



## Apple challenges

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for next season



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APRIL 2021

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# Climate change is real – so what are we going to do about it?

*I had the opportunity in early March to spend the day in Hawke's Bay with the Prime Minister and some of her senior Ministers, along with other Food and Fibre industry leaders. We visited local farmers and growers, and discussed with them the issues and opportunities they are facing.*

By Barry O'Neil  
President : HortNZ

While there was a clear focus on our future seasonal labour needs, we also spent time on climate change and freshwater reforms. Unfortunately, I came away feeling we have a long way to go if we are to collectively, as the food and fibre sector, agree to address the significant industry, national and global issues facing us.

I am however encouraged that as a nation and as an industry, we are at least identifying these issues as priorities. But I felt at times, the wider primary sector is still looking for excuses not to make changes to how we farm or grow, blaming incomplete science, lack of government support or the need for longer transition times. This to me is disingenuous: to be saying yes, we agree with the need and yes, we absolutely must change, but don't make us do it now as we're just not ready yet!

And while I struggle, along with most others, with the complexity of these issues and what the changes we must make will mean to production and the economics of growing, my bigger concern is that if we continue to procrastinate, it will be too late for us to make the changes that will make the needed difference.

“

**...my bigger concern is that if we continue to procrastinate, it will be too late for us to make the changes that will make the needed difference.**



No one wants to see fellow growers being regularly devastated by hail, losing crops to rain and flood events, and crops too often suffering with drought. And we especially don't want to see warmer climates so that our production systems and growing regions are no longer suitable for the crops they currently grow.

Our climate is changing from human activity, and our excessive and at times inappropriate use of the earth's limited resources. We need to change how we are doing things now if we are going to mitigate the impacts. This is much more than just growers – and yes, also much more than just New Zealand – but to me that is no excuse for continuing to delay doing what is needed and what is right.

Internationally we are falling behind what leading countries are doing, so we don't have a unique 'NZ Inc story' to tell our consumers now. Consumers always have a choice, and while our produce has historically commanded a premium, this is now being seriously challenged by others who are doing more and moving faster to address climate change and the environmental issues facing our communities and countries.

Millennials and Gen Zs have been the leading generations marching in the street demanding change. They will also soon become the largest consumer group. What therefore do we think will influence their purchase decisions?

From a purely economic perspective, we need to keep ahead of the competition or we run the risk of becoming another Nokia or Blockbuster.



We know that over time, the environment has suffered from our farming and growing practices. There's actually a win-win here. Changing how we grow will not just achieve carbon neutrality but will help to return the land, water and air back to a healthier state.

The majority of us, I like to think 80% of growers, want to change how we grow, do our bit to mitigate the changing climate so we can continue to supply New Zealand and world consumers with products for which they willingly want to pay a premium.

“

**...I like to think 80% of growers, want to change how we grow, do our bit to mitigate the changing climate so we can continue to supply New Zealand and world consumers with products for which they willingly want to pay a premium.**

But as with any significant change issue, there will be the 20% who won't want to change. They will argue it's a croc or changing what they do won't make any difference. And they will argue that people are not causing climate change, it's just a historic earth warming cycle that has happened before, and that the 'greenies' are just crying wolf.

The top credible scientists in the world have concluded that we have a problem and have pleaded for decades for climate change to be addressed. That we are leaving the so-called Garden of Eden era and entering the Anthropocene epoch - where human activities dominate, and in this case, have a real negative consequence on our survival on earth. They are also saying that while the Paris Accord was set to limit global warming to 1.5 degrees, our inaction to date means this is probably no longer possible because we have left it too late. But they are still hopeful that acting now will mean limiting warming to 2 degrees, which still provides a future for generations to come.

A 2-degree increase might not sound much because we live in a temperate climate. But those people in the world already struggling with unbearable heat, lack of water and insufficient food, will be seriously affected and displaced from their homelands. And this won't be just a few hundred; we are talking about millions of people being displaced. Where will they end up and what is our response going to be when they knock on our door?



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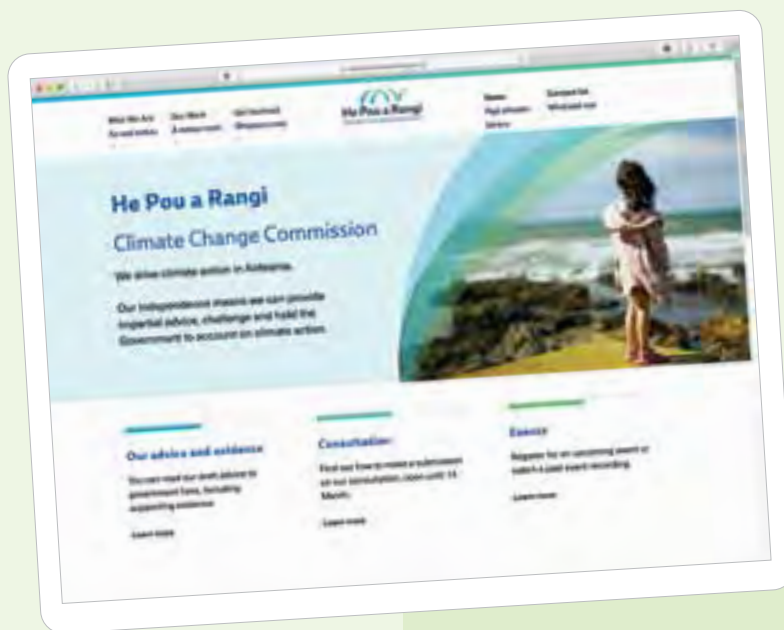


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To see the full Climate Change Commission's report. Go to [www.climatecommission.govt.nz](http://www.climatecommission.govt.nz)

The Climate Change Commission has released its draft report recommending to government the options for New Zealand. I very much welcomed the report as in general, it's a very sound assessment that will result in our country making crucial decisions in order to face the realities.

My one concern is, as with any approach to changing behaviours, regulators often use too much stick and not enough carrot, such as suggesting carbon prices of \$140 or \$250 a tonne. I am sure most of us will change if growers can be shown what we need to change, and how we can transition to being carbon neutral while still being economically viable.

“

**My one concerns is, as with any approach to changing behaviours, regulators often use too much stick and not enough carrot...**

We have knowledge of what change is needed, but there is more work and investment required. The government will generate revenue of \$3.1 billion from the Emissions Trading Scheme according to the Climate Change Commission's report. This money and more needs to be reinvested into finding solutions for things like renewable energy for heating and transport, and to support the transition to these new technologies.

It's going to be hard but we must collectively commit to this, as we just don't have a choice. If we continue to argue why we shouldn't change rather than accept why we should, then limiting global warming to 2 degrees is not going to be possible either, and we absolutely don't want to be part of that scenario.

Ngā mihi. ●



# What is needed for recovery?

*It is just over a year since the whole of New Zealand went into Level 4 lockdown. At the time, the apple harvest was well underway and kiwifruit was building up to peak harvest, with other fruit and vegetables in the throes of either planting, harvest or pruning. Level 4 lockdown requirements markedly increased production costs and reduced the outlets where produce could be sold.*

By Mike Chapman  
Chief Executive : HortNZ

**One of the most notable issues at that time in 2020 was the lack of both permanent and seasonal labour. The horticulture industry - NZ Apples & Pears, NZ Kiwifruit Growers Inc, Summerfruit NZ, NZ Wine, Master Contractors and HortNZ - therefore started campaigns to find labour for the 2020-2021 season. This group has to this day kept pushing the government for enabling border policies, worker support and immigration changes so that the horticulture and wine sectors can continue to be productive. We have had some success but the end result has not been what horticulture has needed.**

During the first lockdown in March-April 2020, the government started paying wage subsidies to support businesses and workers. The wage subsidies were not aligned or available to our sector as despite increased costs and a struggle finding workers, we kept operating. To date \$16.6 billion of taxpayers' money has been paid out in wage subsidies.

The wage subsidies have propped up businesses that in these Covid-19 days are not operating and are not in a position to contribute to the much-needed economic recovery of New Zealand. As a result, I am reaching the view that this is money that has not been well spent. It is delaying inevitable job losses and an economic downturn, while taking workers away from industries like horticulture that are performing and contributing to New Zealand's economic recovery.

As the government works on policy and immigration settings for workers for the next 2021-2022 season, I believe that settings such as the wage subsidy need to be reviewed so that perverse economic outcomes are not perpetuated.



Border and immigration settings, especially with vaccine-enabled travel, also need to be reviewed so that what has happened in 2020 is not repeated in 2021.

New Zealand needs a new set of policies for the immediate future, which is what the horticulture and wine collective is pursuing with the government right now.

There are also some clear wins that can be actioned that do not take money or complicated reviews. One of those wins is the timely enactment of the Organics Bill and rapid creation of the regulatory framework under that Bill, which will enable an increase in both the volume and value of organic exports.

The Bill is going to its second reading in Parliament, having been through the Select Committee phase. It is not perfect but once in place, will enable a rapid increase in organic exports by allowing for the New Zealand organic certification system to be recognised in the countries where we send our exports. At present this is not possible.

The regulations to be created under the Bill can also be tailored to make as cost effective and efficient a national certification system as possible. Industry is ready to work with the government to achieve this outcome, the end result being an enhancement to our ability to earn valuable overseas returns, to keep our rural economies running.

We are at the crossroads when it comes to our economic recovery and the contribution that horticulture can make to it. As I've set out, if we are enabled with smart and appropriate policy settings, horticulture will continue to contribute, otherwise horticulture and our rural economies will further suffer. ●

# YOUR LEVY AT WORK

INDUSTRY WIDE ISSUES FOR INDUSTRY GOOD

## Natural resources and environment



### Water

#### Water Services Bill

The Water Services Bill will implement the government's decision to comprehensively reform the drinking water regulatory system. The Bill establishes the duties and functions of Taumata Arowai as the new national Water Services Regulator.

The new requirements introduced for drinking water suppliers will apply to anyone who supplies water to others for domestic purposes (excluding domestic self-supply). These regulations will capture some irrigation schemes, and small supplies serving more than just a 'stand-alone or single domestic dwelling', such as supplies serving packhouses and worker accommodation.

HortNZ has made a submission and presented at the Select Committee in March. Key points HortNZ made in the submission were:

- It is important to retain and clarify provisions regarding proportionality, given many small supplies will be captured, and to provide a longer transition period.
- Clarify and remove duplication between the Water Services Bill and the Food Act, relating to the commercial washing of food.

- Support for the concept of Te Mana o te Wai, and seeking clarity that Te Mana o te Wai is an integrating framework that seeks to provide for the well-being of water and the well-being of people.

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

The focus of HortNZ's submission is that water policy provisions provide sufficient flexibility to enable horticulture to continue to thrive on the plains, in a manner that is consistent with Te Mana o te Wai.

HortNZ will be supported by expert planning, economic, hydrology, water quality and farm planning evidence. The Council hearing is scheduled for May.

HortNZ supports provisions that:

- Support well designed water harvesting, storage, augmentation and cease take thresholds, to improve freshwater outcomes, support economic well-being and increase climate change resilience.
- Enable crop rotation to support soil health.
- Recognise the importance of domestic food supply of fruit and vegetables.
- Recognise Tangata Whenua values and Māori agribusiness aspirations.

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## Climate Change

### He Waka Eke Noa

He Waka Eke Noa is a partnership between iwi, government and primary sector to manage agricultural emissions. Agricultural emissions include emissions from animals and emissions from fertiliser. Agricultural emissions make up about half of New Zealand's greenhouse gas emissions, but emissions from the horticultural sector make up less than 2% of New Zealand's emissions.

HortNZ supports effects-based thresholds for He Waka Eke Noa milestones, to ensure the key focus of the programme is on reducing agricultural emissions.

### Climate Change Commission Submission

HortNZ is developing a submission on the Climate Change Commission's draft advice. Key points include:

- Land use change to horticulture presents an opportunity for New Zealand to reduce emissions and improve freshwater outcomes. We seek joined-up policy across trade, labour and environment to support horticultural expansion.
- Alternative heat sources for glasshouses are not yet commercially viable, largely due to the capital costs of alternative heat. Glasshouses are a resilient and efficient growing system, the importance of which will likely increase with a changing climate. The glasshouse sector urgently requires targeted investment to support its transition to lower-carbon heat.
- Free allocation policy should be used to align with the Paris Agreement outcomes, that is to reduce global emissions and to maintain food security. We seek a clearly articulated free allocation policy that includes explicit criteria for domestic food security and carbon leakage. We seek alignment of free allocation policy across all emissions sources, e.g. industrial, transport and agricultural emissions.
- Industry assurance programmes such as NZGAP can leverage off market requirements for lower-carbon products, to deliver regulatory outcomes. We seek policy to support the use of industry assurance programmes. ●



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Photo by Mr Noy Sopha, as part of NZAID project in Cambodia, Plant & Food Research

# A biosecurity threat marches closer

## Situation update:

*In April last year I wrote an article in this magazine on an emerging biosecurity threat – the fall armyworm (*Spodoptera frugiperda*) which had recently made landfall in the north of Australia for the first time. Since then, fall armyworm has marched its way south through mainland Australia.*

By Anna Rathé : Biosecurity Manager, HortNZ

After the first detection on two Torres Strait Islands in January 2020 it turned up in Queensland in February 2020, The Northern Territory and Western Australia in March 2020, New South Wales in September 2020 and there have recently been sightings in Victoria. In December 2020 there was a preliminary report of larvae from a single field in New Caledonia.

Fall armyworm has proven itself a highly successful invader. It has made its way to over 60 new countries, none of which have managed to eradicate it. It is clear that this pest is moving progressively closer to New Zealand, and we need all growers to keep an eye out. If it were to arrive on our shores, early detection provides the best chance of managing the pest.

“

**...it has proven itself a highly successful invader. It has made its way to over 60 new countries, none of which have managed to eradicate it.**



## What to look out for

### Eggs

Dome-shaped cream-coloured eggs are laid on the underside of leaves near the base of the plant. Usually, eggs are laid in clusters of a few hundred which the adult moth covers in a layer of greyish furry scales.

### Caterpillars

Caterpillars go through six larval instars. As they develop the larvae grow in size, starting at around 1.5mm and reaching up to 34mm when mature. The instars change in colour from greenish, through to orange and then brown. Fall armyworm caterpillars tend to hide during the day in the whorl or leaf axils. Crop damage is most likely to be observed during the summer and early autumn months when larvae are feeding.

### Adults

Adult moths emerge at night and are highly mobile. The moths have a mottled grey/brown forewing, a white hindwing and a wingspan of 30–40mm.

It can be easy to confuse some life stages of fall armyworm with similar species that are already present in New Zealand, such as tropical armyworm (*Spodoptera litura*) or cosmopolitan armyworm (*Mythimna separata*). It is important that suspect insects are identified by an expert. If you think you have spotted fall armyworm, **catch it, snap it and report it** by calling the Ministry for Primary Industries exotic pest and disease hotline on 0800 80 99 66.

### What is the risk?

Fall armyworm attacks a wide range of crops including grasses, cereals, fruits and vegetables. Maize and sweetcorn appear to be the insects' favoured host with most reports of significant damage on these two crops. Yield losses of over 70% have been reported in cases of severe infestation.

If caterpillar populations get to very high numbers they can swarm and spread in search of food.

During this phase they can chew through the stem of young plants, killing them. This trait is why they are named 'armyworms.'

Fall armyworm favours a tropical or sub-tropical climate, and is thought to be limited by arid and cold conditions. Year-round populations are only sustained in regions with a favourable climate, otherwise infestations are seasonal. Climate modelling is an inexact science, but some climate models have indicated that parts

of northern New Zealand may be suitable for establishment of fall armyworm. The climate of other regions in the north island may only allow for seasonal invasion. While current climatic conditions may limit the threat of year-round populations establishing in wider New Zealand, small increases in temperature can have dramatic consequences for pest populations like fall armyworm.



Ministry for Primary Industries exotic pest and disease hotline on 0800 80 99 66. ●

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*Carla Clelland, self-employed Horticultural Consultant based in South Canterbury, is running a regional maturity monitoring programme for Honeycrisp apples*

## Taking the headache out of compliance

*Meeting compliance requirements is a vital part of operating a fresh produce business, but for many growers, navigating the rules, regulations and paperwork can be a headache, says Carla Clelland, self-employed Horticultural Consultant.*

By Elaine Fisher

**"Many of my clients find compliance overwhelming. They don't have the time or resources to spend on the paperwork, because they are focused on their passion which is producing a quality product, or they are not confident with the technology involved in meeting the requirements."**

Carla, whose business is based in South Canterbury, says it's rewarding to help growers navigate compliance issues or write a system manual for them.

"New Zealand's horticultural produce has a reputation for its high quality, food safety and environmental standards so it's vital growers comply. It makes sense for them to focus on what they do best, growing great quality food, and outsource what they find hard or don't have time for," says Carla, who is also a member of Women in Horticulture.

“

**Horticulture... is full of inspiring people to support you.**

Carla's roles include consultancy and compliance work for growers, post-harvest operators, exporters and industry organisations covering a number of crops, including Honeycrisp apples, and export onions and potatoes.

"My work is about providing growers with timely and accurate data to support their decision-making including crop estimates, budgeting, cash flow and logistics."





*Carla is a member of Women in Horticulture*



*Being self-employed allows Carla to enjoy family time, including with son Jackson, cycling part of the Te Araroa Alps 2 Ocean Cycle Trail between Lake Tekapo and Twizel earlier this year*

Carla is also involved in running a regional maturity monitoring programme for Honeycrisp apples to ensure they are picked at optimum maturity.

Horticulture was not her first choice of career when she decided to study for a Bachelor of Business Studies and Bachelor of Science at Massey University. "As part of my studies I did a horticultural paper and was hooked. That cemented the decision to choose horticultural science as a major in tandem with finance. Many people thought that a strange combination, but in hindsight it was a really good choice. I thought I would pursue a career in rural banking, but then I got a fantastic summer student job with AgFirst in Hawke's Bay and was hooked on horticulture."

The seeds of Carla's future may have been sown even earlier. "My parents had a kiwifruit orchard in Gisborne in the 1980s and my father, Chris Emms, was involved in process tomato production in the early days of Cedenco, working for the Witters family.

"So that probably shaped my early experiences of horticulture. Later as a teenager, I had an enterprise growing sunflower seedlings and selling them through our parents' service station in Napier."

For nine years she was a horticultural consultant with AgFirst Consultants in Hawke's Bay before moving to South Canterbury in 2013 working in a business development role for a vertically integrated pipfruit business.

The transition to self-employment has – in Carla's words – been "organic," beginning in 2015 with the offer of some

part-time work shortly after the birth of her second child. The opportunities and flexibility of being self-employed fitted Carla's family life and she has continued to grow her consultancy business, now working during school hours and in the evenings.

"I can still accomplish a full day's work, but not within the typical eight to five format. For me it is important to define 'working time' versus 'family time' and stick to this."

While being self-employed is not for everyone, Carla says it can be an ideal way to balance lifestyle and work. "Time management is a key requirement, as is business management. Building good relationships with your clients is imperative. It is important to put yourself in your client's shoes and think about how the service or product you provide will help their business create value."

She also advises finding a good accountant to ensure all the tax and financial requirements are met, if business management is not a strength. "If you are passionate about what you do and a self-employed business model aligns with your personal goals in life, then take the risk and do it. Horticulture, which is right up there in innovation and wonderful products, is full of inspiring people to support you."



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

# Farm Environment Plan update

*By 1 May 2021, commercial vegetable growers and those who grow annual crops are required to submit a Farm Environment Plan (FEP) to Gisborne District Council (GDC).*

By Ailsa Robertson

**GDC's definitions of 'commercial vegetable growing' and 'cropping' are in the Tairāwhiti Resource Management Plan (TRMP). 'Cropping' includes seed crops, but does not include perennial crops or orchard operations. See HortNZ's Gisborne FEP webpage for the definitions and more information.**

In late February, GDC formally recognised the New Zealand Good Agricultural Practice (NZGAP) Environment Management System (EMS) add-on as an acceptable pathway for growers to meet their FEP requirements in the TRMP, Appendix H20. HortNZ's environmental policy team and NZGAP are working with GDC on the details of this agreed approach.

The EMS add-on, available to all NZGAP certified growers, includes an FEP template and an audit checklist. Growers using the EMS add-on will be independently audited and can attain NZGAP certification for this add-on based on the audit outcome. Other resources on the NZGAP website include environmental Codes of Practice and regional guides, like the one for Gisborne (Tairāwhiti).

HortNZ and Vegetables New Zealand Incorporated (VNZI) have supported vegetable growers in Levin through the Farm Environment Plan process before, through technical workshops, and linking growers to experienced horticulture consultants. Both organisations are confident that their efforts in Gisborne will pay off for growers. Especially those who actively engage in the process and take ownership of their FEP and Action Plan.

As early as April 2021, the New Zealand government will release draft national regulations for Freshwater Farm Plans (also known as Farm Environment Plans). These mandatory and enforceable FEPs will apply to all horticulture operations that are five hectares or above. The regulation will include details such as where and when FEPs are required, who can audit and certify FEPs, and the content of those plans. HortNZ will lead the industry-wide submission, and provide opportunities for growers and affiliated organisations to have their say on the draft regulations. ●

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“

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# YOUR INDUSTRY

ACROSS THE SECTOR — ACROSS THE COUNTRY

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*Retaining  
traditions*

*Page 15*



*Karen Roche, Birchwood General Manager*



Friends Jude Kauika and Christine Simpson (with dog Izzy) are among the motorhomers in the Birchwood 'camp' for this kiwifruit harvest season



## Harvest traditions, family atmosphere preserved at Birchwood

*It's a modern facility, commissioned to pack Zespri's new red variety, as well as green and gold kiwifruit, yet Birchwood Packhouse at Katikati also retains the traditions and atmosphere of the industry's early harvest years.*

By Elaine Fisher

**That was very obvious during induction day in mid-March when seasonal staff greeted each other like long-lost friends - which in many ways they are.**

"The majority of our seasonal staff this year are returnees from previous seasons and some have been with us for a long time," says .

For Dean Gower, newly appointed to the Birchwood grower services role, induction day was amazing. "It was like Christmas or family reunions. It reminded me of my early days working in small family packhouses in the 1980s when everyone knew each other. That atmosphere is one of the reasons people keep coming back."



Karen says the "fun days" held occasionally through the packing season, when staff are encouraged to dress to theme, flexible working hours and shifts, the mobile-home campsite behind the packhouse and home baked food in the cafeteria all add to Birchwood's reputation as a great place to work.

"We don't have a problem filling our day and night shifts and have never employed Recognised Seasonal Employer (RSE) scheme workers. This year our shifts are over-subscribed thanks to the locals who return each year, and to our motorhomers."





*We are grateful that New Zealanders are so willing to help us pack this season's fruit*

We have people knocking on our door saying they have heard Birchwood is a good place to work."

The facility's relatively small size and Karen's own three decades of experience in the industry are among the reasons for Birchwood's family atmosphere and staff focus ethos, which is supported by its growers and board.

"My first season in the industry was in 1983 at Clark's Packhouse where Tony and Trish Clark were great employers who believed in working hard but having fun too. I think it's important to have happy engaged staff as without good staff, you don't have a post-harvest business," says Karen who has not missed a harvest season in 38 years.

By early March, the camp for motorhomes, all of which are self-contained, was filling up. Among those settling in were friends Jude Kauika who has been working at Birchwood each season since 2017, and her friend Christine Simpson and dog Izzy there for the first time.

“

**It was like Christmas or family reunions.**

The area between the women's campervans is paved and has a fence to keep Izzy in, and Christine has pots of lettuce and tomatoes growing by her door. They are well set up for the weeks ahead.

Birchwood runs two shifts each staffed by 60 people, from 6.45am to 4.15pm and from 5pm to 2.30am, and pays an extra \$1 an hour for nightshift.

"Some of our older staff and young mums don't work six days and often sort out between themselves who will work when, so our six-day roster is filled for us.

"As with last season, extra safety protocols around keeping everyone safe in the Covid-19 environment are in place.

“

**...without good staff, you don't have a post-harvest business.**

"We have implemented temperature checks, contact tracing, extra hygiene measures, and as well as normal cleaning procedures we also clean high contact areas regularly," says Karen.

Birchwood, which for the past five years has been contracted by Zespri to pack its Zespri Red fruit from pre-commercial trial blocks, began packing the variety in early March.

"It's a beautiful fruit which looks and tastes great but tends to be smaller in size than green or gold. Harvest began a week earlier than last year and once packed it is quickly shipped to market."





Photos on pages 14, 16 and 17 courtesy of Mark McKeown

Against the industry trend, Birchwood packs more green than gold fruit. This year it expects to handle in excess of 2 million trays, of which 60% will be green.

"This reflects our grower base, many of whom are smaller growers who have elected not to switch to the new gold variety," says Karen. The co-operative's grower numbers are expanding and for the first time it has leased offsite storage to meet demand. This season it will pack fruit for orchardists growing in the area from Te Puna to Paeroa and few from Whangarei.

"The fruit size is looking good this harvest which is great, especially for our Katikati and Waihi growers who suffered badly due to the droughts of the previous two seasons. Rain in late February and March has helped improve fruit size this season."

While Birchwood has no trouble filling its shifts, Karen says all post-harvest operators are missing the backpackers who added vitality and colour to the packhouse. "They brought a very international atmosphere and many friendships were formed during their time here. We always saved spaces for them. However, we are grateful that Kiwis have applied for positions and are so willing to help us pack this season's fruit." ●



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*Agriculture Minister, Damien O'Connor said that IYFV marks recognition of horticulture being in the spotlight*

## No food, no people

*Food security highlighted at the launch of the International Year of Fruits and Vegetables.*

By Hugh Chesterman : HortNZ

**The importance of food security and people having access to fresh and healthy fruit and vegetables was highlighted at the launch of the International Year of Fruits and Vegetables at Parliament on 10 March.**

"Access to fresh fruit and vegetables is essential for healthy people. What often gets forgotten is the vital role that the people who grow fruit and vegetables play in ensuring fresh fruit and vegetables are on the table," said HortNZ chief executive, Mike Chapman.

In 2019, the United Nations declared 2021 as the International Year of Fruits and Vegetables; which has become much more significant since Covid-19 struck the global food supply.

"Covid has shown us that we cannot rely on imports and has highlighted how lucky we are in New Zealand that we can grow most of our own food. We need to make sure that we protect this ability.

"But at the same time, fruit and vegetable growers are being asked to meet increasingly strict objectives for climate change and compliance in general, without the important role of feeding people being factored in.

"If New Zealand is to meet its climate change and economic goals, growers and farmers need to be empowered to adapt and reduce emissions.

"The Paris Accord clearly states that producing food while adapting to climate change is vital. No food, no people. As a country, we need to grow fruit and vegetables to feed ourselves and to export, to earn essential overseas revenue.

"Give our growers the tools, incentives and time, and we could lead the world in climate change adaptation and global food production. This will require significant research and development to find the tools and techniques needed to make a difference."





From left to right, Agriculture Minister Damien O'Connor speaking to Emma Boase (HortNZ), Lincoln Roper, Jack Keeys (KPMG), George Hyaiason (Massey Hort Society)



Mike Chapman spoke about the importance of investment in R&D if horticulture is to continue to thrive



### What does the International Year of Fruits and Vegetables mean?

HortNZ, along with partner organisations United Fresh, Plant & Food Research and 5+ A Day, will be using this United Nations initiative to promote the importance of fruit and vegetables for health and the economy.

United Fresh NZ will work to raise awareness and recognition of the nutritional benefits of consuming fruit and vegetables. The successful Fruit & Vegetables in Schools initiative will be highlighted along with the need to expand the initiative to reach more children in vulnerable communities. Consumption of fruit and vegetables will run consistently through 5+ A Day Charitable Trust promotions.

Plant & Food Research will be working to bring attention to the science and scientists working on enhancing New Zealand's fruit and vegetable sector. They will also share nutritional facts about key crops from the Food Composition database through collaborations with 5+ A Day and HortNZ. ●

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# Stormy Fruit

*Apples with cosmetic damage from Nelson's Boxing Day storm that would have ended up as wastage are being exported through Golden Bay Fruit's new brand, Stormy Fruit.*

By Anne Hardie

**About 30% of the company's apple crop including slight hail damage, russet and blemishes will fill about 200 containers this year to deliver to several countries seeking New Zealand fruit at a lower cost than Class 1 fruit. That's between 200,000 and 300,000 TCE (tray carton equivalents) of apples that would have had no value to growers and would have been a cost to remove from the trees.**

Golden Bay Fruit chief executive Heath Wilkins says the new brand has been a godsend after the hailstorm and though returns won't result in a profit, they will help recover the costs of growing the crop and stripping the damaged apples from the trees.

He says the company has been considering a Class 2 brand for years, then the Boxing Day hailstorm prompted the name and the incentive to quickly find customers who wanted the nutritional value of the fruit despite the cosmetic damage.

"In the Nelson region we usually get a good pack-out, but there's always about 10% of what you grow that is second class and it usually goes into juice or cattle feed.

"I've been working in the business since I was 20 and in the past 30 years I can remember a good five to six decent storms, but they are generally trending worse. After the hailstorm on Boxing Day a lot of fruit was lost over and above usual hailstorms. They are getting bigger and worse."

He says the closing of the juice factory last year was a double whammy with the Boxing Day hailstorm and the time was right to establish the Class 2 brand for the company. A number of hail-affected growers in the area are also benefiting from the new brand.

"We've had new growers come on board this year who saw the benefits of being able to manage their crop and have an outlet for their Class 2 crop."

For Golden Bay Fruit, the Stormy Fruit brand means it is achieving a pack-out of about 60% this year compared with the expected 30% after the hailstorm. The worst of the hail-damaged fruit was thinned from the trees onto the ground immediately after the Boxing Day storm. After that, it took time to judge the effect of the hailstorm on the remainder of the crop.



*Golden Bay Fruit Chief Executive Heath Wilkins with a carton of Stormy Fruit Royal Gala*

"Some of the orchards we thought were total write-offs and didn't see any hope of salvaging fruit. We thinned off 50-60% straight away and the rest we have actually picked and we're getting about 60% recovery with about 50:50 Stormy Fruit and export grade."

Defect-grading technology in Golden Bay Fruit's new packhouse in Motueka is being used to grade cosmetic-damaged fruit for the Stormy Fruit brand. It means the fruit is still good quality beneath its blemishes and Heath says it's enabling them to capture the nutritional value of the fruit rather than wasting it.

"If we can add value to something with nutritional value the same as Class 1 fruit and offer it to customers who may not be able to pay as much as Class 1 fruit, then that is a win-win situation. That's sustainability.

"We want this to be a brand known year-in and year-out, not just Class 2 fruit selling cheap."

He says they have full disclosure and partnership models with their customers for Stormy Fruit and the brand will carry on as part of the company's stable of brands. The brand covers a range of apple varieties and Heath hopes they will be able to sell significant volumes of fruit through the brand in future.

The Boxing Day hailstorm left a trail of destruction on orchards across the region and in particular around the Riwaka, Motueka and Lower Moutere area. Pipfruit, kiwifruit, hops and vineyards all suffered major crop losses and more than 400 insurance claims were lodged for about \$20m in total for loss and damage. ●



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# 'Courage under Covid' sprouts fresh new Freshie

By Kristine Walsh

*It is a sign of tumultuous times when Gisborne fruit marketers First Fresh include a new prize in their annual Freshies awards ... one for Courage Under Covid.*

**"The Covid-19 pandemic has certainly presented some challenges so we've been dedicated to working out what markets work best in this new space," says First Fresh managing director Ian Albers.**

"And the growers have been doing their bit, too, which is why we introduced this new award."

The first - and hopefully last - Courage Under Covid award went to Tessa Rodden for her management of her and husband Will's persimmon orchard under challenging conditions. Having decided to return home to Gisborne, the Roddens bought an orchard and began the process of learning how to grow their new crops - Tessa based at home while Will worked offshore, with plans to have all hands on deck in time for the persimmon harvest.

"But a worldwide pandemic sent their plans out the window, long stays in managed isolation while traversing two countries being the new order of the day," Ian said.

"At crunch time they were down to one, and for her first harvest Tessa had a real baptism of fire, dealing with harvesting crews, packaging, weather, tractor and forklift operation - even just learning how to strap a pallet onto the truck - all while moving into a new property and being a mum to three kids.

"It was an impressive feat but she took it all in her stride, and with some guidance from family and friends, got the job done."

Also in the category of unconventional prizes was the Ducks In A Row award that went to Muriwai citrus grower Bruce McLelland, who Ian says is so organised he makes everyone else's life easier.

"Although relatively new to horticulture, Bruce has in a short space of time made a huge difference in the quality of the fruit from the orchard he bought. He certainly has all of his 'ducks in a row'."

The Supreme Award winners for the 2020 season, however, were Ormond citrus growers Jason and Hannah Galloway, who had already picked up category awards for their Encore mandarins and Meyer lemons.



Photo by Strike Photography

*Freshies MC and guest speaker Al Brown (left) and First Fresh Managing Director Ian Albers present Tessa Rodden with her Courage Under Covid award*

They were presented with the Freshies Trophy by chef, author and restaurant owner Al Brown, who Ian says was a popular choice for MC and guest speaker.

"That wasn't just because of his knowledge of the food industry, he just has a fantastic way of connecting with everyone he comes across. He even helped pack down the chairs after the event."

The awards ceremony has bounced around venues over the years but Ian says using the NZ Fruits packhouse - with a bit of titivating - is working a treat.

"It just seems relevant and in context and our guests really enjoy being there," he says. "But, of course, we glam it up a bit!"

Founded as an extension to First Fresh's LRA (Loyalty Recognition Agreements) strategy, the Freshies celebrate the achievements of grower suppliers over the previous 12 months, and acknowledge those who achieve outstanding performance across a range of citrus, kiwifruit and persimmons.

"We have an amazing bunch of dedicated loyal growers who we love working with," Ian Albers says. "This event is our way of saying thank you."

## 2021 Freshies winners

🏆 Satsuma - John and Sophia Ross 🏆 Persimmon - Rick and Carol Thorpe 🏆 Meyer Lemon - Jason and Hannah Galloway 🏆 Yen Ben Lemon - Andrew and Delise Ellmers 🏆 Grapefruit - Clive and Amanda Lewis 🏆 Encore - Jason and Hannah Galloway 🏆 Lime - Clive and Amanda Lewis 🏆 Tangelo - Charlie and Vivienne Mills 🏆 Navel Orange - Murray and Wendy Burgess 🏆 Valencia Orange - Steve and Kim McHardy 🏆 Green Kiwifruit - Michelle, Tim and Stephanie Brownlie 🏆 Gold Kiwifruit - Blake and Fraser Briant 🏆 Courage Under Covid - Tessa Rodden 🏆 Service Provider - Dave Wilson (Harvest Transport) 🏆 Young Grower of the Year - Ben and Steph Millward 🏆 Export Grower of the Year - John Honey 🏆 Most Improved - Doug and Campbell Crisp 🏆 Ducks in a Row - Bruce McLelland 🏆 Outstanding Contribution - Bruce Van Dorp 🏆 Supreme Award (Freshies Trophy) - Jason and Hannah Galloway. ●



## Send us your nominations for the

# 2021 Horticulture Industry Awards

HortNZ is calling for nominations for its 2021 Awards to be presented at the Horticulture Conference Gala Dinner.

HortNZ will present up to one award in each of the following categories each year.

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### **INDUSTRY SERVICE AWARD**

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### **ENVIRONMENTAL AWARD**

To recognise a person, or organisation, that has developed and implemented a sustainable environmental project, with identifiable benefits.

### **HORTNZ LIFE MEMBER**

To recognise growers with long and dedicated service as office holders of HortNZ and/or an affiliated Product Group or affiliated Grower Association.

*Full criteria for the above awards are available on the Horticulture New Zealand website or can be requested from the Board Secretary.*

### **Who can make nominations?**

- Any grower member of HortNZ, an affiliated Product Group or an affiliated Grower Association can make nominations.

### **How do I nominate someone?**

- Complete a nomination form. These are available on our website [www.hortnz.co.nz](http://www.hortnz.co.nz) or by contacting HortNZ by calling 04 494 9983 or emailing Board Secretary, Kerry Norman ([Kerry.Norman@hortnz.co.nz](mailto:Kerry.Norman@hortnz.co.nz))

### **When will the awards be presented?**

- At the 2021 Horticulture Conference Gala Dinner on Thursday 5 August at Mystery Creek, Hamilton.

### **When do nominations close?**

- Nominations must be sent to the HortNZ Board Secretary, Kerry Norman ([Kerry.Norman@hortnz.co.nz](mailto:Kerry.Norman@hortnz.co.nz)) or PO Box 10232, The Terrace, Wellington 6143 and must be received by **5.00pm on Tuesday, 8 June 2021.**

**Send us your  
nominations now!**



*Freshies Trophy winner, Jason Galloway, says he is sticking with citrus "one hundred percent"*

*Photo by Strike Photography*

## Grower burns a path to Ormond orchard

*Jason Galloway and his family have some of the most famous faces you have ever seen. As poster growers for Gisborne fruit marketing company First Fresh, Jason – along with wife Hannah and their two children Millie and Holly – have in recent years graced billboards in Japan and China, being seen by millions of pairs of eyes.*

By Kristine Walsh

**"It is a weird feeling to see your giant picture looming over a street on the other side of the world," Jason says. "It's certainly not something we thought about when we got into growing!"**

What the Galloways did think about when they bought their patch of sunny, fertile Ormond soil was that if they were going to grow citrus, they were going to grow it well.

That determination saw them named the Supreme Winners – along with winning category awards for Meyer lemons and Encore mandarins – at this year's First Fresh awards event, fondly known as "the Freshies."

And First Fresh managing director Ian Albers says all their awards were well deserved.



"Because Jason grows a number of varieties across the citrus spectrum he is engaged with us across our team so there are lots of touch-points where we work together," he says.

"Possibly the best thing about the Galloways is how proactive they are, and how diligent in terms of always looking to better their performance in improving yields and quality.

"Jason does a lot of work in figuring out what works and what doesn't. He's always been very open to new ideas, seeking advice and acting on it in a timely manner."

And never mind the Galloways' starring role in First Fresh's international marketing ... they work together in other areas, too.

For example, dotted among the patchwork of Jason's immaculately maintained plantings of traditional oranges, mandarins, lemons and limes are experimental crops being trialled for both performance and budwood.

Then there's Jason's own baby, fresh plantings of finger limes he is optimistic will find their place in the market.

"My approach when thinking about planting something new is to focus on whether it can be successfully exported," he says. "That is my preferred market so it is always at the front of my mind."

He sounds like an old hand but Jason's path into running his Alchemy Orchard has been somewhat unconventional.

Born in Napier, he did work in the apple industry for a while but by his mid-20s had headed to Canterbury to train as a firefighter, a career he stuck with for over 25 years, until mid-2019 when he stepped down to focus on the orchard.

Before settling in as a senior firefighter at Gisborne Fire Station, however, he got around a bit, including a pre-millennium stint in Palmerston North where he met a smart, attractive young English woman ... Hannah.

Then when Hannah headed home at the end of her gap year Jason soon washed up nearby, working in Birmingham while she studied in London, over 200 kilometres away.

Having decided that New Zealand would be their home, in 2004 Jason headed to Gisborne and got established, then took six months leave to live in the United Kingdom so the couple could be married there with Hannah's family around them.

"But before we came back we already knew what we were going to do," he says. "We'd seen this orchard on the internet and within a few months had been able to buy it."

Both the orchard and the house that came with it were in need of attention so that became Jason's labour of love, while simultaneously working as a firefighter.

"It was actually a bit of a godsend in giving me something to do on those days off between shifts," he says. "It fitted in with my work schedule, and turned out to be something I really love doing."

To build on that passion, Jason has expanded the area he has to work with by adding to his original six hectares - in 2014 he acquired another five hectares directly across the road (planted in Meyer lemons and Encore mandarins), then just two years ago bolted on the four hectares of oranges and tangelos that became available right next door. With Hannah in full-time work as a dentist the orchard is predominantly Jason's domain - with the rest of the family helping out when they can and contract workers on call for the big jobs.

"Because of our close relationship with our contractor we've never had problems with getting labour," Jason says.

"It doesn't take long to learn that if you treat people well, they treat you well in return, so an award like the Freshies Trophy is really a big win for everyone involved."

And regardless of how many varieties he decides to work with, Jason says he is sticking with citrus "one hundred percent".

"For us it has been a great industry that has been pretty stable, without the massive highs and lows of some other product groups," he says.

"And since we joined up with First Fresh more than seven years ago, we have come along in leaps and bounds.

"Like any business, it is the people in it that make all the difference and we have been lucky enough to surround ourselves with some really, really good people." ●

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A mobile platform has been developed by T&G to harvest apples grown on a 2D system at their Ebbett Orchard, Moteo in Hawke's Bay

## Die cast for this season: prepare for next

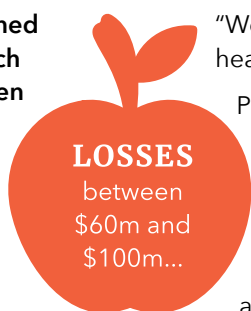
*The horticulture industry needs to start planning for next season to avoid a repeat of the disaster that is unfolding on Hawke's Bay apple orchards, NZ Apples and Pears Chief Executive Alan Pollard believes.*

By Rose Mannering

**Apples are being left on the trees, as a diminished labour force is unable to keep up with the march of apple maturity. A number of blocks have been sacrificed, including Royal Gala.**

The harvest is unfolding exactly as predicted when the government announced only 2,000 Recognised Seasonal Employment (RSE) workers would be able to enter New Zealand for the harvest. "It is sad that a catastrophe is needed to prove our predictions right," Alan says.

Instead of multiple picks to ensure top quality, smaller growers are just doing one pick, and just leaving it for the packhouse to sort. "We expect somewhere between 15% and 20% of the crop may not be harvested, with losses between \$60 million and \$100 million just on volume," he says.



"We have increasing concerns for grower mental health and well-being."

Prime Minister Jacinda Ardern and other key Ministers were in Hawke's Bay in early March for the Five Leaders Forum. They visited Taylor Corporation's impressive innovation in the packing shed. But Alan says there is no immediate transformational technology on the orchard, with automated pickers still 10 to 15 years away.

New 2D growing systems are ready for this new technology but it is not here yet.

"We cannot sustain another season like this - we need to be thinking about that now. It is critical that we reconsider how a sizeable Pacific workforce can come back to New Zealand for next season. This should include a programme to create a vaccinated mobile Pacific workforce."

Late last year, Hastings District Council, supported by NZ Apples and Pears, proposed a privately owned but government managed facility in Hastings to be used as an isolation facility for the movement of workers from Covid-free countries like Samoa and Vanuatu coming in for the harvest. This was rejected at that time.

### RSE shifted to Australia

Instead, Vanuatu workers have been recruited by Australian industries, some offering three-year working visa contracts. "Our government's health response, successful as it has been, has come at some cost," he says.

The industry could lose \$200-300 million, which could mean a more than \$600 million effect on the Hawke's Bay economy. The pipfruit industry provides 2,500 to 3,000 permanent jobs in Hawke's Bay, and in a broader sense 8,000 jobs. "The consequences are dire if we cannot continue our growth path."

"We can only be part of the post-Covid recovery if we are supported by government policy settings; It is a sad state of affairs."

Yummy Fruit general manager Paul Paynter is also feeling the pinch on his family orchard holdings, describing the impending picking of late varieties as a "train wreck".

Getting through the Royal Gala hump was difficult enough, but the clash of late varieties Pacific Rose, Fuji, Pink Lady, and Envy in late March and early April will be the hardest.

Staff turnover has also been big, as inexperienced pickers find the task too difficult. His experienced pickers are making more than \$30 an hour, picking six bins a day. Paul was holding great hope for a "student army" to help out on the weekends, but this did not eventuate.

On the bright side, an earlier season and a smaller crop were helpful.

"The industry has had 10 years of solid growth, but this year export receipts will drop."

Competing for labour has once again reared its ugly head, with growers taking unprecedented steps to entice workers to their business. Rockit Apples has upset the labour market with offers of \$130 per bin. Inexperienced pickers flock to this promise, unaware they may only pick two bins.

Due to the tiny 65-gram size of the apple they need 6,000 apples per bin rather than the 2,000 on a conventional orchard.

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*One of the few levers growers have is the cheque book, but this is not sustainable*

"The RSE scheme has been a reliable multi-year policy; it has allowed investment in worker accommodation, and in the orchard business as a whole."

Bruce Mackay, Heinz Wattie's ag manager Hastings, says his business has been lucky timing wise, with most of their crops ahead of the demand for apples. Golden Queens clashed with Royal Gala and growers struggled, but for the most part quotas have been filled. However, beetroot and tomato crops were harvested in less-than-ideal conditions to make way for the summerfruit harvest.

Finding staff for the factory has been a big struggle. This has been particularly impacted by lack of seasonal work visa holders. "People are just not here; if borders are opened it will be remedied. We need to change to survive in the coming years," he says.

“

## We need to change to survive in the coming years

He too commented on the "arms race" as mainly corporate businesses took further and outlandish steps to get their crops harvested and packed, with some packers paying \$28 an hour. Bonuses are being paid for people who turn up to work, over and above the many Ministry of Social Development incentives. It is particularly hard for new players, and labour contractors are grossly over-committed.

Bruce questions whether crops will be pulled out because of the harvest labour shock. "Producers are facing decisions based on this harvest. The government has no interesting in solving these issues; they are not going to help us."

The only lever growers have is the cheque book, but this is not sustainable. "We have been planning for this, we will get through; our industry is in a different position, we are a high volume/low value producer. We are an important part of the whole food chain; when food is not fresh, we are there. The only option is to import from overseas; that is the playing field we compete on."

## Retrenching

Crystal Road orchardist Leon Stallard says he has never seen anything like it – a big player is offering \$400 worth of Lotto tickets weekly. More people are needed to do the same job, it is far less efficient. "Some of the slower pickers would be better deployed on a packing line, but that is just not an option this year."

Leon is hopeful as the Rockit harvest draws to a close, more pickers will become available for other growers. "Rockit has been offering \$130 a bin, but tiny apples, pickers only pick two bins a day; I offer \$45 a bin, but with bigger apples, pickers can manage six bins a day." Other growers are paying up to \$60 a bin.

Growers have been using chemicals to move maturity forward and back to spread the harvest to get the fruit off. "I have talked to growers like me who are stressed; they are not sleeping. Their entire income relies on getting this fruit off, it is their only opportunity to pay everyone."

It is a like a big step back in time, back to before the RSE scheme was introduced, he says.

"A lot of smaller growers like me, we are going to consolidate our holdings. I am dropping lease blocks; the stance taken by the government has put us in this position. When are our borders going to re-open, I can't see that happening in 12 months?"

There will be major decisions for each operator to make. "The government doesn't care; they are not helping out Nelson growers hit by hailstorms."

Government decisions were based on high unemployment levels that did not eventuate. Industry commentators say at least 10,000 more RSE workers are needed; businesses have been hit by the massive Managed Isolation and Quarantine (MIQ) costs, with estimates of the cost of each RSE worker varying from \$5,200 to \$7,800 before a single apple is picked.



### Envy Army

T&G Global have been throwing everything at finding enough workers for harvest. Their tactics include adding in automation, with a picking platform operating in their 2D orchards, their biggest recruiting campaign ever – FRESHWORX targeting students, school leavers and sports clubs, and now even asking office staff to moonlight the late shift on the packing line as they prepare for their late season flagship variety Envy.

Corporate communications manager Belinda Abernethy says office staff have been asked to help, either working a few hours each day, on the weekends, bringing along family members or even taking a week or two off from their office job.

"We're calling it the 'Envy Army'. Envy is our internationally popular premium apple loved by United States and Asian consumers and it is important everything gets picked," she says. Belinda says global demand for New Zealand apples is strong; markets in Europe and the United Kingdom are low on stock and are eager for New Zealand apples to arrive.

“

**...global demand for New Zealand apples is strong**

Asia is also looking good with strong demand and low stock of northern hemisphere fruit exports, good news for southern hemisphere fruit. "Our new early ripening brand Poppi has been well received in China.

Although fruit is moving through shipping channels, there has been congestion at Asian ports, particularly Singapore and China. Early shipments have arrived in markets mostly on time.

### Labour is tough

Hawke's Bay Fruitgrowers' Association president Richard Pentreath says on his corporate kiwifruit orchard he has been into the Ministry of Social Development (MSD) to interview 14 candidates, six turned up and four started work.

"MSD incentives have been positive, but they have a very low level of uptake." Most of the initiatives existed prior to the pandemic but have been boosted to find more workers for harvest. MSD group general manager, employment, Jayne Russell, says 2,631 people have come off the benefit to go into all seasonal work, up 285 on the same period last year.

MSD's primary vehicle for attracting seasonal workers is Work the Seasons, attracting 500 applications for work. Other initiatives include \$5k to Work, an incentive payment to move to another region to pick. Similarly, the New Zealand Seasonal Work Scheme helps people to relocate; as of 28 February, 93 people had started work through the scheme. Topping up pay interrupted by rain, and other long-term work options are also offered. ●

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NZKGI Labour Coordinator Gavin Stagg distributes information on picking and packing to backpacker accommodation

## Optimistic start to record kiwifruit harvest

*The devastating hailstorms in Motueka in January, fewer overseas seasonal workers, continuing strict Covid-19 protocols and lockdown uncertainties at the beginning of the 2021 kiwifruit harvest have not dented the industry's optimism for a record-breaking crop.*

By Elaine Fisher

**Nikki Johnson, chief executive of New Zealand Kiwifruit Growers Inc (NZKGI), says the lead-up to harvest has been a mixed bag for growers. "This year has been devastating for a small number of growers whose crops in Motueka and other isolated areas were hit by hail.**

"On the other hand, the season is shaping up to produce high quality kiwifruit which means consumers can anticipate a great tasting product coming to supermarket shelves."

Consumers can also look forward to Zespri's sweet, berry-tinged-tasting red kiwifruit which will be on supermarket shelves in New Zealand and some overseas markets this year.

Carol Ward, Zespri's chief grower, industry and sustainability officer, says the wider kiwifruit industry's ability to adapt and work closely together last season meant it could

safely pick, pack and ship a record-breaking crop of fruit, and she expects the 2021 season to be no different.

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**Almost all packhouses will be paying at least the living wage of \$22.10 per hour.**

This season, which began on March 4 with the first fruit picked in Gisborne, is forecast to overtake last year's record of 157 million trays of export green and gold. On average, each tray has around 30 pieces of kiwifruit. The gold variety is usually picked first, followed by green kiwifruit in late March. Harvest peaks in mid-April and runs through until June.



The industry needs around 23,000 seasonal workers, about 20,000 in the Bay of Plenty. Almost all packhouses will be paying at least the living wage of \$22.10 per hour. Kiwifruit picking is also expected to exceed the living wage, with an average of \$24 per hour paid last year when the minimum wage was \$18.90 per hour.

NZKGI is working closely with government departments to ensure unemployed Kiwis are aware of the seasonal and permanent jobs available within the industry.

"This year NZKGI is working closely with the Ministry of Social Development (MSD) and the Ministry for Primary Industries (MPI) and we're thrilled to have their support behind us," says Nikki.

"They are creating some excellent initiatives, events and marketing to get the messages around kiwifruit work opportunities to those seeking employment, such as with the MPI Opportunity Grows Here campaign - and it's not just about seasonal work. Kiwifruit offers long-term and permanent career opportunities in our leading horticultural sector."

Another initiative to attract staff is the NZKGI led and MPI funded harvest courses which offer a free taster day to encourage job seekers to take up employment in the kiwifruit industry. The courses follow NZKGI's successful winter pruning and summer-work taster programmes in 2020 and are rolling out throughout the start of harvest. NZKGI is also offering post-harvest businesses the opportunity to host a taster course.

In mid-March, Nikki said it was too early to tell if marketing by both the industry and government agencies to attract seasonal labour had been successful.

"Despite the increase in volume of kiwifruit to be picked and packed this year and the reduction in Recognised Seasonal Employer scheme workers and backpackers available to assist, we are hopeful that enough New Zealanders will join the industry to fill seasonal positions.

"The increased media coverage of the need for seasonal workers, combined with early recruitment campaigns from kiwifruit employers advertising for seasonal workers, will have contributed to recruitment. However, the extent of labour supply will not be understood until harvest commences."

As it did last season, Covid-19 is also having an impact on industry operations and Nikki says the health and safety of people working in the kiwifruit industry is top priority.

"The industry has put stringent protocols in place for the different alert levels to protect workers and ultimately communities from Covid-19, as well as to ensure food safety and market access."

And just to add another twist, as harvest was about to begin, a series of three powerful offshore earthquakes triggered a tsunami warning and evacuations of coastal regions on the North Island's east coast, including Gisborne. However, Nikki says NZKGI did not receive any reports of significant disruption to the industry as a result of the tsunami warnings on 5 March.



People interested in participating in this year's harvest can find vacancies on NZKGI's Facebook page **KiwifruitJobsNZ**. For more information on the different jobs and worker rights, visit the NZKGI website [www.NZKGI.org.nz](http://www.NZKGI.org.nz). ●

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# How one competition has changed the future for this budding horticulturist

*Studying for a Bachelor of Agriscience majoring in horticulture at Massey University helped fuel Regan Judd's passion for horticulture, but taking out the Hawke's Bay Young Fruit Grower of the Year Competition in 2019 has given Regan a lot more than he expected.*

With the 2020 competition cancelled due to Covid-19, Regan Judd has offered his advice to those thinking about entering June's competition – 'just do it!'

Hawke's Bay is the home for two-thirds of New Zealand's apple and pear production, so it's not surprising that the region's Young Fruit Grower competition has traditionally attracted its fair proportion of pipfruit contestants.

The competition run by the Hawke's Bay Fruitgrowers' Association (HBFA) is now in its 16<sup>th</sup> year.

"At the time there was an obvious gap in the industry to support and encourage the development of young horticulturists," says Leon Stallard, past president of HBFA (2005–2014). "So I came up with the Young Fruit Grower concept, twisted a few arms and here we are 16 years on. It's just incredible to see the competition running nationwide and recognised as a very successful framework to identify and develop our future leaders."

"We had 60 or so people turn up to watch the first competition at Pernel Café back in 2005 – most were ring-in's!" Leon says. "There was little planning, or more rightly as we said back then 'what happens is the plan!'"

With the event growing in popularity every year, the Association starts planning for it five months out, with the final eight spaces strongly contested and an awards dinner that sells out well in advance.



*Hawke's Bay Young Fruit Grower of the Year Competition in action*

"Horticulture is a growth industry and there are endless career options if individuals do the mahi, are determined and want to succeed," says HBFA president, Richard Pentreath.

“

**Horticulture is a growth industry and there are endless career options if individuals do the mahi...**

"Regan and previous contestants are exactly the kind of people our industry needs and it's great that we can provide them with a platform to showcase their talent."

Regan entered the competition in 2019 to give himself the opportunity to meet other like-minded people and to test his skills and knowledge.

"The competition showed me where my strengths were, and what I needed to work on. But the biggest takeaway was the connections I made throughout the local industry, connections that will no doubt influence me as I continue my career."

It's a great environment to meet new people and learn new things. Both through the competition and through the new connections you make along the way. It is an extremely rewarding experience, one that will open doors to create a great future for you in the horticulture industry," says Regan.

The competition runs in conjunction with the National Horticultural Fielddays and provides businesses with an opportunity to identify emerging talent.

Eight contestants are tested on a range of theoretical and practical challenges on the first day of activities, and then deliver a speech at the awards dinner the following night. The winner goes on to represent Hawke's Bay at the Young Grower of the Year final later in the year.

"The Young Grower competitions helped me to appreciate just how exciting our industry is," Regan says.

"The opportunity to get to know other young growers from across the country has helped me to understand why I do what I do and made me enjoy it even more.

"Winning the title also gave me the opportunity to join the Executive International Horticultural Immersion Programme where we travelled to Europe in early 2020. It opened up my eyes to horticultural practises on the other side of the world. The influence all this has had on my career is massive, it has provided me with a great path to grow my knowledge and to step up in an exciting industry."

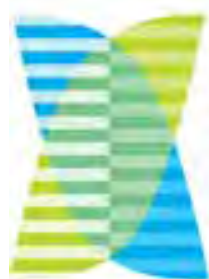
Two years on and it's time to hand over the silverware. What's Regan Judd's advice? Just do it! ●



*The National Horticultural Fielddays always draw a large crowd*



The Hawke's Bay Young Fruit Grower of the Year Competition entries close on **30 April**. For more information and to complete the application form online: <https://hbfa.co.nz/yfoty-contestant-entry-form-2021/>



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# From unemployment to a great career



## Jason Hogarth

The quest for a job in February 2019 led the then 23-year-old unemployed Nelsonian, Jason Hogarth, to a seasonal job at Heartland Group in Richmond. "I never thought I'd be this far already (in my career). I love the challenge of trying different things." Jason was quickly noticed and encouraged to develop his skills, progressing to backup forklift operator. "I like being around a good group of people and working with people every day," he explains.

Jason has a great attitude and loves his seasonal role, so the company saw real potential in him which led to a full-time permanent role. He was reliable from day one and has a positive attitude and being a great team player, he fitted well with the company's values. Heartland Group like to provide staff training and development opportunities and Jason has taken every opportunity given to him. He can cover a number of roles within the packhouse operation including documenting some product lines using a newly introduced inventory management system.



## Sepi Lokotui

Heartland Group has a culture where their workplace values of quality, trust, drive, honesty and teamwork are paramount. Packhouse supervisor Sepi Lokotui, originally from Tonga, won a ballot for New Zealand residency in June 2012, five years after her first Recognised Seasonal Employer (RSE) scheme trip to New Zealand to work at Heartland Fruit.

"I was shocked when I got a phone call in June 2012 to say I had been selected for New Zealand residency," Sepi says. Ballots are rare, and she explains, "I love the people here: I love apples and people." Sepi has completed front line leadership, first aid and phytosanitary/quality control training, progressing from packer to a production line leader. Heartland Group says, "Sepi relates so well to staff and always displays a positive and friendly approach to both people and production demands. She enjoys a challenge, and nothing is ever a problem."

**Heartland Group** packs apples year-round and is now well into their busy harvest season. A strength is their respectful family environment, commitment to training their staff and ensuring there is always someone being provided with development opportunities.



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### Aaron Webby

Between jobs at the time, Aaron Webby joined the team at Heartland Group six years ago and has had a steady development progression learning a number of key tasks within the company's packhouse and coolstore operations.

Aaron says "I have enjoyed the opportunities given to me, particularly over the last couple of years, and the industry has a lot to offer those who are willing to put the effort in."

A challenge doesn't daunt Aaron and he has consistently been open and willing to take advantage of the many opportunities that have come his way within the business. A particular standout was his positive approach to learning a new inventory management system that the company introduced during 2020. Aaron progressed to a production line leader during the busiest time of the year for the company, and outside of the peak demands he assists with other key areas of the packing and coolstore operations.



To find out about a new career in horticulture go to [www.gohorticulture.co.nz](http://www.gohorticulture.co.nz) or email [hortnzcareersnelson@outlook.co.nz](mailto:hortnzcareersnelson@outlook.co.nz). ●

# Kiwifruit worker sows the seeds to a growing career

*Stacey Marino is a perfect example of how finding your ideal career can materialise when you least expect it.*

By Casey Vassallo

**The 38-year-old mother of three from the Eastern Bay of Plenty area is a full-time orchard supervisor. But she's worked her way up the kiwifruit ladder, starting as a seasonal kiwifruit contractor and upskilling herself along the way.**

Prior to working in the industry, Stacey was an apprentice chef at a restaurant in Paengaroa, and before that was working as a wool handler at Mt Ida Shearing in Central Otago. However, it wasn't until she was living in Te Puke in 2015 that kiwifruit caught her eye.

"I kept getting asked if I worked in kiwifruit because you can't live in Te Puke and not have worked in the industry," Stacey laughs. "So, I thought I'd go into the packhouse and see what it was like. I loved it, and it grew from there."

Starting as a packer, Stacey quickly grew fond of the variety of jobs on offer and the diverse people she was getting to work alongside.

"I love the way so many cultures end up working in the kiwifruit industry," she says. "You get to learn about where they're from, their countries and a little bit of their language too."

In her first season, Stacey went from packing to grading the kiwifruit.

"Then I was asked if I wanted to stay on when the kiwifruit season finished, so I did the re-pack season, going back through all the pallets and checking over the fruit before it ships out," she says.

"The following season, I got asked to be a packaging supervisor, teaching others the skills I learnt in packing and grading."



Stacey Marino, Orchard Supervisor

Stacey initially thought working in the kiwifruit business would be a linear job. Yet, she says she's been pleasantly surprised by the work, support and growth the industry offers.

“

**...she's been pleasantly surprised by the work, support and growth the industry offers.**

"I honestly never thought I'd rise that fast within the packhouse. The industry has an array of jobs and so many areas to branch off in, whether it's in the packhouse or the orchard."

Curious and eager to learn the ropes, Stacey headed outside to the orchard the following season to try her hand at fruit thinning.

"I decided I loved it more than being in the packhouse because I enjoy being outdoors," Stacey says. That was two years ago.

Along the way, Stacey has taken the initiative to develop her skills and further her on-the-job training with a Level 3 certificate in horticulture at the Open Polytechnic. She's also about to start her Level 4 in horticulture production at Toi Ohomai Institute of Technology, and recently completed a winter pruning course, a five-day initiative developed by New Zealand Kiwifruit Growers Incorporated and funded by the Ministry for Primary Industries.



"Winter pruning is a tricky task because you've got to make sure you're picking the right canes and don't cut too much. It's one of the hardest things to pick up in the kiwifruit orchards," she says. "Growers don't take just anyone on for the job because it's high risk and you can do a lot of damage to the crop."

By attending the course, Stacey learnt how to prune and what to look for. "It gave me a piece of orchard production that I was missing," she says. "I've gained a lot of confidence from the course and recommended it to a lot of people."

It was during the programme that Stacey got chatting with a worker from Kiwifruit Investments. Encouraged by the positive feedback, she met with the kiwifruit management company, and another door opened.

Today, Stacey works as an orchard supervisor for Kiwifruit Investments, despite having a fear of bugs.

"I heard rumours it was hard work, and it is, but with good techniques and training it makes the job a lot easier."

"Even though I'm getting older, I'm always upskilling, going forward, learning and being rewarded for it," she says.

"Supervisors and managers will spot you out and advance you. They put a lot into helping people, and giving them different skills and areas to work in."

While her mentors help her, Stacey supervises 12 to 18 workers, including backpackers, New Zealanders and Recognised Seasonal Employer (RSE) scheme workers from the Pacific Islands.

Stacey's 17-year-old son is currently part of her team, earning some money over summer before heading off to study at the polytechnic himself.

"I work with so many different people and help them find their talent. If there's an area in the kiwifruit industry that I can help them go into then I'll speak to somebody who can get them into things like forklift driving or the laboratories," Stacey says. "Watching somebody learn and love the job is the most rewarding."

“

**Watching somebody learn and love the job is the most rewarding.**

For Stacey, it's every part of the job that gets her motivated for work every day.

"I really enjoy the work because it's always changing, and I enjoy teaching people," she says. "I love learning new things, and the industry is always evolving." ●

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Cosy Cat Orchard owners Christine Herbert (left) and Diana Pearce

## Cosy Cat Orchard

*Trading the city life for a lifestyle block in the Bay of Plenty has been the best move for first-time orchardists Christine Herbert and Diana Pearce.*

By Helena O'Neill

**Christine wanted a change from the corporate life after many years working in the public transport sector and set about convincing partner Diana that life on the land was the way to go.**

"It's something completely different for us. I'd always thought that I would like to do something horticultural, or something on the land with a lifestyle block or something. My job was to convince Diana that she wanted to do that too."

While researching what they wanted to grow, the pair visited a passionfruit orchard at Katikati and fell in love with the idea of growing the fruit.

"They had a few redeeming features about them: the fruit dropped on the ground, they grew on six-foot structures so you didn't need ladders, they didn't have thorns, they didn't have complicated after-harvest processing like macadamias."

The couple decided to take a chance and grow their passionfruit under cover, Diana says.



"We took a bit of a gamble with how we are growing them, we didn't go down the traditional route of growing them under hail cloth. We're growing them under high crop tunnels so they're sort of half inside and half outside. We did that with the hope of growing good quality."

She says the tunnels reduce fungal diseases while allowing them to have a more controlled environment for the vines.

"They seem to really love growing under the tunnels."

“

**...the tunnels reduce fungal diseases while allowing them to have a more controlled environment for the vines.**

They bought the 1.1-hectare Whakamarama property in 2018 and set about building a passionfruit orchard the following year. About 0.8 hectares is plantable land and they now have 460 vines planted on 0.2 hectares.

"We started the project in March with a land clearing exercise - we had old infrastructure on the property that needed to be removed, like old kiwifruit posts and sheep fencing and sheep pens. We cleared the land, tilled it, resowed it and waited for the grass to grow," Christine says.

They then got the tunnels and other infrastructure built before planting in November and December.

Cosy Cat Orchard's first fruiting season began mid-January this year. The majority of the fruit is exported to the United States, with the rest sold at the orchard gate or online.

While Diana works as a nurse four days a week, Christine spends her day in the orchard picking passionfruit.

"We're not actually processing them on-site, and that's another variation to what a normal grower would do. They would process them - washing, grading, packing, and sending them away. We hooked into another grower that's doing the packing. That's been a big help to us."

“

**We hooked into another grower that's doing the packing. That's been a big help to us.**

Christine spent a year studying for a Certificate in Horticulture (Level 3), strand in Fruit Production from Toi Ohomai. While very focused on kiwifruit, the course updated her horticulture knowledge from school certificate learning in the 1980s.

Despite being a new orchardist, Christine has also ended up as secretary for the New Zealand Passionfruit Growers Association. She says it's a great way to build connections



within the industry while also learning more about fruit and growing practices.

The national lockdown didn't affect the orchard too much as the young vines were in the growing phase and the couple was able to get the supplies they needed to keep things running.

"We were lucky that horticulture was considered an essential industry ... we weren't too inhibited getting supplies. The worst that we did was create our own café because we couldn't go out," Christine says.

The couple cares for Diana's 87-year-old father who suffers from dementia. The home café was a great way to keep things more normal for her dad, Diana says.

"With his dementia, he liked to go out for lunches, and because we couldn't go out we take him for a little drive up the road and back again. We would have 'Cosy Cat Café' set up and one of us would be the cook and waitress, you would choose what you would want off the menu. It worked really well and gave us a bit of entertainment."

And as for the unusual name for the orchard?

"It's a family business name. My mum and dad opened the first bed and breakfast in Whitianga in 1987. My mother was absolutely cat crazy and the bed and breakfast was called Cosy Cat Cottage," Diana says.

"It just seemed like something we wanted to honour really, so we decided to call it the Cosy Cat Orchard." ●

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# Industry stability makes automation viable

*The stability of the New Zealand kiwifruit industry, the scarcity of labour and a philosophy of being cutting edge are among the reasons EastPack has invested \$35 million in automation for its Washer Road post-harvest facility in Te Puke.*

By Elaine Fisher

**The 'green button' on the facility's automated 14-lane grader was activated in mid-March, increasing its through-put by 50% and reducing staff by 25%, says chief executive Hamish Simson.**

"This is a bit of a poster child for EastPack and is the result of three to four years of research and development with our design partners."

Such an investment is only possible in a stable industry. "The stability of the single marketer (Zespri) with a good broad view of the market plus the predictability that it takes a few years for orchard production to come on stream, provides that confidence."

Stability, however, is lacking in terms of labour availability. "Labour scarcity is a profound structural issue, exacerbated by the closed borders, but long-term labour shortages are still a structural issue. Investing in automation is not just about competitive advantage and efficiencies but also about addressing this long-term structural issue. It's something you have to be persistent at, as solutions take years."

Automation of its biggest grader means fewer staff to pack a percentage of the 45 million trays the company expects to handle this season, but it still requires 3,200 seasonal packers at the peak of the harvest across its six sites.

To innovate requires an appetite for risk, Hamish says. "EastPack has a culture based around core values, one of which is to be cutting edge, so everyone from the board down is open to the prospect of change and welcomes it. We do take risks and don't get it right all the time; that's the thing about risk, you have to have an appetite for it to innovate."



*EastPack Chief Executive Hamish Simson in the company's Washer Road packhouse, Te Puke*

The newly automated system begins with grading camera technology which is close to but not quite AI (artificial intelligence) to grade and weigh fruit. Previously manual roles of making and lining kiwifruit boxes and delivering them to the lanes to be filled with fruit have been replaced by automation, as has filling of both bulk and single layer trays. Robotic machinery also closes off the boxes, labels and stacks them onto pallets.

"It's not quite a 'lights out operation' which is fully automated and requires no human presence and probably never will be, but it is a big leap forward for EastPack."

The automated system will pack up to 95% of the facility's bulk trays and 25% of single trays. "The market is moving slowly away from single trays as part of a sustainability drive to reduce plastic in the supply chain. We are keeping an eye on the way that develops to understand the pack types the markets want, as we don't want to automate things the market doesn't want."

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**The automated system will pack up to 95% of the facility's bulk trays and 25% of single trays.**

Automated filling of bulk boxes has been in operation in kiwifruit packhouses, including EastPack, for some time but the difference with EastPack's new system is speed and handling of the fruit to avoid damage.





*EastPack's 14-lane Bravo grader is part of an automated kiwifruit grading and packing system in operation at its Washer Road facility this season*



*The new palletising robots at work in EastPack's Washer Road post-harvest facility*

"Handling is important to us and it's been a bit of a journey with design partners involving mutual investment in getting it right. The existing fillers were not fast enough, in fact people were almost faster at the task. This new one is the result of two years of research and development and is three times the speed, with no handling issues. We had to be sure we had it right before scaling up automation."

Automation also helps make the workplace safer and in fact in 2019, when EastPack won the Bay of Plenty Westpac Business of the Year title, judges said its attention to health and safety was a standout. That included technology solutions to eliminate people and forklift interaction risk by use of stacking robots and an automated storage and retrieval warehouse system.

"It is the nature of an industry which involves manual handling that you will get sprains and strains. How we manage people's safety is at the forefront of what we do. Automation does remove more of the physical aspect of the work and will absolutely reduce risk over time, but we will still have people managing that automation because it doesn't run itself."

Some of the robotic machines can lift tonnes at a time at high speed, so they are surrounded by cages and light curtains. "They will stop and shut down if anyone or anything gets too close."

One of the biggest challenges for automation is the variability of kiwifruit size, weight and shape. "We have worked closely with manufacturers to become partners in design. We are not the mechanical or robotic engineers, but we have worked with them to design equipment which operates how we need it to."

Among the companies involved in designing and supplying the components which make up the new automated grading and packing system are Compac which designed and supplied

the leading-edge grading technology, JMP Engineering which supplied the robotic palletising systems, and a number of smaller hi-tech companies, mainly from the Bay of Plenty.

"Some of the things we are doing now were technically not possible a handful of years ago. It's the nature of the speed of innovation that computer technology has got a lot faster, which is a real key driver in design."

There is a drawback to a significant investment in automation in the kiwifruit industry. "All this wonderful machinery is used for just three months of the year. If we could use it for 12 months EastPack would get four times the payback. However, the nature of the kiwifruit industry is that the packing season lasts for three months so as a business we have to determine the pace at which we can scale up."

Scaling up will depend on crop volumes increasing. "We have a five-year plan taking into account volumes coming on and we have a solid plan to meet those expectations. EastPack changed its capital structure a few years ago and entered new bank funding agreements, so we have all the building blocks in place ready to follow the line of expansions planned.

"Assuming everything goes well this season we have more plans in place for an extension of automation next season."

EastPack, which in the last five years has invested more than \$155 million into increased storage capacity at its sites and innovation including automation technology, handles fruit for orchardists from throughout the North Island's growing regions, much of it transported to Te Puke.

"We have six sites but it is clear that you cannot make this kind of investment across a whole lot of little sites. It requires big sites with economy of scale, and we have a happy grower base who see the benefits of trucking their fruit to be packed in a state-of-the-art facility." ●



*Katikati Innovative Horticulture Project donor 90-year-old Jopie Heuseveldt with college Principal Carolyn Pentecost (left) and Hilary Johnson, Innovative Horticulture Manager*

## Horticultural education centre nears funding target

*Fundraising to build a dedicated horticultural education centre in Katikati is just \$100,000 away from its target, and construction is planned to begin later this year.*

By Elaine Fisher

**The Katikati Innovative Horticulture Trust now has \$400,000 of the \$500,000 needed for the purpose-built facility on Katikati College grounds, thanks to donations from businesses, organisations and private individuals.**

Hilary Johnson, Innovative Horticulture manager, Katikati College, says reaching the milestone is exciting and gratifying, especially given the fundraising began last year, just as New Zealand went into Covid-19 lockdown.

"Despite the uncertain times, generous donations have continued to be received from businesses, individuals and organisations who recognise how important it is to have a dedicated horticultural education centre for college-aged

students, young people not in education, employment or training (NEETs) and the local community.

"The impacts of Covid-19 and the restrictions on overseas workers entering New Zealand has also highlighted the urgent need for skilled horticultural workers."

Even before work has begun on the new centre, the popularity of horticulture as a subject has soared among Katikati College students.

The last three years have seen growth in enrolments, in student retention, in academic achievement and a closing of the disparity gap between Māori, Pasifika and other students.

The NCEA (National Certificate of Educational Achievement) results for Katikati College show that:

- ✓ 92.6% of Level 1 Māori students gained Level 1 in 2020 versus 58.2% nationally.
- ✓ At Level 2, 81% of Māori students passed, versus 70.5% nationally.
- ✓ Across all ethnicities Level 1, 2 and 3 literacy achievement rates were 99.2, 99.1 and 98.8% respectively, and numeracy was also impressive at 96.8, 98.1 and 100% respectively.
- ✓ 91.3% of all students gained Level 1 versus 70.2% nationally, and 88.8% gained Level 2 versus 79.1 nationally.

"Our class numbers are bursting at the seams now, and we are truly ready for a new building so that community and NEETs classes can also begin," says Hilary.

“

**...her contribution can go towards affecting so many young lives in our community.**

The project has received a further boost thanks to 90-year-old Jopie Heuseveldt who has committed to support the Katikati Innovative Horticulture Project through her Acorn Foundation fund.

Jopie and her late husband Kees immigrated to New Zealand from Holland and went on to buy a property in Omokoroa. Both worked at Katikati College, where Kees installed a new workshop and taught engineering and technical drawing, while Jopie taught English and history before retiring in the 1980s. Jopie moved to Katikati after Kees passed away.

Jopie chose to support the Innovative Horticulture Centre due to Kees' passion for growing trees of every type on their property in Omokoroa and her belief that supporting students

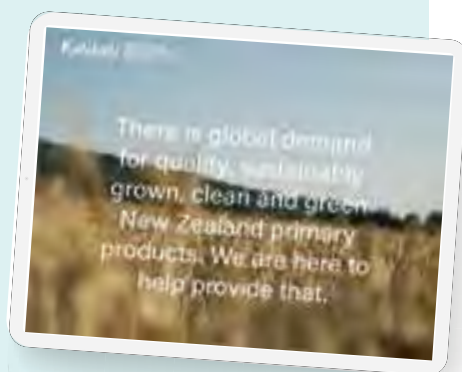
into careers in horticulture would greatly benefit the area.

"I am hugely grateful to Jopie for not just her generosity, but for her vision in seeing how her contribution can go towards affecting so many young lives in our community, which then of course translates into older lives contributing to our community and society in general," says Hilary.

"To receive support for our project from a private individual with no affiliations to the horticultural industry is truly humbling. She greatly recognises that learning must be relevant and real to the individual. This is something that underpins our personalised Innovative Horticulture programme and is one of the key factors making it successful."

Katikati College principal, Carolyn Pentecost, said, "Quite simply she reminded me why I love my job! Being a teacher is truly a calling for someone like Jopie, and even at 90 she still has a lesson or two to teach others. I imagine she was a game changer for the students lucky enough to have her as a teacher. Her humility and passion are the essence of a good teacher."

The Acorn Foundation has been working with generous donors like Jopie Heuseveldt to support local organisations working in areas of interest to them since 2003. For more information on how you might support the community you love, go to [www.acornfoundation.org.nz](http://www.acornfoundation.org.nz).



For more information on the exciting work being done at the Katikati Innovative Horticultural Project, go to [www.katikatiihp.com](http://www.katikatiihp.com). ●

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From left to right, Ella Wells, Emma Ritchie, Grace Mainwaring from the Lincoln Hort Society at Grow Ōtautahi

## New Lincoln Horticulture Society growing rapidly

*Grace Mainwaring is excited about the future of the newly established Lincoln University Horticulture Society. Starting in early 2021, they've quickly grown to having 50 members and support from the university, growers and industry groups.*

By Hugh Chesterman : HortNZ

**"It's really exciting, and our members are excited too," says founder and president, Grace Mainwaring. "We're looking forward to being able to get more people involved and exposed to the opportunities of the horticulture industry."**

Although it's early days, the Horticulture Society has plans to expand the club membership, have more events with growers and the community, and give the students more experience in horticulture.

Grace says she came up with the idea to start the club after a summer internship with HortNZ. "I was looking at the Massey Hort Society and thought, 'why can't we have something like that?' I want Lincoln students to be able to get exposure to and experience in the industry too.

"One thing we're really looking forward to is an exchange with the Massey Hort Society. I've been having talks with their president, George Hyauiason, about meeting in Nelson to exchange ideas and see some of the exciting and innovative growers there."

"Our first event on 15 March, a panel discussion supported by Women in Horticulture, had lots of great positive feedback. Students were inspired and really keen to get involved.

April Oakley, human resources specialist at Oakley's Premium Fresh Vegetables Ltd., was part of the panel and says the event was really valuable for the grower community.

"On the panel, we talked a lot about the advantages and importance of having diverse leadership. Within horticulture, women make up half the



The panel (Mike Chapman, Prof Sharon Lucock, Lincoln Roper, MP David Bennett, April Oakley and Summer Wynyard) discussed the opportunities of diverse leadership in horticulture

workforce, but only make up about 20% of people at the leadership level.

“

**On the panel, we talked a lot about the advantages and importance of having diverse leadership.**

“From a business point of view, there are huge advantages to businesses with diverse leadership.

“The event itself was really great to meet all sorts of people from the horticulture community. It brought together industry leaders, an MP, professors, researchers and of course, the students.

“Talking to other growers, we often struggle to find the best of the best young people to fill roles. This club is a key touchpoint to solve that by being a community of enthusiastic people who are interested in the industry and are showing initiative.

The students are also able to build networks and gain exposure within the industry.

Lincoln University Dean of Agribusiness and Commerce, Professor Hugh Bigsby, is a big supporter of the society. “It’s really cool seeing students lead this type of initiative,” Hugh says.

“We’re excited to see what the club gets up to and help them to achieve their goals. Lincoln is here to support their ideas and we’re really keen to help make it successful.”

“It’s an amazing opportunity for the students to expand on what they learn in the classrooms and build connections, leadership skills, and channel their passion for the industry.

“Employers want people who not only have the technical skills that they learn through their courses, but the people skills and industry experience. This club will give the students enormous opportunities to build these skills, and connect with people in their community.” ●



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*Fine weather brings an earlier harvest than usual for feijoas this year*

## Feijoa season looking bright

*The New Zealand feijoa season is looking bright as fine weather brings an earlier harvest than usual for the fruit, which is expected to hit supermarket shelves this week.*

**T&G Fresh's key supplier of feijoas, Kaiaponi Farms, is expecting another great season with ideal weather conditions, and a new packing line bringing greater consistency of fruit to consumers.**

Kaiaponi Farms commercial manager Barton Witters says: "thanks to plenty of irrigation and a bit of rain we're expecting a slightly bigger fruit size profile this season, which we know our Kiwi consumers will love."

"With T&G Fresh as our preferred feijoa distributor for the second year, we look forward to continuing to provide top quality fruit at an accessible price under our K-fruit brand."

T&G Fresh and Kaiaponi Farms are working together on a new season social media campaign to drive consumers to K-fruit.

T&G Fresh trade marketing manager, Louise Srhoj says: "as there is only a small harvesting period for feijoas, getting awareness out to our consumers quickly is vital to ensure the popular fruit can be enjoyed by many!"

The social media campaign will share various recipes and include a giveaway of the delicious, high fibre fruit, which is rich in vitamin C.

Kaiaponi Farms has been growing feijoas in Gisborne for the past 20 years and has gained market share by growing larger commercial blocks of the newest varieties, enabling greater consistency, size and taste compared to what is currently on the market.

"We pride ourselves on having a crop that is picked daily and shipped to market overnight, to ensure the fruit is of the freshest quality for our consumers each and every season," says Barton. ●





# Commodity levies

*Over the years that I have been working with horticultural industries, one question comes up frequently – are we getting our correct income from compulsory levies?*

Ian Turk : Manager, NZ Feijoa Growers Association

**The disparity between what industries expect production to be, and how much is actually represented by levy income is surprising. There are growers who oppose compulsory levies, or disagree with how levies are spent, but all levy money is spent with the benefit of growers and industry in mind.**

Remember, financial accounts which are funded by compulsory levy are to be audited, and all levy payers have the right of a say on how levies are spent. Every grower should be benefitting from industry expenditure of commodity levy funds, so failure to pay will only be harming the industry good programmes of your industry.

“

**Every grower should be benefitting from industry expenditure of commodity levy funds, so failure to pay will only be harming the industry good programmes of your industry.**

Let's look at the feijoa industry. Until recently we spent about half of our budget on promotion. The association could not commit to these programmes without certainty that they could be funded through yet uncollected levies on the coming harvest.

Most levies are collected at the first point of sale by wholesalers, but sales of fruit by growers at the farm gate or through farmers' markets is all eligible for levy payment. Growers whose marketers don't deduct the levy, or who opt out of paying commodity levies are selling themselves, their colleagues and friends short. You will benefit from promotion and other activities, even though you are avoiding your statutory requirement to pay just 3% (current feijoa levy rate) of value, to have your industry body organise and pay for industry programmes that will also benefit your sales.

On the local market, it is hard to know where sales are happening. We rely on your honesty – but that doesn't mean you don't need to pay the commodity levy. Remember, industry bodies can open up the audit procedures that are available under the Commodity Levies Act if they get frustrated enough!

Referring again to the feijoa industry, our focus in recent years has moved to research as we deal with an insect pest and a plant disease that threaten to spread. The fact that we had assured income has enabled the industry to attract a total of \$676,000 from the Sustainable Farming Fund for two three-year projects. We would not be able to make this commitment or attract such funding without a compulsory levy. Again, the outcomes will be available to everyone.

So our plea to all feijoa growers, in fact to all growers of fruit and vegetables which are subject to a commodity levy, is to contribute the small percentage your levy comprises, and be part of the team that is working to protect and grow your livelihood. (Feijoa Growers, go to the association's website at [feijoa.org.nz](http://feijoa.org.nz), then select levy submission in the levy menu – this is a levy declaration and calculation, and provides a tax invoice for your payment.)

“

**...part of the team that is working to protect and grow your livelihood.**



For more information contact Ian Turk, Manager, NZ Feijoa Growers Association, [ian@feijoa.org.nz](mailto:ian@feijoa.org.nz). ●



*Fit for a Better World has ambitious targets which aim to drive New Zealand's post-Covid economic recovery*

## Industry in crisis

*In July 2020, the Prime Minister launched Fit for a Better World, a plan to boost primary sector export earnings by \$44 billion over the next decade, while protecting the environment and growing jobs. In doing so, she noted that New Zealand's post-Covid recovery will be led by the primary sector. Horticulture Chief Executives have said for some time that the horticulture sectors would be best placed, with supportive policy settings in place, to achieve this.*

By Alan Pollard : Chief Executive, New Zealand Apples and Pears

Indeed, despite an unprecedented lockdown from late March, many parts of the horticulture sector actually had their best year ever! The apple sector reacted swiftly to the changes required to operate as an essential business, re-engineering itself in the space of a couple of weeks. Although strict hygiene was nothing new for the industry, social distancing on orchard and in post-harvest facilities created challenges.

Ultimately, we were successful in meeting this challenge, with our seasonal labour force living, travelling, and working in their bubbles. We exported over 400,000 metric tonnes of apples and pears for the first time, with an export value exceeding \$900m (not far off our \$1b target set in 2013).

### **From incredible results to a catastrophic situation**

So how could we go from this incredible result in the face of adversity, buffering the destruction being seen in other parts of the economy, to the catastrophe unfolding in our sector as I write this?

It became clear very early on that with borders closed, our access to a reliable seasonal workforce would be constrained. The Recognised Seasonal Employer (RSE) scheme is one of the key reasons that the New Zealand apple industry has become consistently the world's most competitive apple industry (independently assessed by Belrose Group in the United States by comparing 33 apple producing countries).



Alan Pollard

Apples are not harvested by strip picking a tree – each apple must be individually assessed according to its background and foreground colour. This is a skilled task. It is not unusual to pick an apple tree three or four times before it is done for the season. Once an apple hits its maturity level there is a limited time (often around 48 hours) in which to pick it. Once that period passes, quality and value can erode. Harvest is a physically demanding task, in most cases having to climb 8-foot or 12-foot ladders with a 20kg bag around your waist. We have calculated that a picker averaging about 70 metric tonnes of fruit per month will climb the equivalent of about 25 vertical kilometres (over two and a half times the height of Mt Everest) in that month.

RSE workers are by and large fit and strong. Having RSE workers harvest our fruit allows it to be picked at optimum time for optimum quality and value. Premium returns earned in market due to our quality product are reinvested in growing businesses which creates more permanent jobs for New Zealanders. Prior to Covid-19 we estimated that a further 2,400 permanent jobs would be created in our industry by 2030. The other side of the RSE programme is that workers take home much needed funds to reinvest in transforming their Pacific communities.

### Early predictions

In October 2020, the chief executives of NZ Apples & Pears, NZ Kiwifruit Growers, Summerfruit NZ, NZ Wine and HortNZ, along with the chair of Master Contractors, met to discuss the predicted labour shortage for the coming season. With borders closed and the government taking a primarily health response to the Covid-19 pandemic, it was obvious that a significant labour shortage was looming.

The December shortfall was estimated to be just over 6,000 workers as the summerfruit harvest began; and at the peak (March to May 2021) the estimated shortfall topped out at just under 11,500 seasonal workers. Our estimate was that if RSE workers were not permitted to enter New Zealand, in a worst-case scenario, direct export losses for the summerfruit, apple, kiwifruit and vegetable sectors would be more than \$1.1 billion, with much larger consequential regional economic impacts. We made it clear that the continued growth of horticulture and its ability to contribute to New Zealand's economic recovery would be severely affected.

### Sourcing labour

We source our labour from three key areas:

- ① RSE scheme workers,
- ② Working holiday visa (WHV) holders, and
- ③ New Zealanders.

#### ① RSE scheme workers

The horticulture and viticulture sectors have approval for 14,400 RSE scheme workers to come into New Zealand each year. With borders closed to incoming workers, and workers that remained in New Zealand from the 2020 harvest returning home, it was likely that there would be around 5,000 available for the 2021 season.



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As a result of our submission, a border exception was approved to bring 2,000 RSE workers in from the Pacific. There were strict conditions attached to those 2,000 workers:

- The workers were only allowed from Pacific Island countries that committed to repatriate currently stranded workers who wished to return home, and to repatriate all other workers at the end of their contract.
- Only RSE workers who had worked in New Zealand for at least one season could enter through this exception.
- Workers had to be deployed to regions and employers with the most critical needs to meet harvest requirements – they had to be shared with another RSE employer growing a different crop or in a different region.
- All RSE workers had to be fully employed until repatriated.
- Employers had to cover the cost of Managed Isolation and Quarantine (MIQ) facilities and not charge this cost to the workers.
- Workers had to be paid for 30 hours per week while in MIQ.
- Employers had to pay no less than the living wage (currently \$22.10 per hour) to RSE workers covered by the border exception.
- Employers could not deduct from RSE workers' wages any amounts for flights between Pacific countries and New Zealand more than they would in a 'normal' year; nor could they increase deductions for RSE workers for living costs (e.g., accommodation or transport) beyond last season's deductions.
- Industry had to cover the cost of translation services required to support the MIQ process for workers who do not speak or read English proficiently.

By the time this article is published, 13 flights will have brought 2,011 RSE scheme workers back to New Zealand. NZ Apples & Pears Inc. has managed the process to bring the workers in, under exceptionally tight timeframes. This includes booking flights and MIQ spaces, standing up manifests, arranging worker care packs and handling all of the invoicing and payments for the process. Agencies and industry have worked exceptionally well together to make this happen. I also acknowledge the work that Nikki Johnston has been doing to ensure that there is a fair and equitable sharing process for the 2,011 workers.

## 2 Working holiday visa (WHV) holders

We would normally expect around 50,000 working holiday visa holders to be in New Zealand at any given time. Again, with borders closed and the government encouraging WHV holders to return home, only around 10,000 to 13,000 remained in New Zealand. The government approved an extension to their visas on the basis that they only work in horticulture and/or viticulture; then subsequently changed their minds and made them available to any sector. This effectively removed them as options for us as they remained closer to main metropolitan centres.

## 3 New Zealanders

Finally, we adopted a New Zealander first policy – we will give all willing and able New Zealanders a chance. In our modelling we assumed that half of all seasonal positions would be taken up by Kiwis. We consistently hear from government that there are plenty of New Zealanders available to get us through our critical periods. The truth is that there are not.

There are several reasons for this:

- First, the economy is doing much better than expected. A national unemployment rate of 4.9% is only marginally higher than pre-Covid levels. All industries across the country are crying out for staff.
- Second, unemployment is largely clustered in main metropolitan centres. This is not a mobile workforce – they are not likely to leave their rented or owned accommodation, or their family and whānau support, for a few weeks' work. I acknowledge the incentive programmes that the Ministry of Social Development (MSD) has put in place to try and attract their clients to the regions, but this was never going to attract large numbers to move.
- Third, as mentioned before, apple picking is hard work and is largely not attractive to New Zealanders.

## Bridging the gap

Industry and employers have numerous programmes underway to try and bridge the labour shortfall – MSD and Corrections programmes, mobilising high school students, bonuses and incentives and the like. We have multiple websites operating, including employer websites, Pick Tiki, Opportunity Grows Here, and Work the Seasons.

Minister O'Connor suggests that all we have to do is pay more and offer free accommodation – we all know that this is not the case. Accommodation incentives are being offered across the country. But New Zealand has a housing crisis which successive governments have failed to address. And supply and demand has created market pressures on wage rates. Simply focussing on rates is misleading; it is more meaningful to focus on income earning opportunity. Restructuring the orchards in the apple industry has meant that it is now quicker to pick a bin of fruit today than it was (say) 10 years ago. Two-dimensional structures, dwarfing rootstocks and more productive varieties have all improved picking efficiency. If you can pick twice as many bins of fruit in a day today than you could 10 years ago, that is effectively a doubling of the real pay rate.

## So where does that leave us?

Our crop estimate for 2021 forecast a gross crop of just under 560,000 metric tonnes (5% down on 2020, largely due to severe hail events in Nelson and Central Otago). Of this, we forecast 375,000 MT (metric tonnes) for export (down 7%); 70,000 MT for domestic sales (up 2%); and the balance for processing. Quality is outstanding yet again.

We are about to enter the peak of our harvest. The labour shortage is approximately what the chief executives predicted way back in November 2020; the likely economic impact will be at least what we predicted, as will be the consequential impact on provincial New Zealand. As I write this, growers are having to walk away from productive blocks full of fruit; not just low value varieties but varieties such as our largest (Royal Gala) are being sacrificed; trees which would normally be picked two or three times are being picked once; growers and

their staff are stressed and distressed, leading to major concerns about mental health and resilience. It is likely that somewhere between 10% to 20% of our fruit will not be harvested – a potential loss of \$90m to \$180m. We won't know until closer to the end of the season what the impact of the labour shortage will be on value.

“

**It is likely that somewhere between 10% to 20% of our fruit will not be harvested – a potential loss of \$90m to \$180m.**

We don't yet know what our industry might look like at the end of this season. I have heard a number of reports of growers considering 'giving it away' – the stress and uncertainty have taken their toll. This uncertainty has caused many in the industry to review their development or redevelopment programmes, including cancelling tree orders. So the impact of this season will be felt for many seasons to come.

## The tragedy is that this did not have to happen

The chief executives were very clear about the risks of not getting the policy settings right. We offered a solution that reflected the Covid-free status of the Pacific Islands, that built on the success of the sectors during our Level 4 lockdown, and that balanced health with economic objectives – privately owned and government managed regional isolation facilities. This was rejected by government. We cannot repeat this situation next season – growers and industries will not survive. Whether it is expanded space in MIQs due to some form of trans-Tasman flow, an acceptance of regional isolation facilities, or a mobile vaccinated Pacific labour workforce, the approach must change.

If it does not, then Fit for a Better World and its ambitious targets will fail, and New Zealand's post-Covid economic recovery will stall. It is unconscionable to think that the government could let this happen. ●

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## SUMMERFRUIT UPDATE



# Growing strong

By Richard Palmer : Chief Executive Officer, Summerfruit NZ



*The Summerfruit NZ conference is considered a highlight in the industry's winter calendar. It is usefully planned for the time of year when growers have finished the previous season's tasks and before they embark on next season's projects – an ideal time to get away on holiday or to a conference. This year, the unfortunate timing clash with overseas holiday plans may not be so much of an issue – if we can take a silver lining from our current border closure.*

**After the disappointment of having to cancel last year's conference, we're excited to be back in Hawke's Bay with growers, exporters and marketers who are more than ready to come together, reflect and celebrate success in a changing world.**

2020-21 was a season like no other before it. Our theme, *Growing strong - Success in a changing world*, focuses on increasing resilience across a broad platform: our orchards, the environment and personally. In an ever-changing world we need to adapt, collaborate and innovate more than ever to reach the level of success we're aiming for.

## Conference format

Our 9-10 June conference begins on Wednesday afternoon at the Napier War Memorial Centre on Marine Parade with an address from our keynote speaker followed by our Annual General Meeting. The day ends with networking drinks at the Faraday Centre where we'll get a hit of nostalgia with their exhibitions show-casing technology from the 'good old days' including a dental surgery.

A full day's conference is planned for Thursday, during which local and international speakers will present sessions on climate change solutions, labour shortage challenges, international trade and trends. The evening Conference dinner ends on a high note with awards and entertainment.

## Kick the dirt

Friday morning has been set aside as an optional extra for those keen to Kick the dirt. We'll travel a little bit around the region and visit examples of modern horticulture practices that are helping businesses build resilience to 21<sup>st</sup> century challenges and ensure they won't be left behind in a changing world.

## Exhibition and sponsorship

Without the generous assistance of our sponsors, it would not be possible to book the calibre of speakers and venues we aim for each year. We are very grateful to MG Marketing who have been our platinum sponsor since 2017. It's always fantastic to have their backing.

Napier War Memorial Centre is a great venue for sponsors, exhibitions and outdoor displays, and we have already had loads of enquiries from organisations wanting to show their support for the summerfruit industry.



If you are interested in showcasing your products and services directly to the summerfruit industry, our *Exhibition and Sponsorship Opportunities* brochure can be downloaded directly from our website [www.summerfruitnz.co.nz](http://www.summerfruitnz.co.nz) or contact conference organiser Karen McLean at [karen@cml.net.nz](mailto:karen@cml.net.nz) or on 06 833 7440. ●





## AVO UPDATE



# All go with avos

By Jen Scoular : Chief Executive, NZ Avocado



💧 We have begun planning for the World Avocado Congress being held here in New Zealand in April 2023. Speaking to a prospective conference organiser, they suggested people are very keen to start planning activities to get together. What will the next two years bring? With nearly 100 million vaccines given in the United States alone, I certainly hope 2021 continues as the year of the vaccine. I'm certainly keen to roll my sleeves up and I hope most New Zealanders feel the same.

💧 The atmosphere at the recent celebration in Parliament of the International Year of Fruit and Vegetables demonstrated the desire of the horticulture sector to get together. The event saw a great turn-out, passionate conversations and energy to drive growth in our sectors across productivity, capability and profits, while recognising the need to also measure any impact growing fruit and vegetables might have. In New Zealand, horticulture only accounts for 1.4% of agricultural emissions, but we are moving forward to set policy in regard to measuring and then reducing our impact on the world.

💧 Across the avocado sector we are undertaking a life cycle assessment from nursery to market to measure our carbon footprint. Over 50 orchards will be analysed with in-depth surveys and conversations with the growers, and on-orchard methods and inputs measured in great detail. We already benchmark productivity of orchards, and are adding additional data on on-orchard applications and weather information to drill deeper into best orchard outcomes.

💧 The avocado sector operates under the NZ Horticulture Export Authority Act and a group of industry stakeholders met this week to review changes to the 'rule book', our Export Marketing Strategy. This annual engagement offers all stakeholders the opportunity to change, add to or refine the rules we operate under. It is quite a long but effective process, but we ensure it is well communicated so all who are impacted by changes are able to add feedback while those changes are being discussed. Our meeting included growers, packers and marketers, with our current chair and two previous chairs in the meeting. We utilise that depth of knowledge of those who have been in the sector for a number of years or decades.

💧 We had perfect weather for a recent field day at John and Mary Bowen's Bay of Plenty orchard. Growers do love to see other orchards, and hear from other growers about what they have done, and what has had the biggest impacts. We looked at the impact of flower pruning the previous spring, and on canopy management to open the canopy to allow in light to increase productivity. The very healthy crop for the coming season certainly suggests best practice has been well followed. Our job at NZ Avocado is to support these and other growers, packers and marketers to demonstrate to the consumer that not only are New Zealand avocados delicious, nutritious and versatile, but that they were carefully and responsibly produced in a beautiful orchard by passionate growers. ●

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# TECHNICAL

THE LATEST INNOVATIONS AND IMPROVEMENTS

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Nutrition

Page 55







*These Scilate trees have good colour due to careful irrigation and nitrogen management, but have variable fruit set due to marginal spring nitrogen levels. Note the pale tree beyond the post with low crop load, compared to the fruit crop on the tree in front of the post*

## Nutrition – setting the trees up for next season

*The immediate post-harvest period is a critical time for nutrient update, notably nitrogen. The situation regarding other nutrients and trace elements is not quite so clear.*

By John Wilton : Deciduous Fruit Specialist, AgFirst

**Although fruit trees are low users of nitrogen compared with other agricultural crops, it is still the major nutrient they require for satisfactory fruit set, leaves and new growth. A major difference between trees and herbaceous plants is that they have huge nutrient storage capacity, so their spring growth flushes and fruit set requirements for nitrogen are largely satisfied by the mobilisation of stored reserves.**

There is now ample evidence from published scientific papers to indicate that while stored reserves are being mobilised, uptake of soil nitrogen through the roots is minimal and does not commence for deciduous fruits until about eight weeks after green tip.

In our climate in which we normally experience a long dry warm summer period followed by a mild damp autumn,

there is significant build-up of soil nitrogen during the summer. Autumn rains make these soil reserves available and the root flush it stimulates enables uptake.

Another feature of these deciduous trees and vines is that soil nutrient uptake largely requires the presence of photosynthesising leaves, so once leaf fall approaches soil nutrient uptake falls off.

Therefore, for uptake efficiency it is necessary to apply post-harvest fertiliser dressings as soon as possible after picking. There is also some evidence to indicate that soil fertiliser applications immediately prior to harvest do not influence fruit nutrient status.

In recent years we have been largely growing partial red apple varieties, which the market requires us to turn into full colour apples. To achieve this objective, it is necessary





Severe magnesium deficiency symptoms in Scilate

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to grow a low nitrogen status crop to maximise red colour development, then once the crop reaches harvest stage try and build up sufficient nutrient levels, particularly nitrogen to drive next season's spring growth flush and fruit set. Poor fruit set, apart from lack of provision for cross pollination, is usually due to a problem with nitrogen deficiency, or its utilisation within the tree. The latter could be due to micro-nutrient deficiency. There is anecdotal evidence to suggest that severe manganese deficiency may be implicated in poor fruit set due to nitrogen deficiency.

Pale green foliage, high autumn leaf colour and early leaf fall should ring alarm bells regarding low nitrogen. Where mid-summer leaf nitrogen levels are under 2.2% there is risk of fruit set problems due to low spring nitrogen status. This level will vary a bit by variety. Early spring nitrogen leaf levels need to be around 2.7% to 3.0% for good fruit set.

Because we do not want to lift soil nitrogen reserves too high, I prefer to only use low to moderate soil nitrogen fertiliser rates, backed up by several post-harvest foliar nitrogen sprays of urea at 2% concentration at two-week intervals. Uptake from foliar nitrogen sprays is very efficient, usually around 80%, and the nitrogen moves rapidly out of the leaves into the buds and annual wood. This ensures that there is a ready supply of nitrogen reserves for next spring.

In blocks where there is a history of poor fruit set, several foliar urea sprays using low biurette product at about 1% concentration in the open cluster to bloom stage may help.



*Magnesium deficiency is often associated with over cropped trees under stress. In this particular case the stress is from poor drainage, and the variety Fuji*

Do not apply urea close to ATS (ammonium thiosulfate) thinning sprays.

Uptake of soil applied nitrogen fertiliser is often only 20%.

### **Managing the soil variability problem**

The path to higher orchard performance lies in overcoming the tree to tree variability problem. Tree to tree variability is endemic in many New Zealand orchard blocks, particularly those planted on recent alluvial soils.

Variability can show up either as excessive tree vigour where trees grow too well and there is strong competition between annual growth and fruit, or tree growth is weak with small tree size, and the trees are prone to stress. Stress often shows up as nutrient deficiency, leaf necrosis and signs of water stress during hot, dry weather periods. Magnesium deficiency in varieties such as Fuji which are particularly prone to this problem, are good indicators of stressed trees. Poor orchard sward growth such as early browning off is another good indicator of likely soil problems leading to stressed trees.

This is a soil depth and quality problem, rather than a chemical fertiliser issue. It is associated with low soil moisture holding capacity, sometimes drainage problems limiting tree root zones, and is largely overcome by addressing the soil limiting factors of low soil moisture holding capacity and poor environment for root growth and health.

Often these stressed areas have lost their topsoil at some time in the past due to soil smoothing.

Increasing soil organic matter with regular dressing of compost to those weak performing areas is the key to overcoming the problem. Composts are relatively slow acting so it may take several years of compost application to detect tree performance improvement. Use of straw mulches to reduce soil surface evaporation as well as protect the soil surface and compost from oxidation losses will further improve the effectiveness of the compost.

“

**Increasing soil organic matter with regular dressing of compost to those weak performing areas is the key to overcoming the problem.**

We now have good tools for measuring tree to tree variability and stress in orchards, so it is possible to target expansive soil amendment treatments such as compost to the stressed areas where they are needed, rather than blanket application everywhere. Compost application is expensive, but when used appropriately very rewarding in terms of reducing tree to tree variability.





*This is what real iron deficiency looks like. I have never seen this symptom here in New Zealand even though leaf analysis indicates we are often low in iron*

### Other Nutrients

While nitrogen is the most important nutrient for plant growth, other major nutrients such as potassium, which is the second most important nutrient for fruit crops along with calcium, magnesium and phosphorus, complete the major plant nutrients.

Soil parent materials largely determine the availability of these nutrients.

Soils derived from greywacke and schist rocks, as well as a number of other sedimentary rocks such as mudstones are usually well supplied with potassium, but due to their high potassium levels often have magnesium deficiency.

Soils derived from limestone parent materials, as well as soils found in dry climates, usually have high pH (alkaline) and high calcium levels.

Recent alluvial soils are often a mixture of these parent materials, unless they are in predominantly volcanic areas.

New Zealand soils are naturally low in phosphorous, hence the domination of phosphate fertilisers in the past.

Volcanic parent materials, particularly pumice, have very little in the way of plant nutrients. Potassium levels are very low and when they break down to clay they can become phosphate fixing too.

Potassium problems are fairly easy to identify in fruit crops through leaf analysis, or in severe cases spectacular leaf deficiency symptoms which usually suddenly appear in mid-growing season when the fruit is rapidly sizing.

The bad news is that once these symptoms appear, leaf levels are well into the deficiency zone. Visual leaf symptoms appear when leaf analysis potassium levels are down to 0.65% to 0.7%, about half of the recommended minimum leaf level for apple. Low potassium levels result in small fruit and poor colour development. Because crop load levels impact on leaf potassium, high crop loads will depress leaf potassium content. This is because tree demand for potassium depends on the fruit load.



**...This is because tree demand for potassium depends on the fruit load.**

Like nitrogen, potassium levels need careful management to avoid problems with magnesium and calcium. Once potassium levels are adequate for satisfactory fruit size and colour, applying more potassium fertiliser is detrimental to fruit quality. The bad news is that once soil potassium levels are pushed into the excessive range it is very difficult to rectify the situation. The only solution is to withdraw potash fertilisers and farm the excess out of the soil, which may take a number of years.

While nitrogen and potassium are required in high amounts, magnesium and phosphorus requirement is only about one-tenth of these two nutrients.



Magnesium deficiency is quite widespread in New Zealand fruit crops. Symptoms are generally expressed mid to late season, and often related to stress. Crop load is a major factor in the expression of magnesium symptoms. This is because ripening seeds have a high requirement for magnesium. In orchards where magnesium deficient symptoms are often seen, annual dressing of a magnesium fertiliser should be part of the soil fertiliser programme. As well as soil dressings, a robust foliar magnesium programme commencing late November is necessary for varieties prone to magnesium deficiency.

Tree fruit crops, because of their mycorrhizal associations, are quite good at hunting down soil phosphorus. Instances of phosphorus deficiency in tree fruit crops are relatively rare, particularly for summerfruit. There is a bit of data in the scientific literature to indicate, for young trees anyway, that applying soluble phosphorus fertiliser over the bloom period may increase fruit yield. We are also of the opinion that the ratio of nitrogen to phosphorus may influence fruit colour development, so perhaps we should be paying more attention to phosphorus in orchards.

### Calcium

The problem with calcium is not a deficiency in the soil unless the levels and pH are low (soil is acidic). It is uptake and distribution within the tree where the problem lies. This is largely due to an imbalance with other cations, particularly potassium, or excess tree vigour problems because growing shoot tips are a stronger calcium sink than the fruit.

Most of the calcium entering the tree comes through the tips of actively growing roots. Providing good conditions for root growth, such as adequate drainage and aeration along with trying to maintain satisfactory cation balance is your best chance of getting a good supply of calcium into the tree.

Vigour control and regular cropping is the easiest way to improve fruit calcium status. There is also data to indicate that calcium is slow moving within the tree. It may take four or five years for calcium to reach the upper tree in younger trees.

### Trace Elements

Relative to many overseas fruitgrowing areas, particularly those located in arid climates on calcareous soils, trace element deficiencies in New Zealand orchards are rare.

Boron deficiency is the most common trace element deficiency we see here. Until recently it needed fairly careful management because of the general use of fertilisers with rapidly available boron such as Borax and Boracic acid. The safety margin between sufficient and excess levels were very narrow with these materials. Recently a low-cost, slow-release boron fertiliser has been introduced. Safety margins with this product, OrganiBor, which contains boron as a mixture of magnesium and calcium borate compounds, are much wider than either Borax or Boracic acid.

Manganese deficiency is endemic on many orchards and usually appears in late spring. Occasionally severe symptoms have been seen in the pre-bloom period, particularly on light sandy soils. When this happens fruit set can be very poor. Foliar manganese sprays including Mancozeb, generally overcome the problem. In wet soils with anaerobic conditions, manganese toxicity can occur particularly if the pH is low too.

“

**Manganese deficiency is endemic on many orchards and usually appears in late spring.**

Zinc deficiency can sometimes occur, but relative to other parts of the world is rare here.

Leaf analysis often shows that iron levels are low, but I have never seen any evidence of the leaf bleaching often associated with iron deficiency elsewhere in the world.

Trace element deficiencies are often associated with excessively high soil pH. Correcting high soil pH is expensive and difficult, relative to applying trace elements by way of foliar sprays. ●



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# Are assumptions on climate change based on irrefutable science?

*In late January the Climate Change Commission (CCC) released its report to the government on its recommendations on how New Zealand can lower its greenhouse gas emissions based on our commitment to the Paris Agreement signed in 2016. Public submissions on the CCC report close on 28 March, after which the political process will begin for deciding what measures will and will not be implemented, so that as a nation we can meet our obligations to the Paris Accord.*

By Robin Boom : CPAG, Member of the Institute of Professional Soil Scientists

The CCC recommendations will impact everybody in some way or another and will prove costly to many businesses. Almost half of our greenhouse gas emissions come from agriculture, largely from enteric methane produced in the rumen of sheep, cattle, goats and deer, but also from nitrous oxide from animal urine and fertiliser nitrogen. Arable and vegetable crop production also produces greenhouse gases from CO<sub>2</sub> lost through soil inversion, fallowing and plant desiccation, and nitrous oxide from artificial nitrogenous fertilisers. Soil carbon loss can in part be mitigated through the use of composts, manures and biochar, but there will still be CO<sub>2</sub> lost into the atmosphere during the cultivation process from microbial decomposition of organic matter.

There have been statements made like 'the science is settled' as far as the anthropogenic global warming (AGW) theory goes, yet real science should be able to withstand the challenges of falsification and not be pressured by political agendas and expediency. There is no question that CO<sub>2</sub> levels in the atmosphere have risen from the pre-industrial level of 280 ppm, to close to 400 ppm today, and that global temperatures have risen almost one degree since 1850. However, 1850 was also the end of what is called the 'little ice age' which was a cooling period which began 500 years previously. There is also no question that sea levels rose about 0.3 metres through ice and glacial melt during the 20<sup>th</sup> century, but when these figures are compared not with what levels were like 150-200 years ago, but with more distant history, the alarmist narrative of AGW theory could be seen as skating on a lot thinner ice.

Just 20,000 years ago at the peak of the last Ice Age called the Late Glacial Maximum, the Earth was at its coldest point for the previous 250 million years. Twenty thousand years



is less than one ten thousandth of 250 million years, so just a blink of an eye in terms of the planet's history. On average the planet has been six degrees warmer than today for the past quarter of a billion years, and there were no polar ice caps to speak of. Fifty million years ago, when mammals were starting to appear, the planet was 16 degrees warmer than today, so claims that life will disappear from global warming are wrong. It was only 3 million years ago

that the planet started having polar ice caps through a series of ice ages and interglacial periods which occurred every 40,000 to 100,000 years, known as the Milankovitch cycle, believed to be caused by the relation of the elliptical orbit of the Earth around the sun and its axial tilt.

It can be argued that we are still coming out of the last ice age, which when at its peak, cities like Chicago would have been under a kilometre of ice, Boston under two kilometres of ice and Montreal under three kilometres of ice. For 12,000 years sea levels rose on average one metre per century due to glacial melt, which was three times greater than sea level rose for the whole of the twentieth century. Twelve thousand years ago Britain was still covered in glaciers, and our own Southern Alps was one massive ice sheet. Ice Ages would appear to have a much bigger impact on life on Earth than global warming, and perhaps increased CO<sub>2</sub> levels is a good thing to help stop the planet going into another deep freeze. Plants thrive better with higher CO<sub>2</sub> levels, and some glasshouses lift CO<sub>2</sub> levels to 1200-1500 ppm, three or four times the current atmospheric levels, to produce bigger crops. Back in the Jurassic period 150 million years ago, CO<sub>2</sub> levels were around 2000 ppm, five times higher than they are today, resulting in prolific plant growth which would have fed the large herbivorous dinosaurs alive back then.

Made by Nordox

The vilification of higher CO<sub>2</sub> levels may be misguided, and as an agronomist I see there could be positive spin-offs from having more CO<sub>2</sub>.

One of the concerns of a warming planet is that there could be a feedback effect as the ice tundras of northern Russia thaw out, and the trapped methane in these will evaporate into the atmosphere, accelerating the speed of global warming. Frozen mammoth bodies have been found in the Siberian ice, proof that 40,000 years ago this area was a much warmer grassland landscape which was being grazed by these large mammals, when a rapid freezing struck their bodies and preserved them from further decay and deterioration, and it is only through recent thawing of the ice that their bodies are being discovered.

New Zealand was a signatory to the Paris Agreement of the United Nations Framework Convention on Climate Change and has a duty to fulfil the demands in the Agreement. One of the guiding principles in this agreement is:

*"Recognising the fundamental priority of safeguarding food security and ending hunger, and the particular vulnerabilities of food production systems to the adverse impacts of climate change."*

Article 2 (b) states that one aim of the Agreement is:

*"Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner **that does not threaten food production.**"*

As a food producing nation which feeds the equivalent of 40 million people through our food exports, it is imperative that any policy implemented on climate change does not affect our food producing ability. Unfortunately these clauses in the Paris Accord seem to be ignored by our current crop of politicians. The cost to our nation if we proceed with the recommendations of the CCC will be immense. Whether it is the best course of action for future generations of Kiwis, only time will tell. ●

“

Unfortunately these clauses in the Paris Accord seem to be ignored by our current crop of politicians. The cost to our nation if we proceed with the recommendations of the CCC will be immense. Whether it is the best course of action for future generations of Kiwis, only time will tell.

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## METSERVICE UPDATE

# Still rather dry in the eastern South Island



By Georgina Griffiths : Meteorologist, MetService

At the time of writing (mid-March), the eastern South Island (Marlborough through to south Canterbury) year-to-date rainfall accumulations were running below normal.

Figure 2 show year-to-date rainfall accumulation at Blenheim, Culverden, Christchurch and Ashburton, comparing the 2021 tally with the average year-to-date rainfall accumulation, as well as comparing to the last five years. All four locations continue drier than normal so far in 2021, with the dryness being most marked in Marlborough and north Canterbury, but less unusual for Christchurch and Ashburton.

## Non-linear response to El Niño Southern Oscillation (ENSO)

Research in the early 1990s by one of our most highly respected climate researchers, Dr Brett Mullan, investigated the effects of both La Niña and El Niño events on seasonal rainfall across New Zealand. He identified a 'non-linear' response on rainfall in some regions of the country.

Put simply, that means that the typical effects of La Niña are NOT equal and opposite to the normal outcomes during El Niño phases, for some regions of New Zealand.

Canterbury and Otago are the standouts – often experiencing dryness or drought under persistent westerly regimes during El Niño events, AND drier than normal conditions while persistent Highs sit over the South Island during La Niña phases. Marlborough is a little less clear-cut, but La Niña summers can often be drier than usual, due to the influence of frequent Highs over the South Island.

## Some years are drier than others – because of other climate drivers

Together, El Niño and La Niña are known as El Niño-Southern Oscillation (or ENSO). The ENSO pattern exerts an important influence on New Zealand's climate during its stronger phases. However, overall, ENSO only accounts for around 25% of the year-to-year variance in seasonal rainfall and temperature at most locations.

Other factors, such as the Southern Ocean storminess, and what the Tasman Sea is getting up to, are also very important.

Here at MetService, we routinely monitor a number of climate drivers that influence the New Zealand weather maps over the coming weeks and months. One of the reasons that the South Island has been 'relatively' quiet this summer is a relative lack of vigorous Southern Ocean weather systems (Figure 1).

Figure 1: The Southern Annular Mode (Southern Ocean storminess)

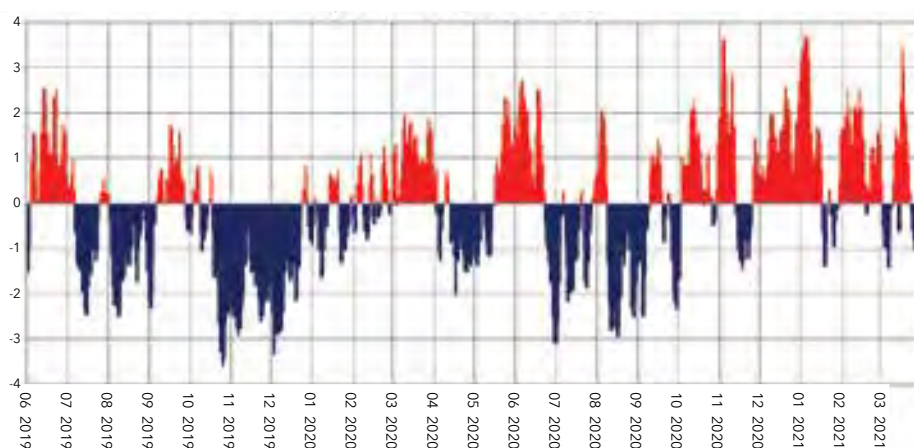
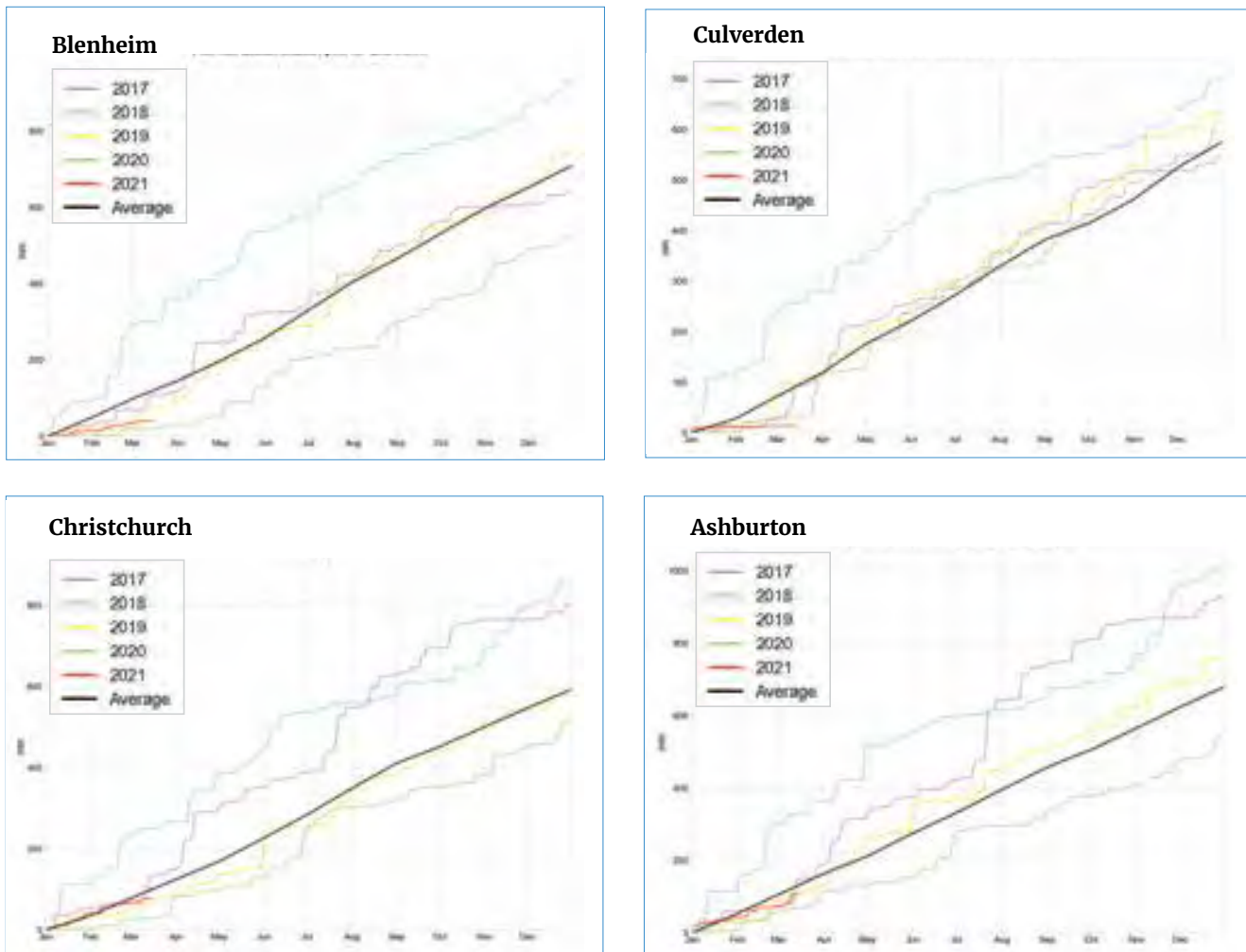


Figure 1: A plot of observed Southern Annular Mode (SAM, also known as Southern Ocean storminess) from 1 June 2019 to 16 March 2021, with forecast SAM values shown for the period 16-29 March 2021.

Note the persistence of the positive phase since October 2020. The positive phase of the Southern Annular Mode implies a 'quiet' Southern Ocean in the New Zealand region. In other words, a lack of Southern Ocean storms washing up and over the country. The day-to-day weather maps often show High pressure near the Chatham Islands or lying across the South Island.

**Figure 2: Rainfall accumulation**

Annual rainfall accumulations (mm) for the following areas for the last five years. The annual average rainfall accumulation is shown in black.



### Looking ahead

The waning La Niña should be gone for winter 2021. Under neutral ENSO conditions, the state of both the Tasman Sea weather systems and the Southern Ocean storms, will drive our winter weather patterns.



As always, you should keep up to date with the MetService long-range forecast at <http://metservice.com/rural/monthly-outlook>.

Or sign up to the Monthly Outlook for delivery straight to your email inbox at [www.metservice.com/emails](http://www.metservice.com/emails). ●

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# Sizing up copper – microscopic particles go far

*Whether you are using copper to protect kiwifruit, avocados, citrus, fresh vegetables or summerfruit trees from bacterial disease in the weeks ahead, the key to success comes down to foliar coverage.*

**Copper fungicides work by preventing spore germination and can act at several other stages in the fungus development.**

Without complete coverage plants can still succumb, as any untreated surface remains a potential disease infection site.

“Coverage is just as important as the quantity of actual copper on the plant surface,” says Alan Cliffe, research and development manager for Nufarm, the company which developed Tri-Base Blue®.

“That’s why particle size becomes such a priority, along with the type of copper complex used and product solubility.”

The tiny particles of Tri-Base Blue give excellent coverage and provide a greater surface area for the release of cupric ( $\text{Cu}^{++}$ ) ions than other products with larger particles.

“

**Coverage is just as important as the quantity of actual copper on the plant surface**

Small particles adhere better and resist dislodgement better than larger particles, allowing the copper to act to its full potential against fungi and bacteria, Alan says.

The form of copper used in Tri-Base Blue, tribasic copper sulphate, gives a uniform steady release of  $\text{Cu}^{++}$  ions, provides very good weathering qualities and a low risk of phytotoxicity.



Labelled crops include avocados (anthracnose), citrus (melanose, brown rot), grapes (downy mildew), kiwifruit (leaf spot, Psa), onions (downy mildew, bacterial blight), peas (downy mildew, ascochyta blight, bacterial blight), potatoes (early blight, late blight) and stonefruit (leaf curl, shot hole, bladder plum, bacterial blast).

Common uses at this time of the season include post-harvest protectant sprays for summerfruit (apricots and cherries, for example, are particularly predisposed to bacterial blast at leaf fall); and autumn sprays to help prevent brown rot in citrus.

Following full registration for Psa last season, Alan says Tri-Base Blue is now becoming popular with kiwifruit growers as a liquid alternative to traditional granule and wettable powder copper formulations, and now is a good time to be planning ahead for post-harvest protectant treatments.

The stable, solvent-free formulation is easy to pour, mix into solution, handle and apply.

Tri-Base Blue disperses rapidly when added to the spray tank, can be applied in concentrate or dilute spray volumes, and is compatible with a wide range of other products, including most commonly used fungicides and insecticides. It has nil WHP (withholding periods) on all crops. ●


For more detail, talk to your horticultural representative today.

Tri-Base Blue® is a registered trademark of Nufarm Australia Ltd.

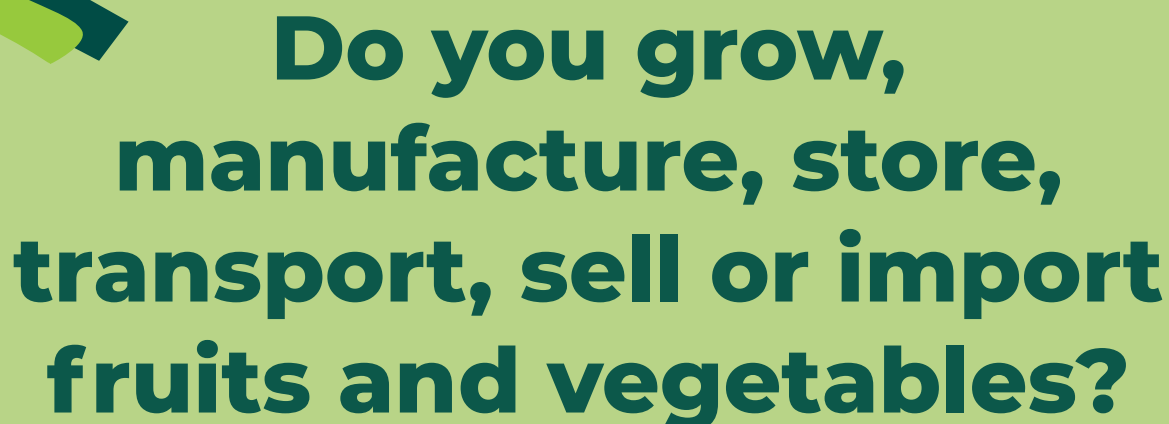
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# Do you grow, manufacture, store, transport, sell or import fruits and vegetables?



Your business may need to be  
registered for the Food Act 2014



It's easy. Go to **foodsafety.govt.nz/myfoodrules** to find out:

- the plan or programme you need to use
  - where to register your business, and
  - who can verify your business.
- 

If you are a member of BRC (for fresh produce only),  
NZGAP, or GLOBALG.A.P. talk to your **industry association**  
about how they can help you register.



Any questions about food rules?  
Contact New Zealand Food Safety at:  
**foodactinfo@mpi.govt.nz** or phone **0800 00 83 33**



**New Zealand Food Safety**  
Ministry for Primary Industries  
Manatū Ahu Matua

# Do You Know Your Food Rules?

*If you grow, import, manufacture, store, transport, or sell fruit and vegetables, you need to meet food safety requirements. This may include registering with New Zealand Food Safety or your local council.*

New Zealand Food Safety (a business unit of the Ministry for Primary Industries) is urging owners and managers of all existing New Zealand businesses that trade in food, to find out if they need to register a plan or programme. Even if food is only a part of a business's activity, registration may still be needed.

New Zealand Food Safety's director of food regulation, Paul Dansted, says registration helps to ensure food is safe and suitable for customer use, and provides an important link in the chain to help with tracing food products if a problem is identified.

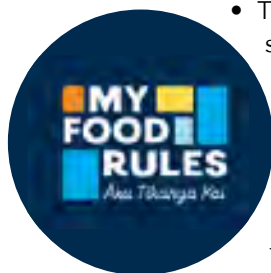
"Food rules are more flexible than they once were, when they used to focus on the place food was made and facilities provided," Dr Dansted says. "These days, there is a more common-sense, risk-based approach to food safety - which puts food businesses in the driver's seat when it comes to managing any food hazards that might arise."

## Unregistered businesses risk fines, delays, prosecution and recalls

If you don't register, New Zealand Food Safety and local councils may take enforcement action (ranging from educational advice, warnings and instant fines, through to harsher penalties including preventing your business operating and prosecution). As well, customers may refuse to accept your goods or use your services if you don't comply with food safety requirements.

You need to register as a food business (with some exceptions) under the Food Act 2014 if you:

- Grow horticultural crops.
- Process harvested foods, such as grain, herbs or spices, nuts and seeds.
- Manufacture foods, including dried or dehydrated fruit or vegetables, shelf-stable grain-based products, and frozen fruit and vegetables.
- Brew, ferment, distil or manufacture alcoholic beverages (including fruit wine), or non-alcoholic beverages (including fruit juice).
- Prepare, serve or retail food (whether from a shop, a market stall, online or via social media).



- Transport or store food (such as providing a food storage or distribution service).
- Import food and beverages for sale (including ingredients).
- 'Give' food away to promote your business.

"For the horticulture industry, what you need to do depends on the type of food you make or sell," Dr Dansted says. "Some foods pose fewer food safety risks than others, so growers have fewer rules to follow."

Under the Food Act, businesses that make or sell food (unless exempt) need to follow either a Food Control Plan or a National Programme. A Food Control Plan sets out what steps a higher-risk business making or selling food needs to take to make safe and suitable food. Medium to low-risk businesses can follow a National Programme which means they don't need to use written Food Control Plans, but must still register the business, meet food safety standards, keep some records, and have the business verified.

“

**Some foods pose fewer food safety risks than others, so growers have fewer rules to follow**

To support the horticulture industry New Zealand Good Agricultural Practice (NZGAP), Global Good Agricultural Practice (GLOBALG.A.P.) and British Retail Consortium (BRC - limited to fresh produce) have all been approved as Template Food Control Plans under the Food Act. If you are a member of these programmes, talk to your industry association about how they can help you register.

Uncertified growers, packers, transporters and wholesalers have the option of joining a GAP scheme or may need to register a National Programme with their local council.



You can go to [www.foodsafety.govt.nz/myfoodrules](http://www.foodsafety.govt.nz/myfoodrules) and complete the online questionnaire to find out:

- Which plan or programme you need to use.
- How to register your food business.
- Who can verify (check) your business.

### Do you import fruit and vegetables for sale?

Imported food includes ingredients used in the manufacturing of beverages (e.g. hops).

If you want to import food and beverages into New Zealand, you must:

- Be registered as a food importer with New Zealand Food Safety or use an agent who is registered. For details, go to [www.foodsafety.govt.nz/register-as-a-food-importer](http://www.foodsafety.govt.nz/register-as-a-food-importer)
- Check the food you want to import for sale is safe and suitable.
  - Know the ingredients in the food, so that Australia New Zealand Food Standards Code rules are met, such as correctly labelling the presence of allergens.

- Ensure the food is stored and transported safely.
- Keep good records to show how you've sourced and kept food safe.
- Have a plan in place to recall any food you have imported, knowing who you sourced it from and sold it to.

- Comply with other New Zealand laws, including the Biosecurity Act 1993, and Customs and Excise Act 2018.

If you import food, and are not correctly registered, your consignment may get stopped at the New Zealand border. It could also be delayed or recalled. Either way, this will cost you more. ●

Find out more at [www.mpi.govt.nz/importing-food](http://www.mpi.govt.nz/importing-food)

**Any questions about food rules?**

Contact New Zealand Food Safety at [foodactinfo@mpi.govt.nz](mailto:foodactinfo@mpi.govt.nz) or 0800 00 83 33.



# Fruitfed Supplies' product trials benefit growers and the industry

*As a grower, you want reassurance when you select a product for a spray or control programme that if it has been assessed, it will deliver results on a specific crop in New Zealand conditions.*

Performing this task for growers is the Fruitfed Supplies Research and Development (R&D) team led by manager, Kevin Manning. The team undertakes more than 50 product trials annually throughout the major growing regions of New Zealand: Pukekohe and Canterbury for trials on potatoes, onions and leafy greens; Hawke's Bay and Marlborough/Tasman for grape and apple trials, and the Bay of Plenty for citrus, avocado and kiwifruit trials.

"We test how a product performs in New Zealand's climate and how its results compare to similar products already on the market, offering our own assessment of its effectiveness," says Kevin.

The breadth of assessments conducted is wide ranging, as Kevin explains. "We trial various agri-chemical, biological and organic products in areas such as pest and disease control, plant growth regulators, herbicides for weed control and dormancy bud breakers. We not only look at product efficacy, but with equal importance, test to see if a product damages a crop or fruit."

In most growing situations, products are not used in isolation but rather alongside other products within a control programme. For this reason, along with efficacy, Fruitfed Supplies' trials assess what products are compatible for use within a programme. As a grower this information, including product choice and timings, is critical when creating a successful spray or control programme in consultation with a Fruitfed Supplies Technical Horticultural Representative.

Fruitfed Supplies' trials, as Kevin explains, are of great importance to the horticultural industry. "With fresh produce exports facing phytosanitary barriers, growers want to be confident their produce is ready for export. The bar is very high; to ensure access to a number of export markets growers face a nil tolerance for a range of pests and diseases."

Kevin and his team are involved in product trials for two or three years before the assessed product may gain registration for use in New Zealand. This gives the Fruitfed Supplies team a real advantage, as when that product arrives in PGG Wrightson retail stores, a sound knowledge



Marcus Fitzsimmons, Technical Advisor, assesses one of his apple trials in Hawke's Bay

of the technical application of the product already exists. For customers, this means they are being recommended a robust control programme.

In Katikati, grower Sean Carnachan has been growing kiwifruit for the last 38 years and actively supports the Fruitfed Supplies R&D team, hosting a trial on his Sungold kiwifruit crop. By playing a part in R&D, Sean will be able to see the results first-hand. "I get technical advice from the Fruitfed Supplies team. It's a two-way conversation; I hold knowledge as a grower and the technical team provides the advice," says Sean. ●

## Fruitfed Supplies

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

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

# Introducing Norshield® 45WG New Technology from Europe

*Grochem launches a new generation copper formulation to the Apple market.*

Developed in Europe and manufactured in Norway by Nordox to meet tough new regulatory standards, Norshield 45WG is now a leading copper product in France, Italy and Spain showcasing low use rates and international organic certification. Norshield 45WG has superior rain fastness and is BioGro approved for Organic crop use in New Zealand.

Norshield 45WG contains 450g/kg Cuprous Oxide and is registered for use on apples for canker control, reducing copper use rates by 33%, while maintaining the same level of efficacy under extreme disease pressure situations.

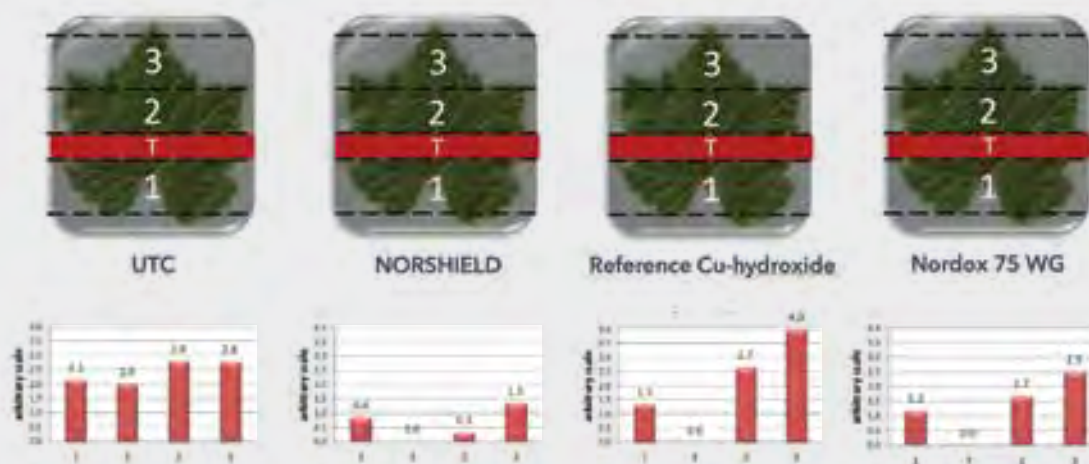
Why the change? Norshield 45WG has more activity per gram of copper thanks to a new improved formulation and reduced particle size. This has shown to have better disease efficacy at lower use rates of active copper per hectare. New label rates and crops are to be added in the future as more trial work is completed in New Zealand.

However, scientists found the new formulation had crop enhancement properties. What they discovered was Norshield 45WG activated the plant's own defense systems through inducing resistance and using the plant's natural pathways, providing disease control beyond the contact zone of applied product.

This was demonstrated in a laboratory by treating grape leaves in only one zone, on the underside of the leaf, then inoculating the leaf with downy mildew. Efficacy comparisons were made alongside other commonly used copper fungicides and tested for disease control outside of the area treated.

The trial results opposite show in red the treatment area and the level of control by each copper product in the untreated zones. This trial illustrates how Norshield 45WG induces resistance using the plant's natural pathways after being applied to a single point on the leaf surface. ●

## Severity 7 days after inoculation



Effect of the treatments – NORSHIELD has increased efficacy at the same rate of copper...



Norshield is available in a 10kg bucket from your local horticultural merchant.

**grochem**

To learn more about Norshield please call your local technical advisor, Grochem representative or visit [www.grochem.com](http://www.grochem.com).



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