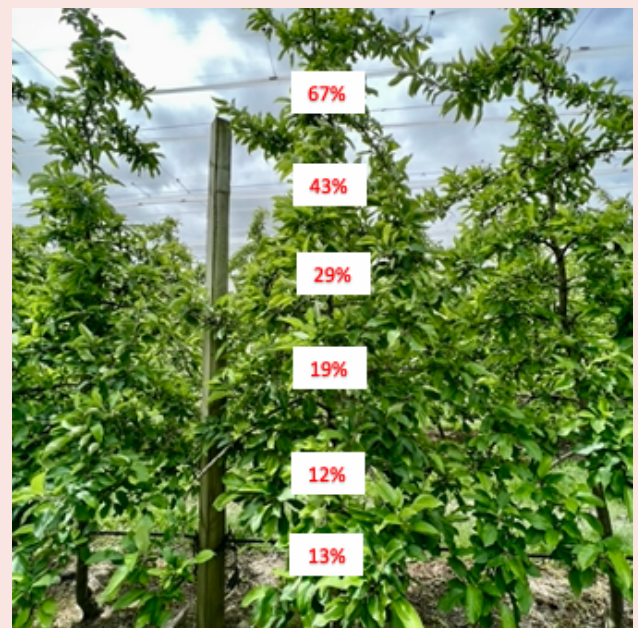


Figure 4 Light distribution from top to bottom of the tree

Vigour control

As outlined above, light is king in terms of the production of high-quality fruit. You need to find the right balance for where your tree is at and according to the block's key targets. A young developing block will need a good level of vigour to fill the allotted canopy. However, for a mature canopy, vigour needs to be under control to ensure enough light is hitting all parts of the canopy.

Some of the key strategies to control vigour include:

- Dwarfing rootstocks
- Pruning technique (limited shortening)
- Branch type
- Pruning timing
- Cropping
- Root pruning
- Trunk girdling (timing is key)
- Low Nitrogen status
- Regulated deficit irrigation (RDI)
- Growth regulators



Figure 6 High vigour at harvest.

Crop load management

The key in managing crop load is using data. Estimating the appropriate crop load by eye after hand thinning is near impossible to get accurate, so data is used to give support to what your eyes are seeing. Understand each block's potential, while taking into consideration, yield, size, colour and overall quality.

Successful chemical thinning should aim for 120 to 150% of optimal fruit number prior to hand thinning. Then, the goal is to hand thin the remaining 20 to 50% of fruit well the first time, prioritising large, high value varieties.

Keys to crop loading:

- Hand thin early to preferably singles on large, fruited varieties
- Only leave doubles where fruiting sites are sparse
- Aim for fruit spaced evenly over the entire tree
- Thin to fruit size more so that perfect spacing, the largest fruit at thinning will be the largest fruit at harvest
- Re-thin in January to remove defect fruit and adjust final crop load if required.

After coming up with a target tonnage that will promote high quality fruit, be sure to regularly check the outcomes of hand thinning using three Quality Assurance (QA) target checks to ensure your crop achieves this.

These target checks are:

1. Trunk Cross-Sectional Area (TCA) - used in young trees with efficacy diminishing as the tree gets older
 - a. Size of the trunk indicates the tree's cropping potential
 - b. Measure 25-30cm above the graft union
 - c. Different tree ages will have different crop load targets.
2. Tree Row Volume (TRV)
 - a. Canopy fill as a proportion of the maximum canopy volume will give you a good indication of the appropriate yield.
3. History
 - a. Considering fruit size, colour and yield, use block history to make a good cropping estimate.



Figure 7 Ross Wilson measuring TCA (trunk cross sectional area) 25cm above the graft union to assess potential cropload

Growth Regulators

Different growth regulators can be used to improve fruit quality in several different ways:

- Regalis or kudosis for vigour control
- BA 6-benzyladenine (BA) light rates for fruit size over cell division.
- Summer NAA (1-naphthylacetic) to encourage return bloom aiming for good tree to tree variability.

Soil moisture

As more and more research data comes to hand, it is increasingly evident that soil moisture management is critical. This is important for maximising canopy development in young trees, as well as having a major impact on dry matter accumulation in fruit and hence fruit quality.

Research carried out by both AgFirst and Plant and Food Research Limited (PFR) on apples showed that periods of partial rootzone drying could increase dry matter concentration by up to 1%, which is very significant. Conversely, too much drying will place the plant under stress which will negatively affect fruit size. This positive impact on DM has also been reported in kiwifruit for some time and grape growers will tell you they've been seeking out low water holding capacity soils for years to achieve high brix and hence, quality wine.

AgFirst Hawke's Bay have also witnessed locally, many examples where, soil moisture is kept close to field capacity or large applications of water are made. As a result, dry matter accumulation in pipfruit is reduced. It would appear that some root zone drying throughout a season on mature canopies is beneficial. The jury is still out on the magnitude required and whether this is just a photosynthate/water balance issue or whether the plant is producing triggers under rootzone drying.

The important take home message, however, is that accurate soil moisture management is critical to the production of high-quality fruit. Being able to measure soil moisture accurately and to multiple depths is necessary to be able to manage fruit size and quality.



Figure 8 Benefit of reflective mulch on Scilate apples preharvest

Nutrition

Often, growers can do more to manage nutrition to achieve high crop performance including fruit quality and fruit colour.

Nutrition is a double-edged sword. Like soil moisture levels, too little or too much is likely to have a negative effect on the production of high-quality apples.

One of the standout nutrients is Nitrogen. If levels in the trees are too high, it is likely that poor fruit colour will be the result. If levels are too low (either by no inputs or lack of availability to the plant) then poor fruit set/biennial bearing risk is likely to be much more significant.

Macronutrient ratios, especially the N/K and K/Mg balance should be measured early in the season (Nov/Dec), so any adjustments to the nutritional programme can be made and will still be effective for the current season's crop. Achieving nutritional balance in the plant will optimise tree health and maximise yield, fruit colour and size as well as lessen post-harvest storage issues.

Trace elements are also essential nutrients but only needed in very small quantities. Leaf testing will quickly detect any trace element imbalances and in most cases, can be solved by a single foliar fertiliser application.

Early leaf testing (mid-November, prior to foliar fertilisers) is a way to identify where potential issues might exist and where different management techniques might be needed to ensure excellent results.

Reflective mulch

The purpose of light reflecting mulches is to redirect light that hits the orchard floor back up into the tree canopy. When used on selected cultivars, value can be added in a few weeks prior to harvest on fruit that would otherwise go to juice.

On varieties which pay a premium for high colour, such as Scilate, it is a no-brainer. However, if Capex is restricted, there is an option to start with the silver disposable mulch and then use white reusable mulch on every second row. This also helps reduce costs. To get the most out of reflective mulch, the best practice is to place white reusable cloth on every row, four weeks out from harvest.

Leaf defoliation

These days with several leaf defoliators on the market, it is a very real proposition to remove surplus leaf just prior to harvest.

Companies that have used this technology generally report good results with little report of negatives such as sunburn, increased canker, or poor return bloom.

Like all technology, it could be overdone, so take prudent care at least in the first few years of trying it.

The timing of leaf defoliation is recommended at 10 to 15 days pre-harvest. Trials have shown this can be done earlier, however, the amount of leaf being removed will influence any potential reduction in fruit size.

Summary

In 2023, optimum fruit quality will be the key to success.

Extremely high summer temperatures in the northern hemisphere this year may have adversely affected fruit quality and storage life. The market may be awash with poor quality northern hemisphere product, so there is an opportunity to produce a crisp, juicy, well-flavoured fruit

to differentiate our product that continues to command premium prices.

We have the tools in the toolbox to manipulate fruit quality from now until harvest, but it is up to us to assess what is needed to grow that perfect piece of fruit.

Quality is king in 2023. ●

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Soils drying out in the east of the South Island



Georgina Griffiths : Meteorologist, MetService

Highs favour the South Island through spring

After a record wet winter for many regions of the country, spring saw a somewhat more settled weather regime set up over New Zealand. More highs than usual sat over the South Island in the September to November period, resulting in soil moisture levels dropping slightly more sharply than normal for the time of year across the east of South Island (figure 1). In contrast, frequent easterly winds produced a wetter than normal spring for the northeast of the North Island, with soil moistures sitting at saturation in mid November.

Compare the rainfall accumulations (figures 2 to 5) in the northeast of New Zealand, e.g., Kerikeri and Napier, which saw above normal spring rainfall and rainfall accumulations accruing at a higher (steeper) rate than the climatological normal. In contrast, spring rainfall totals in both Blenheim and Christchurch were normal to below normal, meaning the accumulation slope was slightly flatter than the average increase.

A cooler than average October; mild through the first half of November

It has been many, many months since New Zealand experienced a cooler than average month - because we're operating against a background of warming that affects us all.

Notably, temperatures were below average for most of October, across most of New Zealand, before a change to

mild conditions in the last week of the month. The recipe of above average temperatures has then persisted through the first half of November, across the country.

The plots shown in figures 6 and 7 show temperature anomalies - deviations from the long-term climate - for both Napier and Christchurch and both locations show the same general trend in temperatures (when compared to their norms).

Get better weather intel

Looking ahead, many growers and farmers are all set to see another La Niña summer - the third in a row. Remembering that each La Niña summer can be somewhat different, you can work the averages and plan for a general 'wetter-in-the-northeast and drier-in-the-far-south' summer to play out. Or, you can contact the long-range team at MetService for a quote for a seasonal forecast, and keep up to date with the MetService long-range forecast at <http://metservice.com/rural/monthly-outlook>. Better still, sign up to the free Monthly Outlook emails at www.metservice.com/emails

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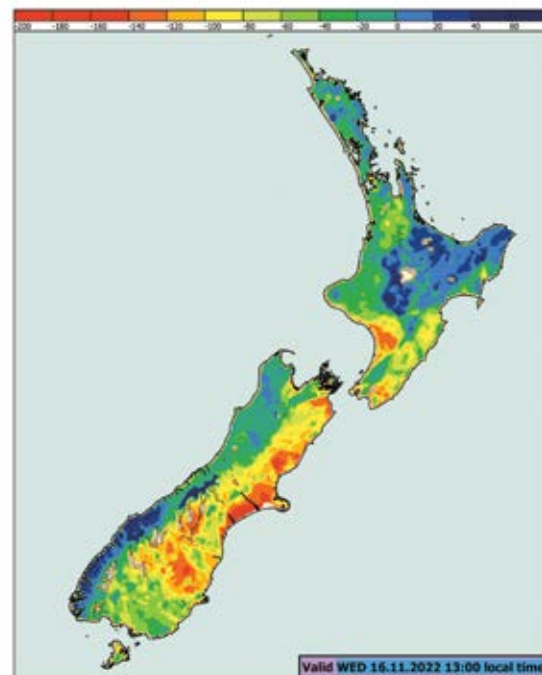


Figure 1: A 'snapshot' of estimated soil moisture deficit at 4km resolution, 16 November 2022. Blue colours indicate saturated soils. Orange colours show significant soil moisture deficit, while red colours signal severe soil moisture deficit.

Rainfall accumulation plots show a large contrast between northeast NZ and eastern South Island:

Kerikeri

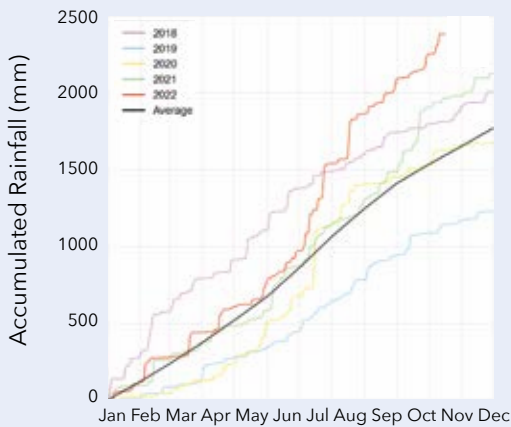


Figure 2: Kerikeri annual rainfall accumulation (mm) for the last five years (2018 to 2022). The annual average rainfall accumulation is shown in black

Napier

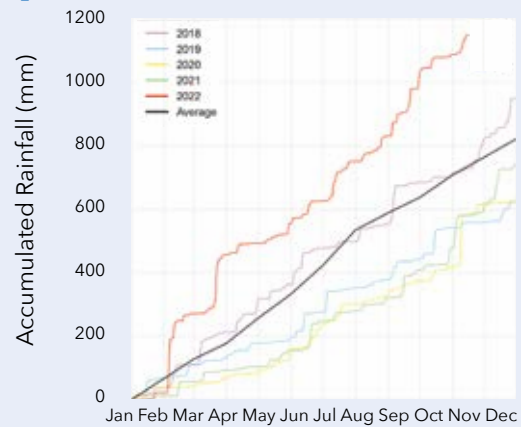


Figure 3: Napier annual rainfall accumulation (mm) for the last five years (2018 to 2022). The annual average rainfall accumulation is shown in black

Blenheim

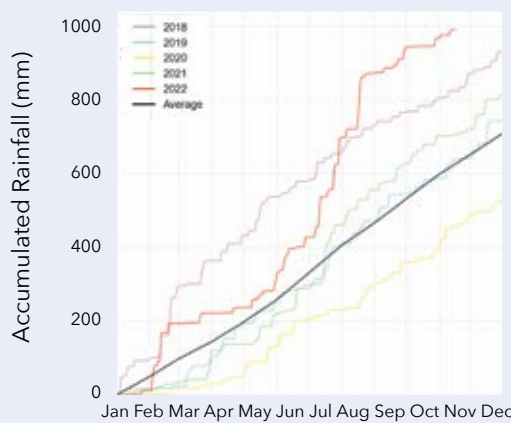


Figure 4: Blenheim annual rainfall accumulation (mm) for the last five years (2018 to 2022). The annual average rainfall accumulation is shown in black.

Christchurch

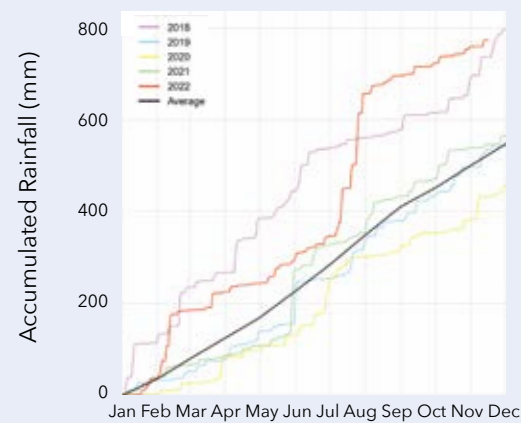


Figure 5: Christchurch annual rainfall accumulation (mm) for the last five years (2018 to 2022). The annual average rainfall accumulation is shown in black. The record wet winter in Christchurch is obvious in the dramatically steep slope of July 2022 (red line); while a slightly drier than usual spring period is evident in the flatter-than-average slope through September, October and November

Temperature anomaly plot for Napier



Figure 6: Napier daily temperature anomaly (difference from the daily average) across 2022. The daily average is calculated from the 30 year climatology. Much of October ran cooler than average, consistent with cooler onshore winds in the Hawkes Bay. In the last week of the month, there was a change to an unusually mild period.

Temperature anomaly plot for Christchurch



Figure 7: Christchurch daily temperature anomaly (difference from the daily average) across 2022. The daily average is calculated from the 30 year climatology. Much of October ran cooler than average in Christchurch, too, before a change to an unusually mild period at the end of October

Roxy® apple creates a snazzy opportunity

New fresh produce exporter Snazzy Fruit Company Ltd has kicked off the 2022 season in style by taking the exclusive rights to export Roxy®, an early season apple variety with strong appeal in Asia.

Based on feedback, Roxy® ticks all the right boxes in-market - it is early to market (harvested a week before Royal Gala). Its infatuating pinky-red colour, a taste profile well-suited to the Asian palate, and funky branding are making it an attractive proposition. In 2022, the Roxy apple was shipped to seven different markets of strategic importance.

Growers truly do love the Roxy variety because it is easy to grow and requires less sprays. They are able to kickstart their season earlier with labour. Roxy allows growers to differentiate their varietal mix with a trendy variety. And they can capture faster cashflow through early sales.

In addition to this, growers have been very impressed with returns in the first year (\$45.00 average for premium grade) despite all of the hurdles that new varieties can encounter during the early development phase. This has led to existing growers increasing their plantings, and a number of new growers in both the North and South Islands becoming official Roxy growers.

Whilst majority of the Roxy volume is currently grown in the South Island, we see a huge opportunity for new plantings in the North Island to take the variety to another level due to even earlier harvest timing which means up to one month earlier to market.



2022 season photoshoot during harvest

Snazzy Fruit Company has made an exerted effort to be transparent with all of our growers, and given them a clear insight into the direction we want to head, and what we need to achieve that. Without growers we have nothing, so we understand the importance of instilling confidence in them and building trust.

There is still significant room for growth in the New Zealand apple industry, particularly off the back of ever-changing market trends, emerging markets, and product awareness in Asia. In a lot of ways this is just the beginning.

“

Growers truly do love the Roxy variety because it is easy to grow and requires less sprays. They are able to kickstart their season earlier with labour

Being a new company provides the opportunity and challenge for us to formulate fresh ideas, rather than carrying on with the status quo. This is what excites us and gets us up in the morning - it forces us to think outside the box in all facets of our business. In doing so, we get satisfaction from knowing we are able to make a difference to growers by adding value to their business.

Snazzy Fruit Company has a number of new exciting initiatives in the pipeline that we plan to roll out in the near future. ●

For more information, contact Josh Parlane (Managing Director), jparlane@snazzyfruit.nz, snazzyfruit.nz

TAKING PART IN A HORTICULTURE FIELD DAY?

THINK ABOUT BIOSECURITY! HERE ARE SOME EASY STEPS.

Field days are a great way to share information and knowledge in a hands-on way. However, movement of people, goods and vehicles between farms/orchards during a field day can present a biosecurity risk. Pests or pathogens can inadvertently be carried:

- onto the host's property
- back to the attendees' property.

Implementing simple everyday biosecurity practices can help to minimise the biosecurity risk for both hosts and attendees, which is a great outcome for all.

If you are an **ORGANISER:**

- Include biosecurity messaging on promotional material and in communications with host properties.
- Minimise the number of vehicles and use transport that is not usually used on the farm/orchard if possible.
- Keep a register of all attendees to ensure tracing is possible if required.
- Avoid visiting properties that are known to have high risk pest, pathogen or weed infestations.

If you are a **HOST PROPERTY:**

- Make sure good biosecurity practices are visible on your property.
- Provide a biosecurity briefing about the actions you'd like visitors to take so that attendees know what you expect of them.
- Ensure that you have a designated and clearly signposted parking area.
- Provide a footwear wash and disinfection station at the point of entry e.g. boot scrubbers and water for cleaning, sanitising spray or a footbath containing an appropriate sanitising product for disinfection.
- Provide hand sanitiser if people will be touching plants or soil.
- Avoid use of other people's tools and equipment for demonstrations, unless they have been thoroughly cleaned and disinfected first.
- Monitor the part of your property where the visit took place over time for unfamiliar pests, pathogens or weeds.

If you are an **ATTENDEE:**

- Make sure your clothing and footwear is clean. Avoid wearing clothes and shoes that you wear on your own farm/orchard.
- Clean and disinfect your footwear between each site during the field day and before returning to your own farm/orchard.
- Follow all biosecurity signage and requests at host properties.

BE A BIOSECURITY CHAMPION:

HELPTO PROTECT YOUR PROPERTY AND YOUR SECTOR FROM PESTS AND PATHOGENS.

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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