NZGROWER & ORCHARDIST

VOL 98 | NO 08 | SEPTEMBER 2025

HORTICULTURE NEW ZEALAND

FRESH DIRECTION

Page 6

IN THIS ISSUE

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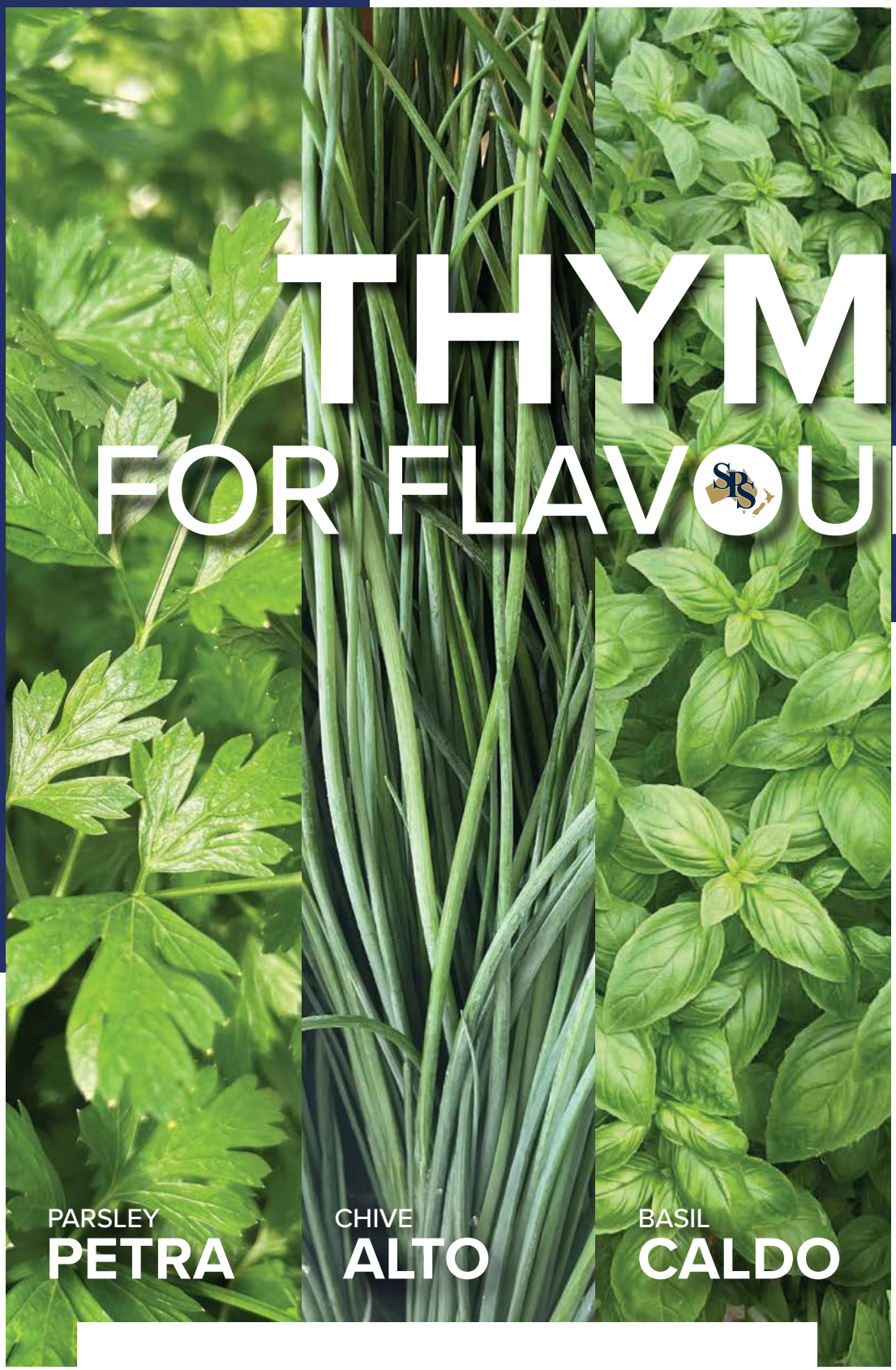

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CONTENTS

SEPTEMBER 2025

People and community

Sector resilience

On the cover:

The young team of family leaders at Wilcox. See page 6.
Photo by Helena O'Neill

Innovation and know-how

Markets and value add

Industry good

What's New

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

NZGROWER & ORCHARDIST

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PEOPLE BEHIND THE PRODUCE

It was so good to catch up with growers and sector partners at the 2025 Horticulture and Recognised Seasonal Employer (RSE) conferences recently.

Bernadine Guilleux: HortNZ chair

For me, it was clear that our sector's strength lies in the people who drive it forward.

The annual Industry Awards showcased those making a tangible difference.

Andrew Fenton received the Horticulture Bledisloe Cup for over five decades of leadership, advocacy and practical expertise across kiwifruit and horticulture.

Daniel Kenna, awarded the President's Trophy, is making his mark through sustainable orchard practices and mentoring the next generation of horticultural leaders.

Innovation and sustainability were also front of mind.

Gordon Skipage and Pranoy Pal of Trevelyan Pack and Cool Ltd were recognised for regenerative agriculture trials providing evidence-based pathways for climate-resilient production.

The Manaaki Award honoured the collaboration of T&G Global, Hastings Health Centre and OrbitProtect/nib NZ in establishing New Zealand's first RSE satellite health clinic, improving seasonal workers' access to healthcare. Stewart Burns received the Life Member Award for his long-standing commitment to grower collaboration, sector development and innovation.

These awards highlight the heart of our sector – dedication, collaboration and a commitment to continuous improvement.

From growers and researchers to those supporting workers and communities, it is the people behind the produce who make New Zealand horticulture exceptional.

Celebrating their achievements reminds us that our success grows from the passion, innovation and leadership of our people – not just the nutritious fruit and vegetables that we harvest for New Zealanders and customers in our global markets.

Thank you to everyone who attended the conferences and Annual General Meeting.

> **"...it is the people behind the produce who make New Zealand horticulture exceptional**

The event was the largest yet, and for this reason, I want to make a special shout out to the people behind it all – notably HortNZ general manager engagement Kate Longman, HortNZ general manager projects and programmes Rebecca Fisher and their teams. Finally, thank you to HortNZ chief executive Kate Scott for cultivating a high performing team to serve our growers. ●

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ACCOMMODATION ECONOMICS MUST STACK UP

The recent Horticulture and Recognised Seasonal Employer (RSE) conferences in Wellington were a real highlight, bringing growers, industry leaders, government, researchers and partners together to focus on the opportunities and challenges ahead for our sector.

Kate Scott : HortNZ chief executive

There was strong engagement and a clear sense of shared ambition – from discussions on innovation, trade and workforce to the importance of sustainability and resilience. It was great to see the sector's optimism and determination on full display.

The Government's decision to allow only a 2.5 percent increase in RSE accommodation cost recovery was certainly a topic of discussion.

From 18 August, RSE employers are permitted to lift weekly accommodation charges for workers by this limited amount to "reflect rising costs".

But after a six-year freeze, the change falls well short of the reality.

HortNZ has been clear that the modest increase is disappointing and risks undermining the Government's own ambitions for horticulture growth.

Growers will know construction, operational and compliance costs have increased dramatically over that period, and the new settings bear little resemblance to the real cost of providing safe, high-quality housing.

HortNZ has met with Minister of Immigration Erica Stanford to discuss the issue and the Minister also explained the decision to attendees at the conference.

We're encouraged by the Minister's comments that the increase is an interim measure, not a permanent change.

She told conference delegates that the Ministry of Business, Innovation and Employment (MBIE) is working closely with industry and Pacific representatives to develop a permanent, fair and transparent accommodation cost methodology.

This framework will aim to balance the realities of seasonal work, support both employers and workers, and ensure the ongoing sustainability of the RSE scheme.

> **"The RSE scheme has been a success story for nearly two decades, built on mutual benefit**

We believe any future adjustments must be based on transparent and verifiable cost data. Independent analysis from Infometrics shows what a fair, evidence-based accommodation rate looks like – taking into account regional variations, while ensuring worker contributions remain reasonable at no more than 30 percent of income.

The horticulture sector has an ambitious target to double farmgate value. Alongside this, the Government has set its own bold goal of doubling horticulture export values by 2034.

But none of this will be possible without the people to pick, pack and process our produce, and growers cannot secure that workforce without fair and sustainable accommodation cost recovery.

The RSE scheme has been a success story for nearly two decades, built on mutual benefit: essential seasonal labour for New Zealand growers and valuable income opportunities for Pacific communities.

At HortNZ, we know growers take their responsibilities to workers seriously, investing in pastoral care and support to ensure welfare is always prioritised.

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NONE OF THIS WILL BE POSSIBLE WITHOUT **THE PEOPLE TO PICK, PACK AND PROCESS OUR PRODUCE**, AND GROWERS CANNOT SECURE THAT WORKFORCE WITHOUT **FAIR AND SUSTAINABLE ACCOMMODATION COST RECOVERY**

With the Government making it clear it will not tolerate poor employment practices or employers failing to meet standards, we must continue to uphold our obligations and hold ourselves accountable.

> "...investing in pastoral care and support to ensure welfare is always prioritised

A key part of that commitment is safe, good-quality housing. Many growers have lifted standards significantly in recent years, but the strain of doing so without cost recovery is becoming unsustainable.

To continue building trust and delivering on shared values, the sector has also supported new initiatives such as Whānau Moana Nui – 'family of the Pacific'. This pilot programme aims to set a world-class benchmark for industry-led, government-enabled labour mobility.

Growers want to do the right thing by their workers. But goodwill and commitment alone cannot bridge the gap when the economics don't stack up.

If New Zealand is serious about growing horticulture and protecting the integrity of the RSE scheme, we need policy settings that are fair, future-proofed and sustainable – for employers, for workers and for the long-term success of the sector. ●

Wilcox's new generation of family leaders, from left: Blair Wilcox, Scott Harvey, Scott Wilcox and Akash Varma

BLENDING OLD **WITH THE NEW**

A new generation of growers is taking up management roles at a longstanding vegetable business near Pukekohe. HELENA O'NEILL talks with Wilcox's chief executive and a trio of youthful family-linked managers.

A fourth-generation family-owned and operated business, A.S. Wilcox and Sons grows potatoes, onions and carrots for both domestic and international markets.

Over the past few years, several personnel changes have led to the formation of a youthful management team under the guidance of Wilcox's chief executive, Akash Varma.

Akash took up his new role in December last year, after seven years with the company, initially in operations, then with the sales teams. He says some of the core management team are in their thirties and have family links to the business.

"The ownership structure of Wilcox is Kevin Wilcox, who has been managing director here for 25 to 30 years, and his wife, Debbie. Then there's his brother Brent Wilcox, with wife Jane, Scott and Blair's parents. John and Mary Anne Wilcox, another owner and key account manager, and there's my wife Anna and I as owners too. Scott Harvey and I come under Kevin's family as in-laws."

Akash grew up in Pukekohe and spent time in the summer holidays working with local growers like Bhula Das and Wilcox. He went to school at Pukekohe High before studying commerce at the University of Auckland. After graduation, he joined Mainfreight's graduate programme, also working for that company overseas before coming back to New Zealand and spending a further four-and-a-half years with them before joining Wilcox at the end of 2017.

Having a young family with Anna (née Wilcox) means that balancing work and family life is key. Staying close to family has been important for us, he says.

Wilcox has a central packhouse at their Pukekohe site and a packhouse in Rakaia

Blair Wilcox, potato crop manager, says it's about creating the environment to meet expectations, goals, and objectives.

"We grew up around the farm, working in the school holidays, and we were always encouraged to get around things and learn the ins and outs. But we were also encouraged pretty strongly to go away for three or four years to work in other businesses. Then, when we came back, we had to apply for a role within the business."

> **"...we were always encouraged to get around things and learn the ins and outs**

Blair spent some time in the United Kingdom before working for LeaderBrand in Gisborne.

One of his highlights with Wilcox is introducing broccolini as a product for the business. Blair learned more about the vegetable while visiting growers overseas and realised there was a space to deliver a consistently fresh product year-round that could be locally grown. The broccolini have been part of their regular crops for about five years.

Home production manager Scott Wilcox worked on a carrot farm in Germany for five months, later taking up a role in Hawke's Bay on a hydroponic blueberry orchard.

Wilcox employee Sangeeta packing washed Vivaldi potatoes, which love growing in the winter alpine-like conditions in Ohakune

"It was good to gain some experience in covered cropping. They were developing a big site there, so it was more construction than growing. It was really interesting and great to pick up some valuable life lessons and the skills you get from being away.

"I always had the drive to come back and be a part of the business. It's more of a family business rather than a family farm. So there are a lot of processes and protocols around working there as a teenager. There were definitely plenty of opportunities."

Meanwhile, Scott Harvey grew up on a sheep and beef farm in the Wairarapa, before he came to Wilcox in 2018.

He already had a Bachelor of Agricultural Science (Hons) from Lincoln University under his belt and experience working as a sales agronomist, but says he found horticulture provided different and interesting challenges.

"I went into a sales role before joining Wilcox. This is kind of a middle ground with vertical integration of the business. It's still a growing business like sheep and beef, but here I'm exposed to the whole supply chain, which appeals to me.

"I started off working in crop support on the potatoes side, then transitioned across to the onions."

He is now managing the onion crop programme for the company, and his role incorporates the whole supply chain, from planning and growing a crop, through post-harvest handling to sales and marketing.

Scott Harvey was also a HortNZ Leadership scholar last year, and says the programme is a very good pathway for people to progress in the sector.

Developing strong teams driven by quality and customer focus has been key to Wilcox's success, Akash says.

"The real backbone to our business is our amazing team. We have 220 full-time team members across New Zealand, which goes up to 300 odd during the season. They represent over 14 nationalities. The longest serving team member is still going with over 50 years of service."

Looking forward, one of the key problems is how to get out of the challenging space the vegetable industry is in, Akash says.

"We're looking for the next generation to come through. Do they have the energy, the passion? We've got the sense that it's there; it's not something that we take for granted. You need to have those good foundations – good purpose, good values, good outcomes to move forward," he says.

Blair agrees. "If we're displaying it and living those values really well, then it should drive our behaviours not only through this leadership group but across the business."

Wilcox has four main growing areas across the country. Northland provides the start of their early-season potatoes (Perlas), which benefit from limited frosts in the region. Pukekohe is the company's headquarters, affectionately dubbed the 'home farm', with early spring production of potatoes, carrots and onions in clay loam, volcanic-rich soil. The soil is famous for producing long-keeper onions.

Further south in Matamata, the good, free-draining soil with a sandy base helps produce summer potatoes, carrots and onions.

Carrots and winter potatoes are grown in Ohakune through the summer, after being planted out in October and November. Stored in the ground through winter, the carrots and potatoes are easy to dig from the volcanic ash soil. It's the ideal region in the North Island for washed Vivaldi potatoes, which love the winter alpine-like conditions.

They have a central packhouse at their Pukekohe site and operate a packhouse in Rakaia where they collaborate with growers in the mid-Canterbury region. Late-season potatoes, carrots and onion crops thrive in the productive soil and climate there.

"We've been through a period of challenge, so getting 'back to basics' and 'focusing on the core' of our business are important elements that have really established us in the past," Akash says.

> **"It was really interesting and great to pick up some valuable life lessons and the skills you get from being away**

"It has been good reflecting on past stories and products like our Perlas that have been really successful for us. How do we ensure that the story isn't lost along with the meaning and learnings we had?

"Then we're looking at some of our other products and innovations that are coming through, like our Beta Bites, growing methods and what we're doing in terms of partnerships, like with our broccolini, as an example. Where there is growth and differentiation, it keeps that energy going as we work at making a difference and limiting that commodity space and price battle." ●

So Sweet managing director Matthew Malcolm with the company's new robotic laser weeder from the United States in the paddock of April-sown carrots

ZAPPING WEEDS IN SOUTHLAND

There's the steady crawl of the large tractor, the faint sound of zapping, bright points of light on the ground followed by puffs of smoke.

Karen Trebilcock

The white upright box towed over carrot paddocks late winter near Woodlands in Southland might turn a few heads, but few will realise that it's a killer robot with an AI brain.

But they don't need to worry, because what it's killing is weeds.

The Carbon Robotics G2-200 LaserWeeder from the United States is the first of its kind in New Zealand.

So Sweet managing director Matthew Malcolm saw a similar model working in the Salinas Valley in California in September two years ago when he was part of the Callaghan Innovation delegation to FIRA USA 2023. He said then he wanted to buy one.

But its six-metre width made it impossible to get through Southland gateways and it would need a pilot vehicle on the roads. Plus, it came with a six-metre width price tag.

However, his visit to California was followed with a visit by Carbon Robotics to Southland.

"The guy saw all our fences and understood straight away," Matthew says.

"Later he rang me and said they were developing a two-metre modular laser weeder. And it came with a two-metre price tag. So we bought one."

It arrived in mid-July with a technician. After a day and a half of unpacking and setting up, Matthew and son, Jesse, who now looks after it day to day, went to a paddock of carrots planted in April, set it to carrot mode and away it went.

"For Jesse, it's an exciting opportunity to combine modern agri-tech solutions with the knowledge and care passed down through generations before him."

Working in the right paddock, where weeds are just emerging, the expected speed is a kilometre per hour.

"However, it is going super slow because of the size of the weeds from winter. It's not really made for this but it's still making an impact."

The weeder comes in metre modules so can be two, three, four, six or more metres wide. There is one working in California that's 16m wide.

It identifies weeds using high-resolution cameras linked with AI. If it's not sure what the cameras have taken a photo of, it uses its Starlink connection to check in with the other Carbon Robotics weeders working around the world for an AI discussion (So Sweet's weeder is number 134).

The centre of the weed has been burnt by the laser

The precision lasers aim at the centre of the weed, with sub-millimetre accuracy, and a bright light and a puff of smoke later the weed's cell walls are destroyed.

"It works best when the weeds are just emerging, even too small for us to see," Matthew says.

The carrots are left untouched and the soil undisturbed. There is just the slight smell of burnt vegetation lingering in the still-frosty Southland air.

By halfway through the day, it had killed 155,000 weeds. Matthew expects it would take out six million in the 2ha paddock of carrots when it had finished.

"That's a lot of hand weeding."

The electricity it needs is from a generator on the diesel tractor's front PTO which also works as a counterweight for the two-tonne weeder. The upper two thirds of the white box contain coolant for the lasers and the Starlink aerial is at the top.

There is an annual licence fee, except the first year which is free, for the continual upgrades to the software. The next upgrade, expected soon, will automatically control the speed of the tractor to suit the weed burden – the only thing the tractor driver now must worry about. They're completely left out of the AI discussion on what is a weed and what is a carrot happening behind them.

Matthew says one day the tractor won't even need a driver.

"I'll just sit at my desk in my office and will be able to see where it is."

Once planting gets underway in Southland, it'll be working around the clock.

"The only thing that stops it is rain. It just gets too muddy. But it's okay in wind and in frost."

> **"It works best when the weeds are just emerging, even too small for us to see**

So Sweet use a four-year rotation for its carrots and parsnips with the ground brought back from pasture each time. The stale seed bed technique will still be used with an LPG flame burning off weeds after cultivation two or three times in the one to two months before planting. The last time is just before the carrots and parsnips strike.

Matthew checks in with the operator of the laser weeder. Note the weeder's generator on the tractor's front PTO

Bright lights and puffs of smoke come from the weeder as it works along the carrot rows. The top two thirds contain coolant for the lasers, above which is the Starlink aerial

But after that, besides for cultivation between rows, in the past it has been hand weeding with mostly university students on holiday lying face down on a bed behind the tractor.

"It can be quite relaxing although some of the students do call it 'soul destroying'," Matthew says.

"I don't think any of them will miss it. They'll do harvesting instead which they find a lot more enjoyable."

But it's not just about freeing up staff. So Sweet aims to have all its carrots and parsnips, whether organic or not, spray free.

"We want to eliminate all herbicide usage from the food we produce."

Matthew has long watched what herbicides do to the health and growth rate of his carrots.

"Of course we never use fungicides or insecticides on our organic carrots, but we have never needed to either. By not using herbicides, and using the robotic weeder instead, we hope to be completely spray free.

"And we've been told to expect a yield increase of about three percent."

He's also going to trial the robot on thinning carrots. The carrots are precision drilled so in theory they don't need thinning, another job which in the past could only be done by hand.

But weather, bird and animal damage take out some of the sparsely planted carrots when they emerge. Denser planting, followed by robotic thinning, could solve the problem and increase yield even further.

> **"But it's not just about freeing up staff. So Sweet aims to have all its carrots and parsnips, whether organic or not, spray free**

"The weeder doesn't mean we're going to expand the number of hectares we use. It may decrease them because we will be able to grow more carrots on less land so that's good for the water and the soil."

He's looking forward to when So Sweet can put spray free on their supermarket packaging, hopefully in autumn next year.

"I did see sweet corn packaged in the States recently as robotic weeded."

And as for the curious Southlanders looking over the fence, Matthew says a dairy farmer has already asked if he could use the robotic weeder for ragwort in his paddocks. ●

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Central Otago Young Grower of the Year 2023 Greg Durand has been appointed manager of Prunus Orchards

KIWI CRUNCH CONSOLIDATES IN CENTRAL OTAGO

It has been busy times for Kiwi Crunch over the past 20 months as it has expanded into the pipfruit sector in Central Otago as well as into the cherry industry.

Aimee Wilson

The owners of the Hawke's Bay-based company bought 132ha of orchards after Cherri Global was liquidated in 2024 and added CAJ Apples to their portfolio as well – the biggest apple grower in Central Otago.

Establishing 'Prunus Orchards' for the cherry business, Kiwi Crunch then created a whole new company – Consolidated Fruits – made up of the three brands.

Together the three companies comprise more than 880 hectares of orchards, producing over 35,000 tonnes of apples, 180 tonnes of pears, and 750 tonnes of cherries each year.

Consolidated Fruits general manager of sales James Bennett says the concept behind bringing all the brands (Prunus Orchards, Kiwi Crunch and CAJ Apples) under one company was to streamline operations across the group, "allowing for shared resources, staff, integrated sales and getting access to group bulk buying discounts."

He says the three companies, based in Hastings and Central Otago, will continue functioning independently, but will leverage shared resources.

"With a large volume of apples coming out of Central Otago (over 800,000 cartons annually), the proximity of CAJ and Prunus Orchards operations is advantageous. When necessary, we can utilise resources and pipfruit staff with the cherry harvest, and vice versa, ensuring that we can pick at peak ripeness."

TOGETHER THE THREE COMPANIES COMPRISE MORE THAN **880 HECTARES OF ORCHARDS**, PRODUCING OVER

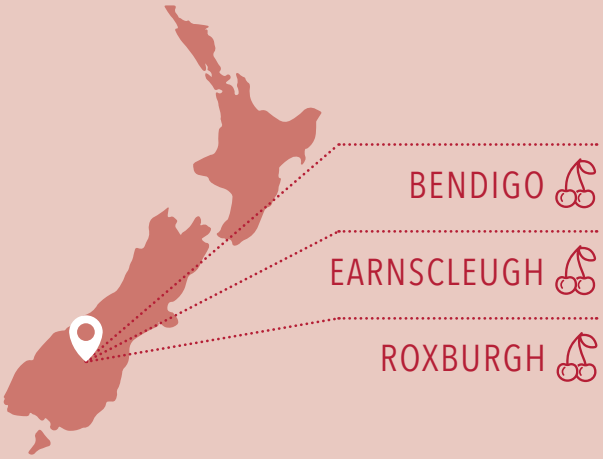
35,000T OF APPLES

180T OF PEARS

750T OF CHERRIES

EACH YEAR

PRUNUS ORCHARDS MANAGES **132HA OF CHERRY ORCHARDS** IN THREE CENTRAL OTAGO LOCATIONS



Prunus Orchards expects to harvest over 750 tonnes of cherries in the 2025/26 season across its range of planted varieties including Kordia, Staccato, Regina, Sweetheart® and Lapins.

This will increase as the plantings continue to mature, with volumes expected to double in the next two years.

The first cherry harvest fell only one month after Kiwi Crunch purchased Cherri Global in October 2024, leading the company to utilise third party exporters for ease, but will move in-house ahead of the 2025/26 season.

The company is currently targeting markets in Taiwan, China and Viet Nam but will look to develop secondary markets in Hong Kong, Japan, Korea, Thailand, Malaysia and Singapore as more volume comes online.

Central Otago Young Grower of the Year 2023 winner Gregoire Durand is now the Prunus Orchards South Island manager (cherries). He has been working on the former Cherri Global orchard since its inception in 2017.

Prunus Orchards manages 132ha of cherry orchards in three Central Otago locations (Roxburgh, Earnscleugh and Bendigo), with all its new plantings utilising the planar cordon growing system.

> **“We can continue on with the great culture and knowledge developed in previous years**

That involves training trees on a two-dimensional plane, often in narrow rows, to maximise light interception and improve fruit quality.

The system was developed in conjunction with Plant & Food Research (a group within the newly created Bioeconomy Science Institute) and resulted in significantly better yield per hectare, increased size and higher quality.

The former Cherri Global operation near Bendigo was acquired by Kiwi Crunch last year and has now been renamed Prunus Orchards

"We are really excited for the upcoming harvest," Greg says. "We've been working really hard this off season on a number of orchard improvements and we can't wait to see all the hard work pay off in the form of great-sized, premium cherries."

Greg says the day-to-day running of the orchards was similar under the new company, and they were fortunate to have maintained key staff from Cherri Global. "We can continue on with the great culture and knowledge developed in previous years."

Prunus Orchards has a strong focus on growing premium quality large cherries for export, which is why they are installing new irrigation systems utilising innovative technology in the coming months prior to the season.

"We are also working on a research and development project focused on maintaining quality and extending cherry shelf life beyond 45 days."

Greg reports to Gareth Hope, Consolidated Fruits' new manager for South Island Cherries and Southern Orchards Apples.

Gareth is part of the Hope family of orchardists in Hawke's Bay and his uncle Graham has worked for the company for over 20 years, as operations manager, while brother Nigel is the chief operating officer. "Growing fruit is in the Hope family blood, and we are lucky to have three of them," James says.

"We are also fortunate that the Van der Voort family, who have operated CAJ Apples in Ettrick for more than 60 years, are still heavily involved – with Jackie van der Voort the chief executive of CAJ Apples."

The 400ha of apple orchards, are spread across seven locations in Roxburgh and Earnscleugh, comprising 11 different apples varieties.

> **We've been working really hard this off season on a number of orchard improvements**

According to their website, the packing operation at CAJ is state-of-the-art and since the upgrades and installation of the Greefa machine, the packhouse has increased its production by 60 percent.

Meanwhile in Hawke's Bay, Kiwi Crunch is one of the region's largest apple growers with over 450ha of orchards and two large packhouses.

"The coming together of all the produce businesses is not only an exciting prospect for us, but our expansion also allows us to extend our offerings to our customers whom we have established long-term relationships with," James says.

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The RSE Conference featured a discussion about the experiences of both employers and employees, with from left: Genevieve Griffin-George, PICMI; Emma Clarke from Woodhaven Gardens; RSE worker Lucy Morou; and (not in shot) Adam Jory from Woodhaven Gardens

HORTICULTURE SECTOR **UNITES AT ANNUAL CONFERENCES**

More than 800 people came together in Wellington on 26–27 August for the combined Horticulture and Recognised Seasonal Employer (RSE) conferences.

Attendees included growers from across the country, Government ministers, international business leaders, scientists, economists, retailers and sustainability experts.

Horticulture New Zealand chief executive Kate Scott says the conferences lived up to their themes: Honotahi – together as one for RSE, and Celebrating horticulture – our people, produce and potential for horticulture.

"People took away real insights from the presentations, forums, workshops and breakout sessions," Kate says.

"It was also good to hear directly from RSE employees, alongside employers, and sending countries, reflecting the importance of the programme to New Zealand and the Pacific. There were great opportunities to connect, network and share ideas across the supply chain."

Roadmap for growth

Conference attendees heard from Government Ministers: Nicola Willis, Minister for Economic Growth, Erica Stanford, Minister of Immigration, and Nicola Grigg, Associate Minister of Agriculture – Horticulture.

Minister Grigg used the event to unveil the joint Aotearoa Horticulture Action Plan Implementation Roadmap, which aims to double horticulture's farmgate returns by 2035.

She said the roadmap builds on the sector-led Aotearoa Horticulture Action Plan and includes practical steps to boost resilience and growth. The focus is on building strong foundations, driving farmgate value and enabling a future-fit sector.

"Key to the success of the roadmap will be collective input and support from industry, government, Māori and research providers," she said.

More than 800 attendees at the opening of the Horticulture and RSE conferences in Wellington

"This support signals a joint commitment to implement the plan, and the roadmap will be the driver of its successful delivery."

Kate welcomes the roadmap, saying it reflects the sector's ambition and the Government's recognition of horticulture's potential contribution to New Zealand's economy.

Thought leaders

A highlight was the keynote address by Jim Haworth, former vice president and chief operating officer of Wal-Mart Stores and now chief executive of US-based Peak Global Holdings.

Jim outlined the dramatic transformation of global retail and food consumption, shaped by technology, logistics and changing consumer behaviour.

> **"People took away real insights from the presentations, forums, workshops and breakout sessions**

He said cold-chain reliability and logistics had become critical to delivering on consumer expectations, while omnichannel shopping was now the norm.

"Consumers expect ease, trust, personalisation and consistency across every channel," he said.

Stephanie Urae from the Papua New Guinea Labour Mobility Unit at the RSE Conference

The conference crowd mingle with exhibitors between sessions

"For growers and suppliers, success lies in understanding these shifts, staying close to consumers, building trusted brands, validating sustainability practices and educating global markets about quality and provenance."

He emphasised that New Zealand's horticulture sector, recognised worldwide for premium produce and high standards, has an enormous opportunity to grow – provided it embraces innovation, connects strongly with international markets and keeps consumers at the centre.

Investor, entrepreneur and agritech leader Arama Kukutai focused on the role of innovation and capital in driving horticulture's future.

Kukutai said New Zealand is uniquely positioned to leverage the combination of genetics, environment and management as a competitive advantage.

While global agritech investment levels have experienced a correction, he said the fundamental drivers of innovation, productivity and sustainability remain strong.

He also explored the contrasts and convergence of indoor and outdoor production systems, the implications of an ESG reset, and the drivers behind technology adoption.

HortNZ chief executive Kate Scott speaking at the Horticulture Conference

A central theme of his address was the evolving role of public research organisations, and the opportunity for New Zealand to rethink their mandate as a lever for innovation and competitive advantage.

He also highlighted the Māori economy as a cornerstone for unlocking shared potential, particularly in food and fibre.

The conference also provided updates on the broader trading and economic environment. Sara Meymand, Divisional Manager Trade Policy and Negotiations for the Ministry of Foreign Affairs and Trade, shared insights into the complex global trading environment and what it means for New Zealand exporters.

Economist Shamubeel Eaqub painted a picture of the evolving economic landscape of the food and fibre sector, highlighting both macro and micro forces shaping horticulture's future.

Grower-led sessions

Industry programmes also featured prominently.

Daniel Sutton, research, development and extension manager for Vegetables NZ, spoke about the role of Te Ahikawariki in transforming New Zealand's vegetable sector.

Bernadine Guilleux, HortNZ chair with Horticulture Bledisloe Cup winner Andrew Fenton and HortNZ deputy chair Brydon Nisbet

Livia Estherhazy, programme director for A Lighter Touch, outlined progress, key findings and future directions from the industry–government partnership focused on crop protection innovation.

The programme featured a wide range of grower-led sessions and workshops. Topics ranged from succession planning and intergenerational change, to sustainable investment and financing, integrated pest management, the review of horticulture skills and qualifications, and the future of energy, infrastructure and food safety.

An unusual but popular session was Play Your Way to Success in a Changing World, led by Pike Stahlmann-Brown, principal scientist at the Bioeconomy Science Institute.

Participants played The Catchment Game, an interactive board game developed by Manaaki Whenua Landcare Research (now part of the Bioeconomy Science Institute) with support from HortNZ.

Players stepped into the role of growers navigating shifting markets, unpredictable weather and social pressures – sparking lively debate and laughter.

Pacific leadership

The merged conference format gave prominence to the RSE programme, with sessions led by both Pacific representatives and New Zealand stakeholders.

> **Consumers expect ease, trust, personalisation and consistency across every channel**

RSE workers themselves shared their experiences – from leaving home to working in New Zealand orchards and vineyards. Employers spoke about balancing operational needs with pastoral care, cultural understanding and long-term relationship building.

Pacific leaders provided valuable context on their countries' workforce ambitions and the importance of labour mobility pathways.

Jone Maritino Nemani, permanent secretary for employment, productivity and workplace Relations in Fiji, Patrick Kaka, deputy director labour mobility for the Solomon

Minister for Economic Growth Nicola Willis highlighted horticulture's export successes

Associate Agriculture Minister Nicola Grigg announced the implementation roadmap for the Aotearoa Horticulture Action Plan

Islands, and Akanesi Feangautapu Polotu Paunga, chief executive of the Ministry of Internal Affairs in Tonga, each highlighted the opportunities and expectations for sustainable labour mobility.

They emphasised that understanding Pacific nations' needs is vital to strengthening partnerships and ensuring the objectives of the RSE scheme remain aligned with those of workers and sending countries.

> **Our goal is to set a world-class benchmark for industry-led, government-enabled labour mobility that reflects our shared values**

Other speakers included Aaron Orr from the Ministry of Social Development, Emma Sherwood from Ministry of Foreign Affairs and Trade and Meriama Taufale from the Eastern Institute of Technology. Ngaire Tihema of Volunteer Service Abroad and farmer and entrepreneur Herman Valvalu discussed GIVE – a values-driven grower-to-grower partnership between New Zealand and Papua New Guinea.

Dr Alisi Holani, labour mobility specialist for the PACER Plus Implementation Unit, explained how PACER Plus is being rolled out and what it means for New Zealand employers.

Fesaitu Solomone, chief executive of the Centre for Pacific Languages, presented new research on the development of an RSE Cultural Awareness Framework, while Dr Charlotte Bedford, Research Fellow, shared the latest data and trends in RSE participation.

Kate Scott also provided an update on the Whānau Moana Nui pilot launched at the 2024 RSE Conference. HortNZ is partnering with employers and Pacific countries to build an industry-led framework that complements the RSE scheme.

"New Zealand's RSE scheme is a success story built on mutual benefit, delivering essential seasonal labour for growers and economic opportunities for Pacific communities," she said. "Our goal is to set a world-class benchmark for industry-led, government-enabled labour mobility that reflects our shared values."

GOVERNMENT OUTLINES APPROACH TO HORTICULTURE

At this year's Horticulture conference, Government Ministers spoke about the sector's growth opportunities.

Minister for Economic Growth Nicola Willis highlighted New Zealand's competitive advantage: "Our horticulture sector delivers products that are trusted, reliable and premium. That's a competitive advantage we can continue to leverage."

She also acknowledged challenges, including the impact of United States tariffs and flooding in Nelson, Tasman and Marlborough.

She said that Government policy aligns with the industry's ambition through initiatives like the Aotearoa Horticulture Action Plan.

Associate Agriculture Minister Nicola Grigg announced the Aotearoa Horticulture Action Plan's implementation roadmap, featuring 52 priority actions over three years, including reducing consenting barriers and protecting horticultural land. She stressed that Government support is only part of the equation – success depends on active industry engagement and collaboration.

At the gala dinner, Todd McClay, Minister for Agriculture, Trade and Investment, praised horticulture's resilience, with export revenue forecast to increase 19 percent to $8.5 billion by June 2025.

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1 *Our RSE Travel Team,* 2 *Our NZEE conference stand*

We also offer a **dedicated Retail Division** that supports both recruitment-related travel and personal holiday bookings. Our experienced consultants, **Judith and Karen**, bring decades of travel industry knowledge and are passionate about delivering personalised, reliable service. Whether you are planning a recruitment trip or a well-earned holiday, they are here to make the process easy and enjoyable.

With a focus on attention to detail, expert guidance and genuine care, Judith and Karen are committed to helping you travel with confidence – whether for **business or leisure**.

If you are looking for trusted travel support from a team that truly understands your needs, **reach out to RSE Travel today**.

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RECORD RAINFALL IN NELSON-TASMAN

The Nelson–Tasman region has endured an exceptional run of severe weather, with rainfall data revealing just how unprecedented recent conditions have been. Weather analysis by Earth Sciences NZ (previously NIWA) shows the area has experienced dramatically wetter than normal conditions, with some locations recording extraordinary figures.

The numbers tell a stark story. New Zealand's wettest location relative to normal was Appleby, where 275 percent of normal July rainfall was recorded, making it the town's third-wettest July since records began in 1932. Earth Sciences NZ climate scientist Gregor Macara says Nelson wasn't far behind, with figure 2 showing just how much wetter than normal it has been in recent months for Nelson and Tasman.

Blenheim and Wairau Valley also observed more than double their normal July rainfall. Tākaka had its fourth-wettest July on record (see figure 3).

The broader picture (figure 1) shows that rainfall was above normal (120–149 percent of normal) or well above normal (>149 percent of normal) across significant portions of both islands, with about 43 percent of New Zealand's climate stations recording these elevated levels. However, the other half of the country experienced drier than normal conditions, particularly Southland, parts of Otago and Canterbury, and the eastern North Island from Napier to Castlepoint.

In the Tasman region the devastating impact came to a head on 11 July, when persistent heavy rainfall caused significant flooding. The highest single-day rainfall reached 164mm at Motueka, triggering widespread damage. Dozens of homes suffered damage and at least four were red-stickered (unfit for habitation), with 21 yellow-stickered. Tasman Mayor Tim King declared a State of Emergency for the Nelson-Tasman region, which remained in place until 17 July.

Approximately 50 local roads were closed, with many schools, kindergartens and playcentres also closed. Around 13,000 homes across Motueka and Golden Bay lost power. Hundreds of people were forced to evacuate their homes, with reports of people requiring rescue from floodwaters.

For the region's crucial horticulture sector, the impact has been devastating. Many growers suffered extensive damage to their orchards, infrastructure and access ways. Land slips, flooding, blocked roads and infrastructure damage have affected growers' operations and income.

The Government and HortNZ have announced a joint $100,000 contribution to support immediate recovery efforts. Applications for the joint funding close on 30 September 2025, with priority given to costs not covered by insurance or other existing support mechanisms.

Additional support includes $300,000 committed to the Mayoral Relief Fund for the rural sector, while growers can access help through the Rural Support Trust on 0800 787 254.

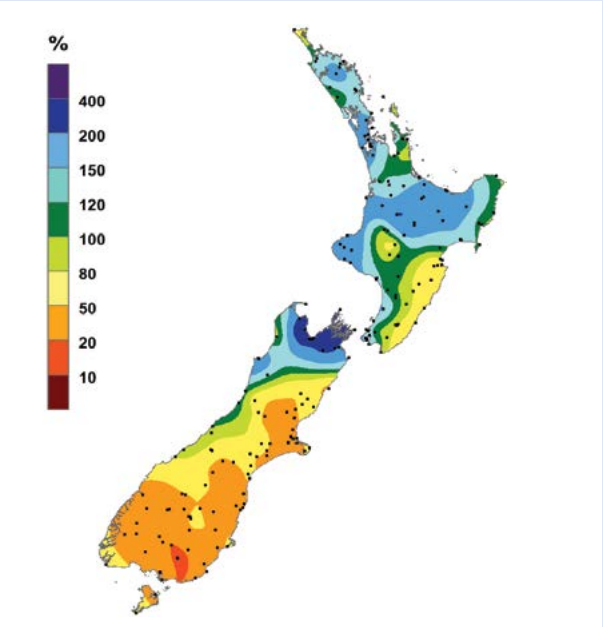


Figure 1: Rainfall in July expressed as a percentage of the 1991–2020 normal shows the exceptional levels experienced in the Nelson-Tasman area

G13222 Nelson Aero

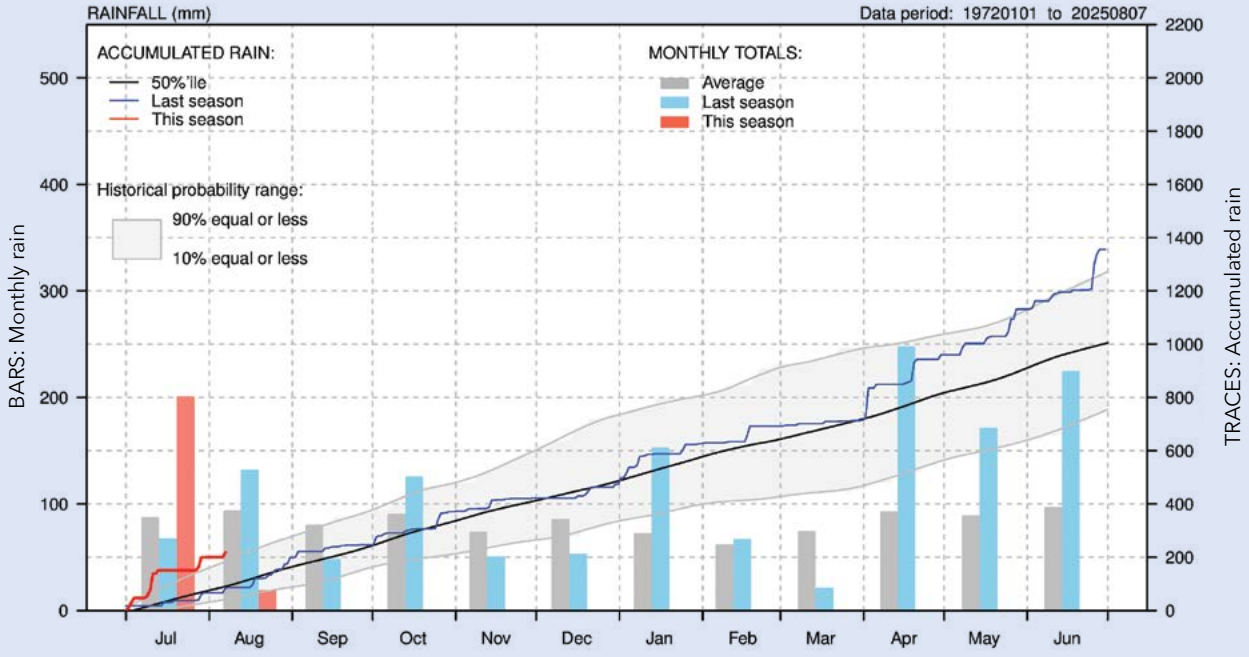


Figure 2: Created in early August, this plot shows how July rainfall at Nelson airport jumped above already elevated levels from April-June to surpass historical probability stretching back to 1972

F02885 Tākaka

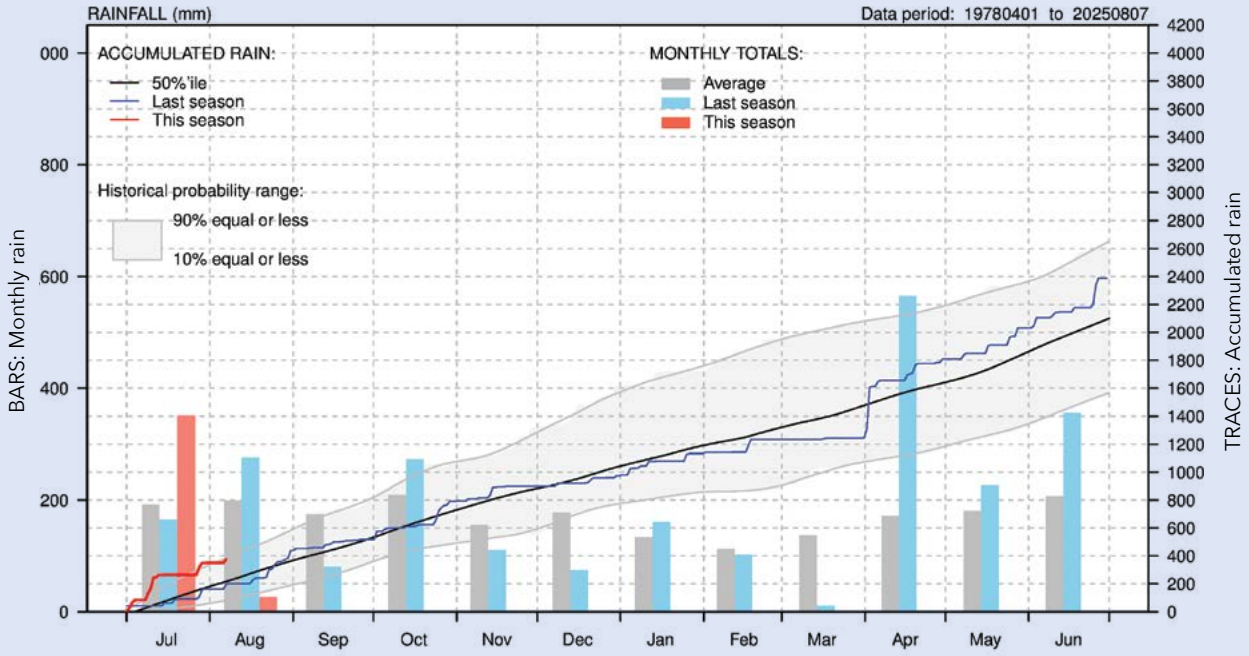
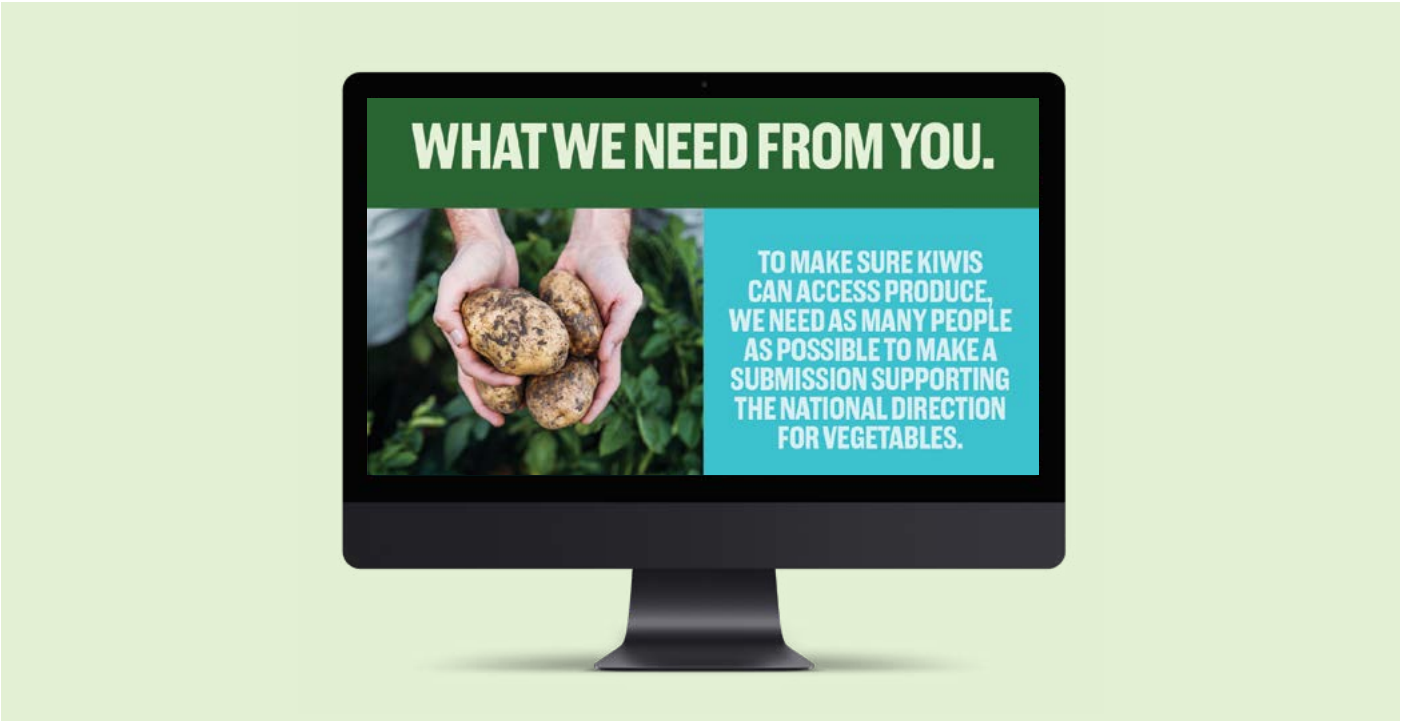


Figure 3: Over the hill in Tākaka, rainfall has also been higher than historical levels, although less extreme than in the Nelson to Motueka area



Authentic public engagement turns consumers into advocates for the very systems that feed them

NEW CAMPAIGN RESONATES WITH NEW ZEALANDERS

Horticulture New Zealand is pioneering a fresh approach to building public support for growers. Following the success of the 'Taste the Yakka' campaign, HortNZ is now using its platform to mobilise public submissions during government consultation – with promising results.

A new campaign has extended traditional government advocacy by actively engaging everyday New Zealanders in policy discussions that affect their food supply.

The journey began with HortNZ's first-ever social licence marketing campaign, "Taste the Yakka," which ran from August to November 2024. The campaign was designed to bridge a significant communication gap, as Bernadine Guilleux, HortNZ's chair, explains.

"This trial aimed to translate complex grower challenges and policy solutions into terms that resonate with everyday New Zealanders who value their vegetables."

The numbers speak volumes about public interest. The original campaign achieved 1.5 million total impressions and 250,000 people reached on social media, with 32,000 website visitors and an impressive 2889 pledges of support. Video content proved particularly engaging, generating 368,000 video through-plays.

> **"The goal of this trial was to make the process of submitting directly to the Ministry of the Environment as smooth as possible for the public**

Reflecting on the campaign, Bernadine says: "The strong results demonstrate many New Zealanders share our concern for vegetable supply security and support our country's vegetable growers."

From awareness to action

Building on this foundation, HortNZ revived the campaign this year with a more action-oriented approach. The follow-up campaign generated 1021 pledges, but more significantly, it served as a launching pad for something new – a public submission drive.

The organisation recognised an opportunity during the Government's big national direction consultation – which included consultation on the proposed National Direction for Vegetables. Despite the limited consultation timeframe provided by the Government for these significant reforms, HortNZ decided to empower ordinary New Zealanders to have their say.

"The goal of this trial was to make the process of submitting directly to the Ministry of the Environment as smooth as possible for the public, and to support the growers' position," Bernadine explains.

HortNZ set up a fully automated process through its new Customer Relationship Management system. This approach removes barriers to participation while maintaining the authenticity and honesty of public input.

The campaign's messaging was deliberately accessible: "Love veges? We need your help to keep them growing.

250,000 PEOPLE REACHED ON SOCIAL MEDIA

32,000 WEBSITE VISITORS

2889 PLEDGES OF SUPPORT

HortNZ's Taste the Yakka campaign achieved 1.5 million total impressions

"Please make your support count by taking two minutes to make a submission on behalf of growers."

The trial submission campaign generated 357 completed submission forms – surpassing expectations for what is a complex policy area that normally attracts little public engagement.

The policy stakes

In addition to generating public submissions, HortNZ's policy team made its own detailed policy submission, supported by the Hawke's Bay Vegetable Growers Association, Onions NZ, Process Vegetables NZ, Pukekohe Vegetable Growers Association and Vegetables NZ.

The submission laid out the case for national direction for vegetables, supplemented by extensive technical evidence, including planning information, freshwater modelling, the new environmental codes of practice for growers and examples of industry environmental research. Grower consultation was a key part of developing the submission, including online and in-person meetings, phone calls and email exchanges.

With the consultation period completed, the Government will review the submissions and make decisions on the national direction.

"We would like to thank everyone who provided feedback and lent their support," Bernadine concludes. "Not just the general public, but also those growers who made their own submissions."

DECIDING NEW ZEALAND'S BIG NATIONAL DIRECTION

On 29 May the Government opened public consultation on the biggest package of changes to national direction under the Resource Management Act (RMA) in New Zealand history, with proposals to streamline or remove many of the regulations that it believes are holding the primary sector back from growth.

National direction refers to rules and policies sitting under the RMA that inform how councils develop and implement local plans and rules. The Government gave stakeholders and the public until 27 July to submit on the proposals.

In what became a mammoth effort in a short timeframe, HortNZ's policy team filed nine submissions on national direction for Water Storage and Vegetables, national policy statements for Freshwater Management, Highly Productive Land, Natural Hazards, Infrastructure and Electricity Networks; and national environmental standards for Electricity Networks and Granny Flats (Minor Residential Units).

Compiling these submissions required reaching strategic positions on sometimes controversial topics, pulling together technical evidence, grower feedback and industry views to best represent the diverse perspectives of the horticulture sector.

HortNZ's final submissions on the complete package of national direction are available on its website.

With consultation now completed, the Government will make decisions on most of this national direction package, and it is expected to become policy in late 2025/early 2026. Two new bills will be introduced to Parliament to replace the RMA late in 2025/early 2026. HortNZ expects an opportunity to submit on these and speak to Select Committee.

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STRATEGIC USE OF PGRs IN APPLE PRODUCTION

For commercial apple growers operating in competitive markets plant growth regulators (PGRs) represent sophisticated management tools, that when used strategically, become important components of integrated production systems.

Dean Rainham : AgFirst horticultural consultant

PGR applications focus on addressing specific production challenges that impact profitability, by optimising the fruit quality characteristics that drive premium pricing. These include controlling excessive vegetative growth that reduces light interception and increases management costs, optimising fruit set and crop load for consistent annual production, promoting return bloom, managing pre-harvest fruit drop and enhancing fruit appearance characteristics that drive consumer purchasing decisions.

PGRs are also the primary tools used in chemical thinning, quickly lowering flower burden, fruitlet shedding, and thereby dramatically lowering labour-intensive hand thinning.

The integration of PGRs into comprehensive orchard management systems requires understanding their interactions with cultural practices, environmental conditions and tree physiology. Successful implementation depends on precise timing, appropriate dosing and coordination with other management inputs including nutrition, irrigation and pest control programmes.

Strategic use of Ethephon or NAA for effective flower thinning

Understanding PGRs in apple production

Auxins: The foundation of growth control

Auxin influences numerous critical processes including apical dominance, fruit development, fruit set, root formation and abscission control. It is produced in young leaves and shoot apices and moves around the plant through the phloem.

Naphthaleneacetic acid (NAA) remains the primary auxin used commercially for both chemical thinning and pre-harvest drop control.

The practical significance of auxins in commercial production centres on their dual functionality in fruit abscission control. When applied during early fruit development, auxins promote abscission of young fruitlets, enabling effective crop load management through chemical thinning.

Conversely, when applied near harvest, these same compounds inhibit abscission, providing essential pre-harvest drop control that protects crop value.

Gibberellins: Regulating growth and development

Gibberellins primarily regulate stem elongation, flower bud formation and fruit development processes. Gibberellins GA3, GA4 and GA7 are predominant in apple trees.

Commercial gibberellin applications serve multiple purposes in apple production systems. They promote stem elongation and canopy growth, fruit elongation and cell wall elasticity.

Seeds produce gibberellins that inhibit flower bud formation for the following season, creating the physiological basis for biennial bearing tendencies. Strategic gibberellin applications can either enhance or counteract these natural patterns depending on production objectives.

Cytokinins: Promoting cell division and fruit quality

Cytokinins regulate cell division processes that directly impact fruit size and quality development. These compounds prove particularly important during early fruit development when cell division rates determine ultimate fruit size potential. Benzyladenine (BA) serves as the primary commercial cytokinin.

The practical application of cytokinin focuses on three areas: fruit thinning, fruit sizing and tree structure development. Applied during early fruit development, it enhances cell division rates, which can have a thinning effect as well as increasing final fruit size. When used for structural development, these compounds overcome apical dominance, promoting lateral branching that improves tree architecture and light interception.

Fruitlet thinning with BA/NAA combinations. The small sized secondary fruitlets will shed, leaving the larger king fruit

The balance between cytokinins and auxins determines apical dominance patterns and branching responses. Environmental factors including temperature, light and water status influence cytokinin effectiveness, requiring careful timing and application adjustments.

Ethylene: The ripening and stress response hormone

Ethylene plays central roles in fruit ripening, stress responses and abscission processes. As apples approach maturity, ethylene production increases dramatically, triggering the cascade of biochemical changes associated with ripening including colour development, flesh softening and aroma compound synthesis.

The commercial application of Ethephon (2-chloroethylphosphonic acid) works by releasing ethylene gas when absorbed by plant tissues. Early season applications are used for flower thinning, promoting flower bud formation and controlling excessive vigour. Mid-season applications enhance red colouration and enable growers to meet early market opportunities.

Careful consideration of ethylene application timing and environmental conditions is necessary as temperature significantly influences ethylene effectiveness, with higher temperatures accelerating responses but potentially compromising fruit quality. Humidity, light exposure and tree nutritional status also modify ethylene activity and must be factored into application decisions.

Abscisic acid: Managing water relations and stress

Abscisic acid (ABA) primarily regulates water relations within apple trees, controlling stomatal behaviour and stress responses. While ABA applications have limited commercial use due to rapid metabolic breakdown, understanding the functions of ABA helps explain tree responses to environmental stress and hormone interactions.

The practical significance of ABA centres on its role in stress signalling and stomatal control. During drought conditions ABA levels increase, promoting stomatal closure and water conservation. This natural response influences the effectiveness of foliar-applied PGRs and timing of applications relative to environmental stress periods.

Strategic tree structure development

Optimising branching architecture

Developing efficient fruiting architecture represents a fundamental objective in intensive apple production systems. PGR applications offer precise tools for promoting desired branching patterns while avoiding the negative consequences of severe pruning.

BA applications provide effective branching stimulation, especially on young trees, without removing terminal buds. BA works by temporarily inhibiting apical dominance allowing the buds 10–15cm below the apical bud to break. When used in combination with GA it is very localised in its effect, and specifically targets the hormone balance controlling apical dominance, enabling selective branching promotion.

Thidiazuron (TDZ) is a potent cytokinin which primarily stimulates cell division and lateral shoot formation. Applied directly onto blind buds on young wood (one to three years old) it is very localised in its effect.

Notching or cincturing techniques can enhance PGR effectiveness for branching promotion. Strategic bark removal above desired buds disrupts hormone (auxin) transport and creates localised conditions favouring bud break. When combined with TDZ and BA followed by GA as described above, notching and PGRs enable precise control over branching location and intensity.

Vigour management

Prohexadione-calcium applications

Prohexadione-calcium inhibits gibberellin biosynthesis at a unique point in the pathway, providing growth control. Understanding optimal application strategies enables growers to achieve consistent growth management while maintaining fruit quality and production.

Initial applications require careful timing to achieve optimal growth control. Applications made when shoots reach 25–50mm length provide the best effectiveness. Earlier applications may lack sufficient leaf area for adequate uptake, while delayed applications reduce overall effectiveness and may require higher rates.

Excessive shoot growth. Managed with strategically applied, early applications of Prohexadine-calcium. Add Ethephon for extra vigour management

Repeat application often proves necessary to maintain growth control, depending on the vigour status of the trees. The compound degrades within two to three weeks, requiring monitoring of growth resumption and additional treatments as needed.

Ethephon for growth management

Ethephon provides effective growth control in specific situations where extra vigour control is needed. Ethephon is relatively milder in vigour control compared to Prohexadione. Care is needed on non-bearing trees as it can reduce canopy development where this is required.

> **Ethephon applications prove most effective on well-pruned trees with good light penetration**

Bearing tree applications after fruit set is established can provide growth control while minimising crop reduction. However, avoid applications during hot temperatures as this may cause excessive fruit thinning. Also avoid applications under cool, frosty or slow drying conditions that may cause fruit russet.

Ethephon's dual activity as both growth retardant and chemical thinner requires careful application to achieve desired growth control without excessive fruit removal. Understanding cultivar sensitivities and application timing enables effective use while minimising risks.

Russet defect. Strategic early applications of GA4+7 provides an effective tool for managing this type of cosmetic defect

Thidiazuron (TDZ) application, combined with notching or cincturing, is a powerful method to promote blind bud break

Optimising flowering and fruit set management

Promoting return bloom

Consistent annual flowering represents a fundamental requirement for sustainable apple production.

Ethephon applications during post-bloom periods can effectively promote flower bud formation. Applications shortly after bloom redirect energy from vegetative growth toward reproductive development.

Summer applications of NAA are also an effective tool in promoting return bloom.

Managing biennial bearing patterns

The physiological basis of alternate bearing is complex, but we know that it involves gibberellins produced in seeds, that inhibit flower bud formation for the following season.

Chemical thinning using PGRs (NAA, BA, Ethephon) represents the primary tool for managing biennial bearing, by early removal of excess flower and fruit, particularly during heavy crop years. This approach allows flower bud formation to proceed normally, maintaining production capacity for the following season. Timing and intensity of thinning applications directly influence the effectiveness of biennial bearing control.

Enhancing fruit set in challenging conditions

Frost damage, flooded soils, poor pollinating weather, or physiological stress such as low nitrogen in the floral bud, can severely reduce fruit set. While prevention and cultural management remains primary, PGR applications offer some opportunities for fruit set enhancement under specific conditions.

Early Prohexadione-calcium applications at pink as a growth control may increase fruit set as a secondary effect, particularly under cool conditions.

Comprehensive pre-harvest drop management

Understanding drop physiology

Pre-harvest fruit drop can be large with losses exceeding 20 percent or worse on susceptible varieties.

The drop process begins with ethylene production in ripening fruit that moves to the abscission zone in the fruit stem. Environmental stresses including heat, drought and pest damage accelerate this process. Overcropped trees leading up to harvest also play a part.

NAA for drop control

Naphthalene acetic acid (NAA) remains an important tool for drop control.

The key to successful NAA use lies in application timing before drop begins, with optimal application timing around seven to ten days before anticipated harvest date. It can take three days for the effect to kick in, so timing is important – too early can cause the effect to wear off before harvest and too late can mean significant fruit drop occurs before the NAA takes effect. A split application between picks is an option to extend the period of drop control. NAA applications have been known to create an increase in yellow background colour and a potential reduction in fruit pressure.

Enhancing fruit quality and marketability

Advancing colour and ripening for early markets

Early season varieties offer marketing opportunities and often command premium prices. Natural ripening may not match colour and maturity requirements for markets early in the season, making ripening enhancement strategies a potential option for capturing premium market opportunities.

Ethephon stimulates natural ripening processes including colour development, flesh softening and flavour compound synthesis. In some varieties Ethephon can cause storage and maturity challenges. Check with the variety marketing company around the acceptance of pre-harvest ethephon applications.

The use of Ethephon usually requires integration with drop control strategies. The same ethylene activity that promotes ripening also triggers fruit drop, making concurrent NAA applications essential.

Light exposure within the canopy represents a critical factor for colour enhancement success. Ethephon applications prove most effective on well-pruned trees with good light penetration.

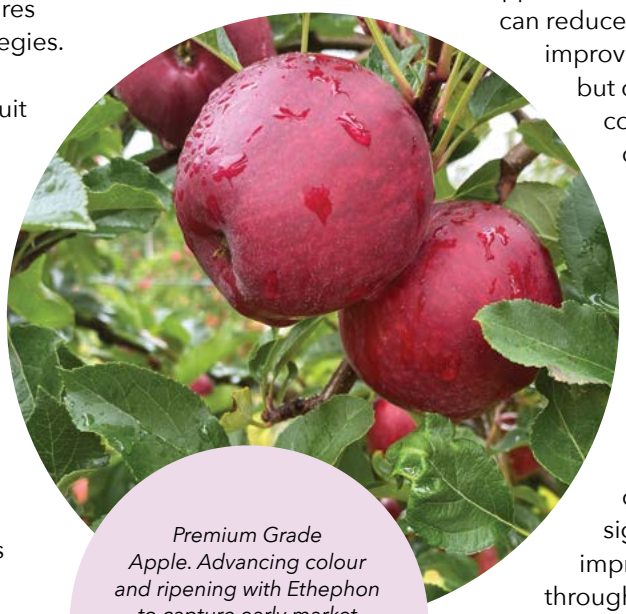
Extending harvest windows with ripening delay

Harvest labour capacity limitations often require extending harvest periods while maintaining fruit quality. Aminoethoxyvinylglycine (AVG) and 1-MCP applications suppress ethylene production and provide effective ripening delay that can extend harvest windows by several days or weeks depending on variety and environmental conditions.

Managing fruit finish and cosmetic quality

Fruit finish quality significantly influences marketability and price premiums. Russeting, cracking and other cosmetic defects can downgrade fruit and reduce economic returns. Gibberellin applications provide effective tools for managing specific cosmetic quality issues.

Applications containing GA4+7 can effectively reduce russeting on susceptible varieties when applied during early fruit development, by increasing cell elasticity.



Premium Grade Apple. Advancing colour and ripening with Ethephon to capture early market premium prices and manage harvest efficiently with 80 percent of fruit harvested in the first pick

Implementation strategies

Integration with orchard management systems

Effective PGR use requires integration with comprehensive orchard management programmes. Nutrition, irrigation, pest control and cultural practices all influence PGR effectiveness and must be coordinated to achieve optimal results.

> **PGRs will remain essential tools for achieving production objectives**

Spray scheduling must consider compatibility with other inputs and operational efficiency. Combining PGR applications with pesticide treatments can reduce application costs and improve operational efficiency, but compatibility and timing considerations must be carefully evaluated.

Documenting application conditions, tree responses and economic outcomes provides the foundation for refining PGR programmes and optimising future applications.

Conclusion

The strategic implementation of PGR programmes offers significant opportunities for improving orchard profitability through enhanced fruit quality, reduced production risks and improved management efficiency. However, realising these benefits demands careful attention to application timing, environmental conditions and integration with comprehensive orchard management systems.

As apple production continues to evolve toward higher tree density systems, premium quality requirements and sustainable production practices, PGRs will remain essential tools for achieving production objectives. Continuous learning, careful observation and adaptation to local conditions enable growers to maximise the benefits of these powerful management tools while building sustainable and profitable production systems. ●

Footnote: For any commercial products mentioned in this article, read and follow label rates and instructions. Check with the variety exporter for market acceptance. If in doubt, seek professional advice before application.

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Figure 1: SeeTree side-by-side view of tree health analysis – January 2025 on the left and June 2025 on the right

DRONES FOR HORTICULTURAL **DECISION-MAKING**

Michael French : ION horticultural consultant

At ION, we provide nutrition-focused agronomy advice to a range of kiwifruit and avocado growers. In June 2023, we began exploring whether drone imagery could enhance the value of our service offering.

Drone-collected data has shown significant potential across horticulture and the broader agricultural sector – but we wanted to know if we could use it to deliver real, on-the-ground benefits for orchard productivity and decision-making.

In this article, I will share how our drone journey has unfolded so far, what tools we have trialled, and where we see the most value emerging for agronomic decision support.

Figure 2: DJI Mavic 3 Enterprise drone

Background – Why use drones?

When we first began considering drones as part of our agronomy toolkit, several key factors influenced our decision:

Need for better visibility at scale

Many of the orchards we work with span 50 hectares or more – some significantly larger. From the ground, it is extremely difficult to grasp the full scope of spatial variability or to detect emerging problems across large areas. We needed a way to see the 'big picture' without losing detail.

Limitations of satellite imagery

New Zealand's reliably cloudy climate ('the land of the long white cloud') creates major challenges for consistent, usable satellite imagery. In our experience, the lack of reliable clear-sky data makes satellite-based services impractical for timely agronomic use.

Rising need for objective data

As growers face increasing pressure to optimise inputs and improve traceability, relying solely on anecdotal assessments of tree size, colour and uniformity is no longer enough. We were looking for tools that could convert these observations into quantifiable data – and drone imagery showed strong potential to fill that gap.

Figure 3: Zoomed up view showing the weak tree area on the right in figure 1, June 2025

Hardware and software choices

Drone hardware: Consumer vs. enterprise

Consumer drones are widespread and becoming increasingly common as a tool for growers to check blocks from above. Typically supporting an RGB (Red Green Blue) camera, aerial imagery from standard consumer drones can be very high quality, and gives a great bird's eye view of things such as canopy fill, tree colour, highlighting problem areas etc. They do however have limitations when it comes to creating truly useful data for agronomic purposes.

Enterprise drones typically have upgraded or specialised (think multispectral) cameras, extended flight times and importantly, advanced flight planning software that enables mapping functionality and consistent image capture across large areas.

ION has been using DJI Mavic 3 Multispectral, an enterprise-grade drone option that allows for RGB and multispectral ortho mapping, and has the sensor requirements for accurate height measurement. When the time comes to upgrade, we will be considering options with larger camera sensors, allowing for higher flight heights and reduced flight times, to improve efficiency of data capture for larger scale flights.

> **SeeTree uses drone imagery combined with AI models to create high-resolution, per-tree health maps**

Drone use in New Zealand is governed by the Civil Aviation Authority (CAA). Refer to the CAA website for further information on safe drone operation and compliance.

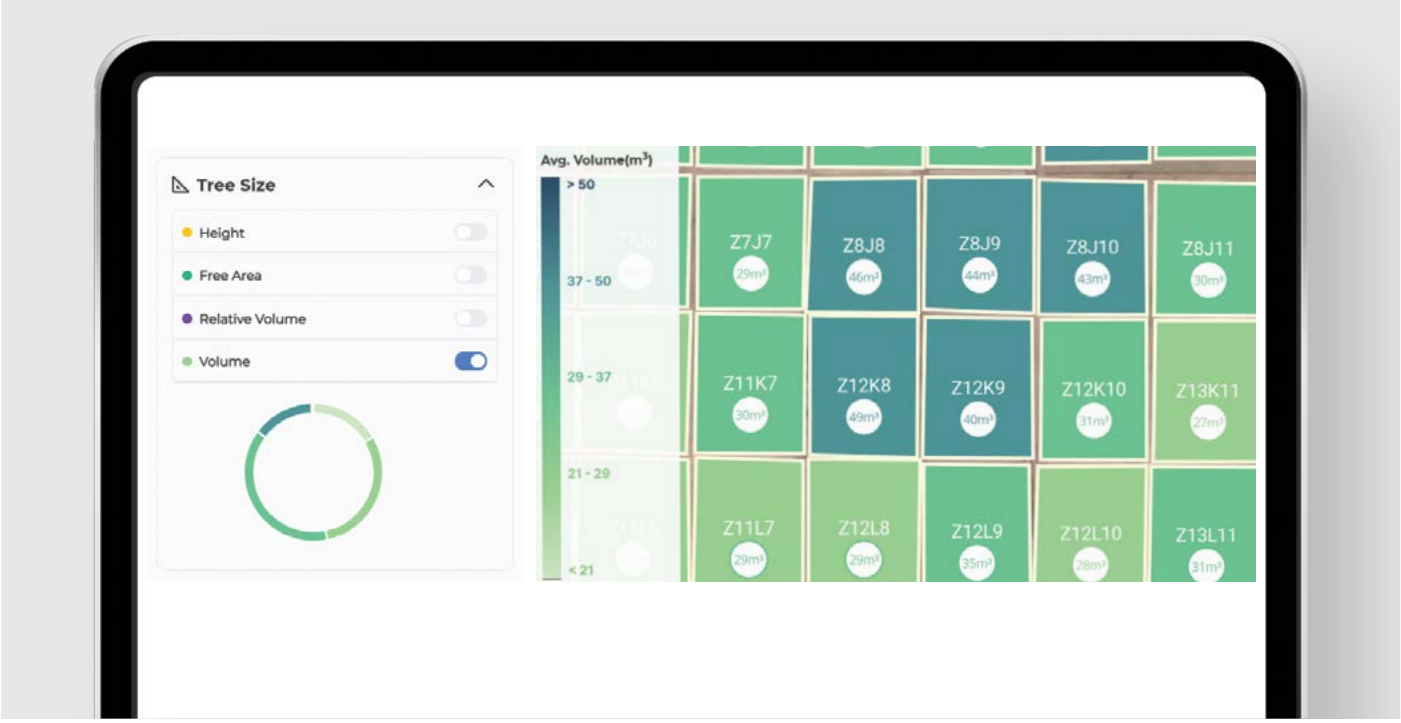

Figure 4: SeeTree canopy volume map

Software

After investigating many of the available options, we have so far utilised two software solutions, Pix4D Fields and SeeTree.

Pix4D Fields

Pix4D Fields is a desktop software solution (with cloud-based versions available) that processes aerial imagery into high-resolution maps and vegetation indices such as NDVI (Normalised Difference Vegetation Index).

What has worked well for us:

- Generating detailed orthomosaic maps for orchard blocks.
- Improved visibility of canopy area and fill compared to ground-based assessments.
- Rapid assessment of issues like flood damage and flowering intensity. Maps can be generated and assessed in the field on the day of image capture.

Limitations:

- Multispectral imagery can be challenging to use at scale in New Zealand due to inconsistent light conditions.
- Currently lacks the ability to track and analyse individual tree performance within orchards (data is visual only).
- Requires computers with specialised processing capacity.

SeeTree

SeeTree is a cloud and vendor managed solution (we send image data to SeeTree for processing on our behalf). The software is tree-centric and delivers individual tree health, productivity and risk insights using drone imagery and machine learning.

What has worked well for us:

- Identifying underperforming or unhealthy trees at a per-tree level.
- Tracking tree health trends over multiple seasons.
- Informing decisions around pruning, nutrition plans, replanting, and targeted management of issues.

Limitations:

- Timing is reliant on SeeTree's service schedule, which in peak times can mean a two to three-week delay between data capture and results being available.
- Scanning between blocks to get a helicopter view of an orchard is more difficult than with Pix4D generated maps.

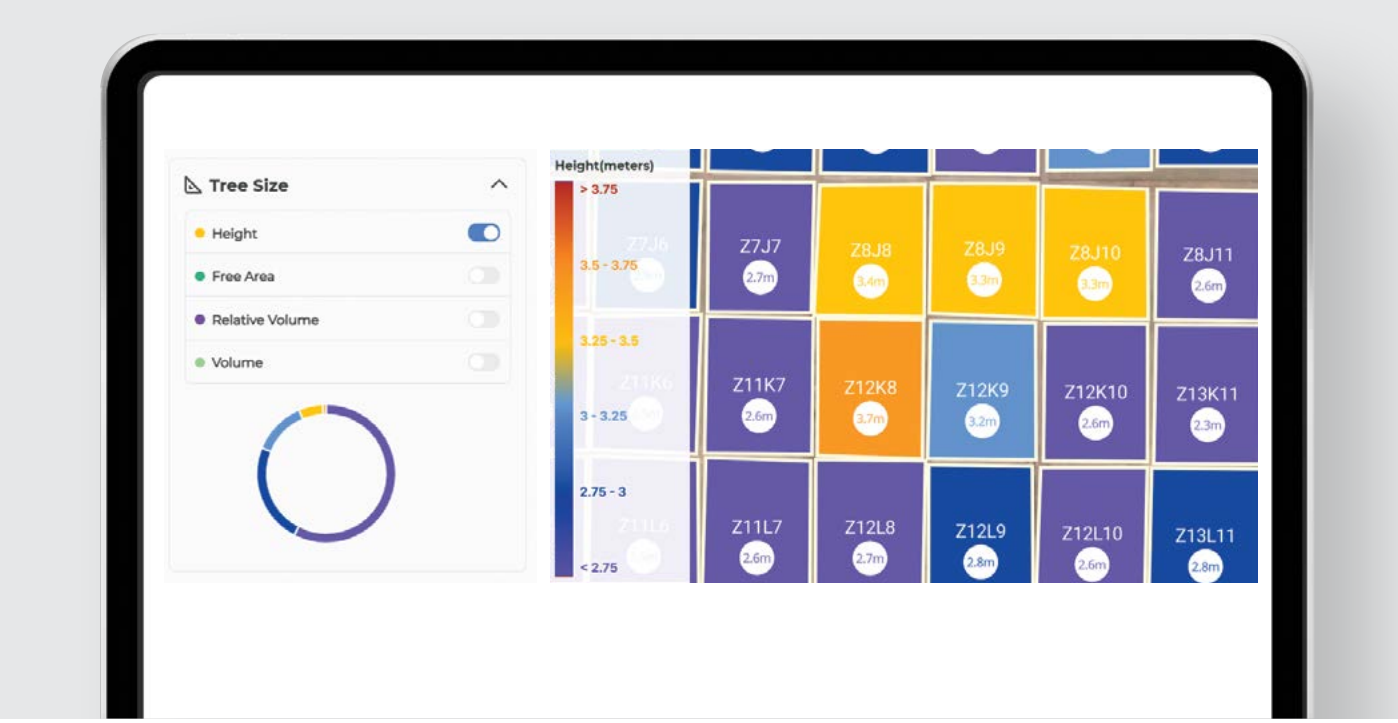

Figure 5: SeeTree tree height map

Utilising SeeTree in avocados

Tree health

SeeTree uses drone imagery combined with AI models to create high-resolution, per-tree health maps. Each tree is assigned a health score based on canopy density, colour and structure. This allows for early identification of weak or declining trees, and gives clear insight into the scope of any issues i.e. how far the problem is spreading, and what patterns are emerging. In figure 1, we see a patch of weak trees which have been identified in the right-hand side (Survey 5, June 2025), but which were not presenting as weak in the left-hand image (Survey 4, January 2025).

The image in figure 3 is a higher resolution view of the bottom left of this block. The weak area to the right-hand side shows yellowing, bony trees, typical of a drainage issue but requiring further investigation.

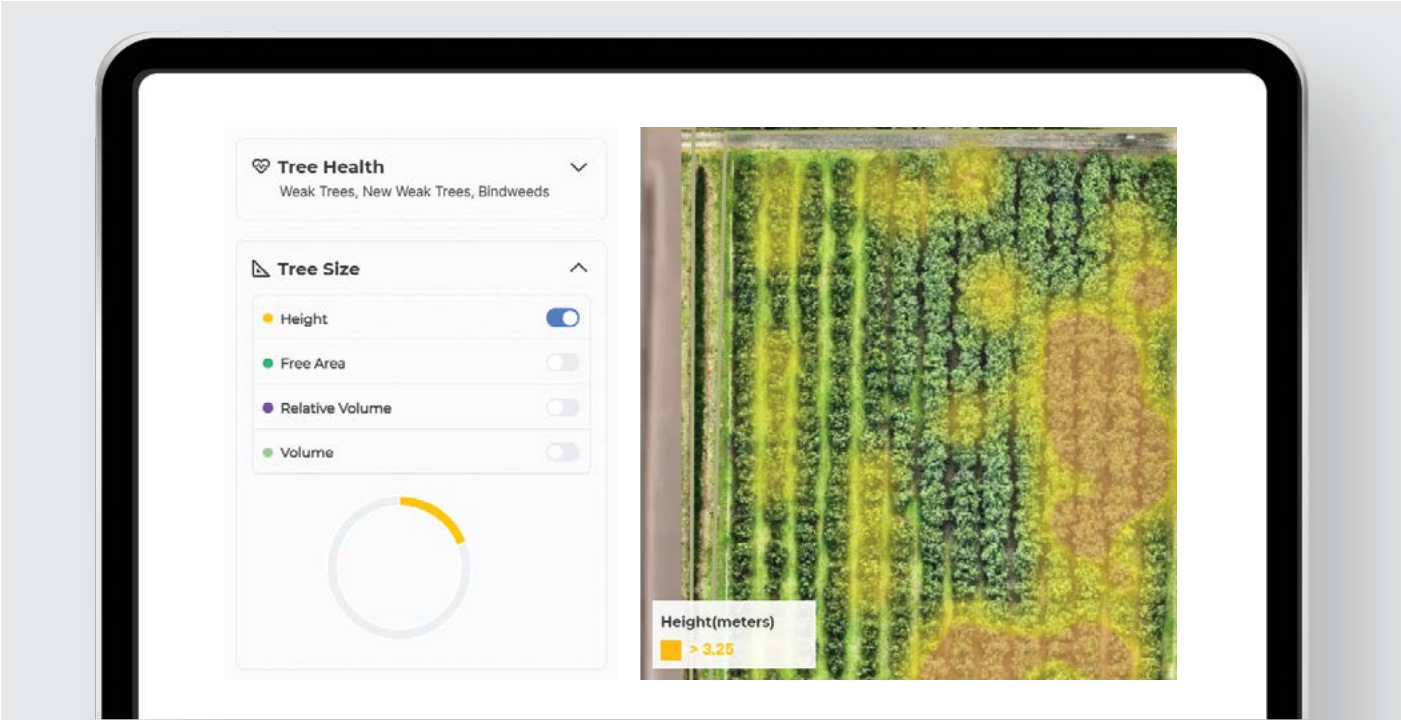

Figure 6: SeeTree block-level tree height map

Canopy analysis: Tree volume and height insights

SeeTree offers a range of insights on tree canopy parameters, these being the primary ones we utilise:

Block-level volume map – Visualising canopy volume

The map in figure 4 displays average tree volume by block, measured in cubic metres and colour-coded from lighter to darker greens. Each block is labelled with its average canopy volume. This provides a holistic view of canopy volume, accounting for both height and spread.

In an avocado context, this data is particularly useful when correlating tree volume with yield or interpreting yield variability. Once we understand the optimal volume of tree required to get to a desired yield we can then decide whether management practices need to increase, decrease or hold tree volume on a block-by-block basis.

Block-level height map – Visualising canopy structure by height

The map in figure 5 highlights average tree height per block, colour-coded from purple (<2.75m) through to orange and red (>3.75m). Each block is labelled with its average tree height in metres.

Like most tree crops, avocados benefit from an optimal ratio between tree height and row width to maximise light interception. This view gives a quick insight into how individual blocks are tracking toward that ideal structure, allowing targeted adjustments to pruning or growth regulation plans.

Intra-block tree height variability – Tree-level heatmap

The heatmap view in figure 6 drills down height data to the individual tree level, showing variation in height within a single block. Taller trees (>3.25m in this case) are shown in orange, while shorter trees are left unshaded.

These heat maps are a valuable reference tool for pruning teams, enabling them to plan the parts of a block that need the most attention. It can also be utilised to better understand the impact of varying soil conditions on tree performance at a block level.

Conclusion

Drones have quickly become a valuable part of how we approach yield analysis and orchard decision-making. Being able to visualise canopy structure, tree size and variability across an entire orchard gives us a clearer understanding of why certain areas are performing better than others. It has helped us move from anecdotal observations to data-backed insights – especially when it comes to linking canopy volume and tree health to yield outcomes.

While there are still a few limitations to work around, the value we have seen so far has been well worth the effort. As the technology improves and becomes more integrated with other orchard data sources, we see drone imagery playing a key role in our agronomic decision-making process.

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Hugh Ritchie in a direct-drilled wheat crop checking soil structure after winter rain. This soil was flooded in 2023

REGENERATIVE FARMING FOR VEGETABLE PRODUCTION

Loosely defined 'regenerative' principles evoke mixed reactions among vegetable growers. However, whatever label you stick on them, these farming practices could offer economic benefits, as DIANA MATHERS discovers speaking with growers Hugh Ritchie and Gordon McPhail.

My dad had green fingers and a prolific vegetable garden. He took care of his soils, knowing they were vibrant by the smell of them. He grew a diversity of crops in a rotation and believed in compost and the good of worms.

I didn't inherit his skills. I prefer the supermarket with shelves and freezers stacked with fresh vegetables, clean and bug-free. It's good health at my fingertips. But like many consumers, I do pause and wonder how all that produce is grown. Is it the same as Dad's ways? Can I be sure that it's not all coming at a cost to the environment?

Regenerative farming has become a global phenomenon. Governments see it as a pathway to reducing greenhouse gas (GHG) emissions. Major food production companies use it to secure their supply chains. Some farmers see it as an eco-friendly alternative to conventional farming, while others see it as just trendy label.

What does regenerative farming even mean? Could it lead the way to more resilient vegetable systems with positive environmental impacts? Which principles enhance vegetable production, which ones are growers adopting and which ones are the most challenging?

The Ritchie family has been growing crops in Central Hawke's Bay since 1962. Their irrigated flats are cropped with a diversity of vegetables and arable crops. Animals are part of the rotation and compaction is minimised by restricting grazing to sheep. Cattle and sheep graze their hill country blocks.

When I asked Hugh if I could talk to him about regenerative farming, he laughed and said, "whatever that means." His son David said his father has been "regenerative" for the last 20 years, driven by economic pragmatism and eyeing sustainable profitability, rather than ideology. Long-term benefits to the environment, particularly the soils, have just followed on.

I first met Hugh more than 25 years ago when he took part in a strip-tillage trial for sweetcorn. From memory, our first meeting was in the yard where he was tinkering with a planter, adapting it for strip-tillage. At the time strip-tillage machinery was not readily available, so farmers and contractors worked together modifying existing machinery in iterative processes of continual improvement.

Cover crop in a LeaderBrand greenhouse

> **"One of the challenges to resilience is opportunity for economic diversity in the rotation**

Our trial had mixed success, the planting job was good, the corn emerged – but the memory of slugs looms large in my mind. The damage they caused was extensive. Chopping them up during cultivation had obviously worked well in the past. Disappointing, but not enough to discourage Hugh from persevering and getting it right.

Today his cultivation is as minimal as possible. Sweetcorn, maize, beans and squash are strip-tilled and everything else, apart from the carrots grown on beds, is direct drilled. Hugh notes that regular visual soil assessments show his soils are in good condition, with worms and internal drainage working effectively.

His land flooded in Cyclone Gabrielle and now he sees ponding after rain in paddocks which used to readily drain. "Worms drowned and the macro-pores blocked with silt, but I reckon the damage would have been worse without years of minimal disturbance." He expects the land to recover quickly.

I asked Hugh how easy it would be for growers to modify their tillage intensity. "It's mainly mental," he said. "Two internal dialogues get in the way. The first, 'I've always done it this way, and I know that it works, so why change?' The second, 'It looks untidy.' But nowadays, growers can be confident of good machinery and a good job, so the risk is low, and an untidy paddock for a short time is not a bad thing."

Hugh is continually reassessing the system to remain profitable. He manages water and nutrient applications with feedback from soil tests and crop monitoring. Every input is justified, and yield is not compromised by reducing inputs.

Gordon McPhail, general manager farming at LeaderBrand, says successful compost use depends on understanding the variability of nutrient release

One of the challenges to resilience is opportunity for economic diversity in the rotation. Contracts fluctuate and disappear depending on market demand and local infrastructure. Hugh is constantly manipulating his rotation by selecting profitable crops and will choose grass if better options disappear.

A regenerative system case study for Canterbury potato growers showed limiting factors for resilient production were ineffective crop rotation cycles and low crop diversity. Finding a diversity of economic crop options is difficult, and one participant in the case study noted he has "sacrificed short-term profits by growing low-value crops as part of a long-term strategy to maintain soil health." This is hard.

Gordon McPhail, general manager farming at LeaderBrand, says the soil is LeaderBrand's life blood. Soil health supports their vision of sustainable farming well into the future. Concerns about their soils led to changes to their management systems, moving to permanent beds for all their crops, as well as controlled traffic practices and minimal cultivation.

A recent collaboration with Woolworths and Plant & Food Research (a group within the newly created Bioeconomy Science Institute) took things a step further with an exploration of regenerative principles; composts and cover crops for the beds, and a focus on community, recognising that their staff and the community are part of a holistic system.

Large trial sites became the testing ground for the composts and cover crops. Benefits for the soil were soon apparent, but there were things to learn about managing composts and cover crops in the system.

> **"Our incentive is sustainable production for the business and the wider community**

"Compost is seen as the non-invasive option for the rotation," Gordon says. "Access to a weed-free and food-safety certified supply is important. There's an opportunity to reduce fertiliser inputs, but success depends on understanding the variability of the nutrient release from the compost. Cover crops have value too but also have challenges. They are not always easy to fit into the rotation, trash must be managed, and there's a risk of weeds from the seeds they drop."

The regenerative growing project is now completed, and Gordon says "LeaderBrand will continue to trial and build on their learnings. We've added biochar to the system to support soil health. Our incentive is sustainable production for the business and the wider community. Regenerative practices have a part to play, but they must pay for themselves."

Vibrant soils are important to both Hugh and Gordon. They have included regenerative practices in their systems to increase profitability and resilience, not because using the label might better meet market expectations. They have shown that change requires perseverance, and Gordon says the industry needs more growers to be involved. A toolbox of ideas would be helpful.

> **Soil health supports LeaderBrand's vision of sustainable farming well into the future**

Last words from my former colleague at the Foundation for Arable Research (FAR), Abie Horrocks: "I never minded that there was no clear definition for regenerative farming and that it is principles based – to me it is important that it is not prescriptive like 'organics', which means there was a pathway for farmers to dip their toe in the waters and progress in a direction driven by continuous improvement that could be customised to them. No one size fits all."

REGENERATIVE FARMING PRINCIPLES FOR VEGETABLE CROPPING

- Minimised soil disturbance – supporting structure and biology.
- Increased soil organic matter – assessed regularly.
- Reduced fallow periods – crops and cover crops.
- A diversity of crops is grown – the rotation is mixed.
- Farm biodiversity is enhanced – in buffer zones, riparian and non-productive areas.
- Softer chemistry pesticides are used – protecting human and ecosystem health.
- Water and nutrient applications are optimised by deliberate decision processes.

Gisborne site 2: Canopy condition 1-Feb-24: Prior to the 2023–24 squash crop, this paddock had been in pasture. Harvested 5-Mar-24, it had a moderate yield. Photo by Trevor Lupton

CAN SOIL TESTING **PREDICT SOIL-BORNE DISEASE BEFORE PLANTING?**

During summer 2023–24 squash crop trials were established in Hawke's Bay and Gisborne in paddocks with a history of squash cropping. The objective was to evaluate the efficacy of novel fungicide options for Fusarium control in squash. During the study, plant and soil samples were collected to establish the plant pathogens present.

Trevor Lupton : Horticultural consultant and Dereck Ferguson : Ferguson Agronomy Ltd

Seasonal conditions and disease development

Trial crops were planted in December and harvested late February to early March to maximise expression of the root pathogens present. In Hawke's Bay 127mm of rain fell in three months. February was dry with 31 percent of long-term average rainfall recorded. Gisborne had 239mm of rain, with above average rainfall in December and January, however February was dry with 34 percent of long-term average rainfall.

Fruit from both trials was stored for eight weeks in a refrigerated sea freight container simulating shipping conditions. Rot incidence was assessed after four, six and eight weeks. Rot levels were low, likely due to dry conditions in the month pre-harvest.

Plant pathogen identification

Samples of roots and basal stems from plants exhibiting early canopy collapse from three squash crops in Hawke's Bay were sent to Plant Diagnostics Ltd to determine the range of pathogens present. A complex of soil-borne fungi associated with root and vine decline symptoms and fruit rots were detected.

Key pathogens detected were:

- *Fusarium oxysporum* (crown and root rot, wilt)
- *Fusarium solani* (crown rot)
- *Fusarium graminearum* (crown rot).

Other pathogenic fungi present at lower levels were:

- *Macrophomina phaseolina* (charcoal rot)
- *Pythium* species
- *Diaporthe sclerotioides* (Phomopsis black root rot)
- *Plectosphaerella cucumerina* (vine decline and root rot, formerly *Fusarium tabicinum*).

Alternaria species were detected but likely to be secondary to others.

Interpretation

Isolations to agar media consistently yielded a complex of soil-borne pathogens. The Fusarium species commonly cause crown and root rots, and cucurbit crop wilt. The Plant Diagnostics report states Fusarium can survive in the soil for two to three years, however Australian reports state up to ten years. Fusarium can be seed-borne but is unlikely in commercial seed lines treated with fungicides.

Pythium species *Macrophomina phaseolin*a and *Diaporthe sclerotioides* were present at lower levels. All these pathogens have been associated with vine decline and collapse in buttercup squash. *Plectosphaerella cucumerina* was also isolated. It is commonly associated with the complex of Fusarium species causing fruit, root and collar rots.

Plants showing canopy collapse exhibited symptoms of collar rots and vascular staining in the root and stems.

Gisborne trial site 26-Feb-24 at harvest. This was a high-risk site due to its squash cropping history. Plants had low vigour and small fruit – poor yield. Photo courtesy of ALT

However, the entry point may be through the finer roots of young plants which may be symptomless or show only mild symptoms. These infections may occur following rain and lack of air in the soil. At maturity many of these early infections may still be present along with infections from secondary organisms.

Determining risk of soilborne diseases pre-plant?

Quantitative PCR (qPCR, or real time Polymase Chain Reaction) is a rapid analytical technique used to detect and quantify the presence of micro-organisms in soil, including Fusarium species. In New Zealand the Bioeconomy Science Institute (previously Plant & Food Research) have developed a qPCR test to accurately predict Fusarium risk in peas.

Pukekura South trial site: This was a high-risk site due to its previous squash cropping history. Canopy condition 21-Feb-24: Partial canopy collapse due to strong northwesterly winds and high temperatures. Photo by Dereck Ferguson

The question was, could this test be used before planting to determine the risk of soil-borne diseases. In this study, soil samples were taken at planting from four paddocks where disease risk was assumed to be medium to high due to prior squash cropping history, and from two paddocks with an assumed lower risk profile due to limited recent cropping.

Samples were also collected from trial paddocks in both locations at planting and again at harvest. (See Table 1.)

The demonstration plots received biologicals, biostimulants, foliar fertilisers and other products attempting to minimise crop and quality losses from soil-borne disease development.

We found that qPCR analysis for *F. oxysporum* and *F. solani* was not a good indicator of likely Fusarium risk, nor did it provide a good indicator of yield outcome. For example, in Hawke's Bay, the Tukituki site with a seven-year break from squash cropping had high levels of Fusarium detected. The crop in this paddock collapsed and was not harvested. However, the Corner paddock with no squash cropping history also had high levels of Fusarium detected and produced a moderate yield.

The Gisborne Trial site resulted in a poor crop compared with Gisborne 2. However, the qPCR results for *F. oxysporum*, *F. solani* and total Fusarium for the trial site were lower than for Gisborne 2.

One explanation for the inability to predict crop outcomes from qPCR soil tests comes from Australian research into Fusarium wilts in melons. This work recognises that *Fusarium oxysporum* has over 100 *formae speciales* (special forms) that attack different host species of agricultural plants.

In Australia two main species of *F. oxysporum* found in melons are:

- *F. oxysporum F.sp. niveum (Fon)* in watermelons
- *F. oxysporum F.sp. melonis (Fom)* in rockmelons, honeydew melons and watermelons.

There is another level of specialisation within *formae speciales* termed races which relate to the susceptibility or resistance of commercial cultivars. Within watermelons, rockmelons and honeydew melons, Australian researchers have identified that each *forma specialis* has four races. Surveys in Australia detected a change in the predominant races over time, indicating cropping history can influence the predominant races as well as natural changes and mutations.

Identifying *Fusarium oxysporum* in soil does not in itself mean there is a high risk of Fusarium wilt in a squash crop. It depends on which *formae speciales* and races are present and whether the crop to be grown is susceptible. As of December 2024, Australian advice (see Fusarium wilt of Melons) is "*Soil DNA testing is available for some diseases, but at this point in time it is not suitable yet for pathogenicity and*

Table 1: qPCR results by squash crop site

Site		Cropping History	Grower Assessed Pathogen Risk	Fusarium oxysporum (estimated cells /gram)	Fusarium solani (estimated cells /gram)	Total Fusarium (estimated cells /gram)	Yield
2023/24							
Pukekura South Trial (HB)		15 squash crops since 2000, 7 maize crops, 2 onion crops	High	19,251	5,787	59,698	Moderate yield
Tukituki (HB)		Squash prior to 2015–16, 7 years pasture 2016–23	Medium	119,607	16,748	394,897	Not harvested, total canopy collapse
Chelsea (HB)		15 squash crops since 2000, 9 maize crops	High	9,833	11,382	62,516	Poor yield
Corner (HB)		No squash history	Low	106,782	23,900	282,678	Moderate yield
Gisborne Trial		Long-term cropping including squash	High	34,228	13,908	108,840	Poor yield
Gisborne 2		Ex-pasture, no recent cropping	Low	71,305	18,090	197,350	Moderate yield
2024/25							
Hawke's Bay Demo site	Pre-Plant	Long-term cropping including squash	High	10,601	1,485	35,055	Moderate yield
Hawke's Bay Demo site	Harvest Control	–	High	27,249	2,833	89,888	Moderate yield
Hawke's Bay Demo site	Harvest Demo	–	High	18,626	5,405	50,809	Moderate yield
Gisborne Demo site	Pre-Plant	Long-term cropping including squash	Medium	17,270	7,727	120,798	Moderate yield
Gisborne Demo site	Harvest Control	–	Medium	13,392	3,098	89,888	Moderate yield
Gisborne Demo site	Harvest Demo	–	Medium	21,967	16,686	136,707	Moderate yield

(*Yield commentary: <10T/ha poor, 11–15T/ha moderate, 16+T/ha good)

Tukituki: Assessed as a medium-risk site due to the last squash crop in 2015–16, then seven years in pasture (2016–2023). The canopy collapsed prior to harvest and the crop was not harvested. Photo by Dereck Ferguson

Fusarium race identification." For the qPCR test to be a useful prediction tool requires research to establish pathogenicity down to *formae speciales* level and the qPCR test to be calibrated to this level, as with peas.

> **Soil DNA testing is available for some diseases, but at this point in time it is not suitable yet for pathogenicity and Fusarium race identification**

Another explanation is that we are dealing with a soil-borne disease complex of which Fusarium may be one important part. Plant pathogen analysis from wilting plants detected a range of soil-borne pathogenic genera including *Macrophomina, Pythium, Diaporthe* and *Plectosphaerella*. Fungi may be present in the soil, but no significant crop infections may occur unless conditions favour disease. Favourable conditions include wet or anaerobic soils or soils with poor structure or aggregate stability. There is some evidence that infections may occur early in crop life. These early infections may be relatively symptomless, persist through the life of the crop and act as entry points for other pathogenic fungi after rainfall.

The soil-borne disease project plan for future work includes pathogenicity testing to identify causal organisms down to *formae speciales* level to determine which soil-borne pathogens infect the crop, which are the primary and secondary invaders and those that pose no risk. This could lead to accurate pre-plant predictive testing.

Other opportunities for mitigation being investigated include plant breeding for soil-borne disease tolerance, exploring the role of crops in rotation, service crops for modifying the inoculum carryover between squash crops, and the role of soil structure in soil-borne disease development and how this may be modified. ●

Acknowledgements
Mark Braithwaite (Plant Diagnostics Ltd) and Len Tesoriero (NSW Department of Primary Industries) for helpful discussions on plant pathogenic fungi in the soil-borne disease complex. Andrew Barber, Chris Lambert and Jeff Smith for guidance and reviewing this article.

Zespri will begin integrating the health claim into its European communications

EUROPE APPROVES FRESH FRUIT HEALTH CLAIM

Green kiwifruit has become the first fresh fruit to achieve an authorised health claim by the European Commission, namely that "consumption of green kiwifruit contributes to normal bowel function by increasing stool frequency." The claim is based on a daily intake of two fresh green kiwifruit, providing a minimum of 200g of flesh.

This authorisation published in the *Official Journal of the European Union* on 31 July is among only three health claims approved by the European Commission in the last five years. Zespri fully funded the application process and majority of the key research submitted in the scientific substantiation, committing over 15 years to documenting the benefits of green kiwifruit. The approval follows the submission of a comprehensive scientific dossier in 2018 which included 18 human intervention studies, six of which ultimately were considered as a strong basis for proving the effect of green kiwifruit on intestinal function. The European Food Safety Authority (EFSA) delivered a positive scientific opinion in 2021, which has now culminated in the Commission's formal authorisation.

Zespri says this achievement demonstrates the critical value of investing in health and nutrition science – both to build trust in the fresh category and to unlock further growth and demand for green kiwifruit.

www.zespri.com

STAYING COMPLIANT WITH LABOUR LAWS JUST GOT EASIER WITH ABCGROWER

Managing seasonal labour comes with several challenges, not least of which is meeting and proving compliance with labour laws and Recognised Seasonal Employer (RSE) scheme conditions.

But with ABCgrower, ABC Software's labour and inventory management system, growers can rest easy knowing they have a purpose-built tool that helps to ensure compliance, without adding to the administration burden.

ABCgrower supports employers in meeting the RSE scheme requirement of offering a minimum of 30-hours per week, averaged over four weeks. As well as recording time and task for work done, ABCgrower records hours offered to workers but not taken up by them.

> "This real-time insight is invaluable for managing workers and monitoring productivity as it happens

A new forecasting report shows whether workers are on track to meet the 120-hour minimum over a four-week window. If a shortfall is likely, the system highlights it in advance, giving growers time to manage rosters or plan top-up payments accordingly. A new history report proves compliance in a few button-clicks. Further, ABCgrower offers clear visibility to top-up payments if these are required to be made.

For growers paying piece rates, ABCgrower simplifies compliance with minimum wage requirements. The system tracks the number of hours worked alongside piece rate earnings, automatically calculates any shortfall, and clearly displays any top-up payments.

ABCgrower in use on a cherry orchard

In addition to recording timesheets, ABCgrower offers an optional Onsite Log module that allows workers to self-sign in and out. A recent enhancement enables the time for which workers are paid to be auto-created from their clock-in records. Alternatively, paid times can be set manually, individually or in bulk. This ensures on-time workers are paid from their rostered start time, with clear visibility of late-comers and no-shows.

Instead of manually crunching numbers at payroll time, or risking underpayments, growers can be confident that their team is being paid fairly and in line with the law. Founder and chief executive Sharon Chapman says "we share our clients' vision of building a fair and sustainable workforce, especially in an industry that relies so heavily on seasonal labour. With ABCgrower, growers can focus on getting the job done, knowing their people are being looked after and their records are in order".

ABCgrower is part of the ABC suite that includes an electronic spray diary, QA/AC (Quality Assurance and Quality Control) system, and ABCpacker, a full post-harvest packhouse solution. Whether you are looking for a comprehensive package with one service provider from farm to market or simply need a straight-forward approach to horticultural pay compliance, ABC Software is the smart choice.

ABCgrower is designed to record what happens, where and when it happens. This real-time insight is invaluable for managing workers and monitoring productivity as it happens.

www.abcsoftware.com
06 845 00068
hello@abcsoftware.com

ABC HELPS YOU GROW

The Minister for Trade and Investment Todd McClay presented NZ Avocado chief executive Brad Siebert with the certificate recognising the avocado sector as an ambassador for the New Zealand story

AVOCADO INDUSTRY UNITES UNDER FERNMARK

NZ Avocado and all registered avocado exporters have joined forces to secure a collective FernMark Licence – the first time an entire sector has united behind New Zealand's official country-of-origin mark.

John Gauldie

The FernMark will feature prominently in upcoming NZ Avocado promotional campaigns across Asia, North America and other strategic markets.

Its first use is at Asia Fruit Logistica in Hong Kong from 3–5 September, where three exporters are collaborating to create an avocado zone within the New Zealand pavilion.

What is the FernMark?

The FernMark is used by Government ministries, agencies and trade commissioners, and as part of Government promotions of New Zealand. The Government also awards the FernMark under licence to products that meet its standards of authenticity, quality and governance. The licensing programme for exporters began 15 years ago.

"Prominent kiwis like the Prime Minister wear the FernMark all the time," says David Downs, chief executive of New Zealand Story, which runs the FernMark Licence Programme and manages trademark protection. "We've got it on the side of Air New Zealand aircraft. Rocket Lab has blasted it into space. It's getting real traction now."

Collective benefits

New Zealand Story says the FernMark is recognised by nearly half of consumers in key export markets, with 44 percent of them more likely to purchase products bearing the mark.

"In all the market research that we do around the world, we know that New Zealand's reputation and brand stands for something," David says. "It has value. There are some markets where it really matters, particularly in Asia where food safety, food security and those sorts of things are very important."

Many individual exporters and marketers (such as Pure Pac cherries (pictured opposite) and Piqa pears (above)) use the FernMark in packaging, trade shows, and in-store displays. The avocado industry association licence is its first collective marketing use

Country of origin is already commonly featured in New Zealand horticulture product collateral, however there is a mish-mash of marks, images of the flag and Kiwi symbols.

Although some avocado exporters already held individual FernMark Licences, the industry association licence shows how crop/product groups can develop collective marketing resources to accelerate their approach to market.

The more the FernMark is used across horticulture, the greater the halo effect on securing value for producers, David explains.

"Consolidating under one country-of-origin mark creates a network effect. This is a fantastic example of exporters working together to amplify their impact and elevate New Zealand's reputation in competitive international markets."

The avocado sector initiated the idea to collectively use the FernMark. Brad Siebert, chief executive of NZ Avocado, says their industry association licence reflects the industry's shared vision of a more coordinated and united position in global markets.

"It's a powerful example of how working collectively raises the bar for quality and builds even greater trust in New Zealand avocados across international markets."

The initiative aligns with the Optimise Value pillar of the Aotearoa Horticulture Action Plan, which aims to double the farmgate value of horticultural production by 2035 in a way that improves prosperity for our people and protects our environment.

How does the industry association licence work?

New Zealand Story has worked previously with small groups of companies that go to market together, but this new industry association licence is the first time a whole sector has agreed a unified front.

The FernMark Licence logo and licence number that will be used in sector-wide promotional campaigns is granted to NZ Avocado Growers Association Inc. (NZAGA). However, in addition, each avocado exporter holds their own FernMark Licence (and unique logo) which can be used for their own campaigns and product packaging.

Currently eight avocado exporters are licensed under the NZ Horticulture Export Authority. Although exporters are not members of NZAGA, they are united under the Avocado Exporters Council (AVEC), which in turn is represented on the NZ Avocado executive committee.

NEW ZEALAND.COM
Licence No.101119

The FernMark Licence logo granted to NZ Avocado Growers Association Inc

David says it is important to issue unique licences, so that customers and consumers can trace products back to each individual exporter.

"Having said that, we have made the collective application process really easy for them, so they can get their FernMark Licences pretty quick. This has been a good test for me and the team at New Zealand Story to think through because obviously there are many sectors, and this is potentially a model for others in the future."

Visitors to Asia Fruit Logistica will spot the FernMark on individual stands as well as the collective avocado zone within the New Zealand pavilion

What does it cost?

David says annual licence fees are based on company revenue, with horticulture exporters likely paying anywhere between $800 to $7500 a year.

> **We have made the collective application process really easy**

The licence fee covers costs, particularly for trademark administration and monitoring for misuse. The FernMark is a registered trademark in 43 jurisdictions across a set of core classes, including all 45 classes in New Zealand.

"It's break-even for us," David says. "Our interest is in getting people to use it – not making money out of it."

The FernMark can also provide an added layer of legal protection in the case of a trademark dispute.

"The Government can get involved as a party to a complaint because it's our trademark. I hope that doesn't happen in the avocado sector, but if it does, it can help for us as the Government to get involved because we tend to have a bit more cut-through."

Are grower entities responsible for policing claims about country of origin, potency and health benefits?

AUTHENTICATING EXTRACTS

Consumers around the world are increasingly recognising the added value of New Zealand blackcurrants as a natural health supplement. However, where there is value, there is the risk of fraud.

John Gauldie

About half of blackcurrants grown in New Zealand end up in supplement form, thanks to a growing global market for the unique and proven properties that differentiate New Zealand blackcurrants from blackcurrants grown elsewhere.

Research has well-established the high levels and unique combination of antioxidant anthocyanins in New Zealand blackcurrants – the result of a targeted breeding programme and favourable growing conditions such as high UV, climate and soil conditions in the primary growing areas of Canterbury.

Around the world nutraceutical manufacturers purchase bulk anthocyanin extract in powder form. These companies produce supplements that are frequently marketed with 'New Zealand blackcurrants' as the key ingredient.

"As fruit, our blackcurrants are rather easily distinguished," says Mike Callagher, general manager at the NZ Blackcurrant Co-operative Ltd. "The problems occur up the value chain when the fruit is transformed into products with much higher value, both financially and in terms of health benefits. This is where we have come across examples of adulteration, substitution, misleading claims around potency and misleading claims around the health benefits. This is very much of concern right now."

A serious food safety issue or loss of trust in efficacy involving blackcurrant extract would be massively costly to blackcurrant growers, Mike says. The industry relies on consumer trust which can be easily knocked.

A recent example out of Japan involving an extremely serious food safety issue from a well-known supplement producer has impacted the entire supplement industry in

that country. Despite this being an extreme case, examples like this keep the New Zealand blackcurrant industry focused on maintaining a clean supply chain.

Compromising safety is a key concern, however the authenticity of country-of-origin marketing is obviously also critical to protecting industry revenue.

At the recent Vitafoods Trade Show in Barcelona, Mike met with Kenn Israel, one of the pre-eminent commentators on the subject in the industry. Kenn says, "Adulteration is the biggest existential threat to the future of the dietary supplement industry. If we want to scale with integrity, we need to confront it head-on."

Earlier this year Meike Rombach and Hiraina Tangiora from Lincoln University published an article titled "The food fight – Overcoming the challenges of food fraud" in *The Journal by the NZ Institute of Primary Industry Management*.

Of the various types of food fraud, the paper outlines the risks including:

- **Adulteration**: Adding unauthorised substances to food products to enhance weight, volume or perceived quality, often compromising safety and authenticity
- **Substitution**: Replacing a valuable ingredient with a cheaper alternative while misrepresenting it as the original
- **Mislabelling**: Providing false or misleading information on product labels, such as incorrectly claiming a product's origin or quality
- **Dilution**: Like substitution, this involves mixing a food product with a cheaper substance to increase volume and profit while reducing quality.

Meike goes on to contemplate the ethical nature of the problem.

"From an ethical perspective we should consider our role as stewards of land, our duties to consumers and justice. Horticultural growers are stewards towards land and products, and this includes our unique New Zealand story of provenance. Safeguarding authenticity is part of that stewardship."

Food fraud strips growers of the value they have worked to create, transferring benefits to dishonest parties. From an ethical lens, this is an issue of fairness. Growers should be recognised and rewarded for their product, Mieke says.

"Within our New Zealand products, consumers are seeking real health benefits. Supplying anything adulterated or misleading not only violates their trust but can also harm their health. The grower's responsibility to that consumer extends beyond the orchard. The fight against food fraud considers economic aspects but is also about honouring the integrity of our New Zealand products."

New Zealand blackcurrant traceability is excellent – not just to the grower, but down to the bin number.

To guarantee New Zealand provenance, the NZ Blackcurrant Co-operative Ltd developed its own Adaptive™ New Zealand Blackcurrants trustmark together with the Bioeconomy Science Institute (previously Plant & Food Research). The uptake of Adaptive™ has been slower than ideal, Mike says. This in itself is potentially concerning, considering its use requires full and absolute traceability. Once the blackcurrants are shipped offshore for processing into extract, it becomes difficult to trace.

> "Horticultural growers are stewards towards land and products, and this includes our unique New Zealand story of provenance

Mike says that he is currently in active discussions with offshore suppliers of branded supplements claiming to be using high anthocyanin New Zealand extracts. "The price point is generally the first sign in identifying questionable product being offered at prices which simply are not viable were the product genuine."

Often this comes down to insufficient due diligence by brands buying bulk product from a trader several steps away from actual processors.

New Zealand-based tech company Oritain is a global leader in applying forensic science and data to verify the origin of products. It is used by New Zealand's meat industry, for example. However, such solutions are cost prohibitive for small sectors like blackcurrants.

"There are some great genuine blackcurrant products out in the market which the consumer can rely on to deliver what they claim," Mike says. "We are doing what we can with the resources we have to police functionality, authenticity and claims as we come across products, but where do we start and where do we stop? We are grappling with these questions at an industry level but are determined to safeguard the value of authenticity that we hold so highly."

One solution being actively explored to ensure New Zealand blackcurrant provenance, would be to restart onshore processing, which would be an opportunity to control traceability through to the extract form – as well as adding value to the New Zealand economy. ●

ZESPRI LOOKS **TO FUTURE**

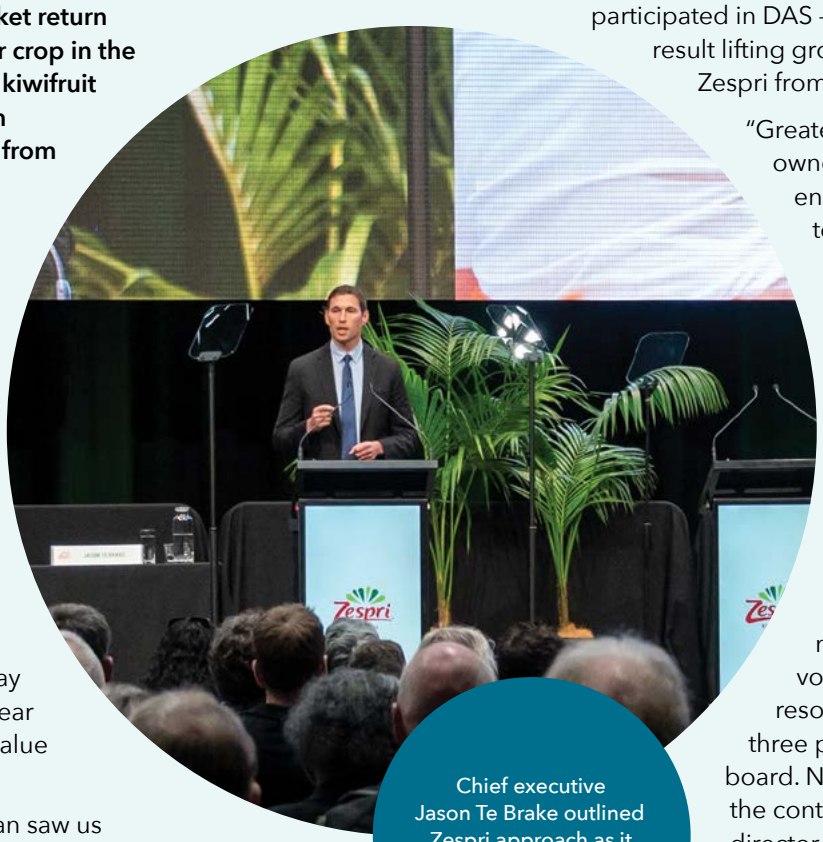
The 2025 Zespri Group Limited Annual Meeting was held on 21 August 2025 at Mercury Baypark Arena in the Bay of Plenty.

Strong demand and market return from Zespri's largest-ever crop in the 2024/25 season saw the kiwifruit marketer top $5 billion in global sales ($3.1 billion from New Zealand supply).

Looking back, Zespri chair Nathan Flowerday highlighted the scale of the achievement, as the industry has doubled its volume and tripled its value in the space of 10 years.

Zespri chief executive Jason Te Brake says the industry's results gave it a strong platform for the future, with work underway on resetting Zespri's 10-year plan to deliver ongoing value to growers.

"Our previous 10-year plan saw us targeting $4.5 billion in sales by 2025. With that fulfilled, our focus now shifts to how we remain future-fit in a global environment that will be more competitive and more complex than the environment we have been operating in previously.



Chief executive Jason Te Brake outlined Zespri approach as it looks ahead to the next 10 years

> **"Greater grower share ownership is crucial in enabling our industry to make commercial decisions together**

"With this in mind, our 2035 ambition is focused on being the world's healthiest fruit brand with our approach to be built around three key priorities – unleashing brand-led demand, transforming our global supply, and creating the product portfolio of the future and executing them well.

"We're in the process of finalising that strategy and setting ourselves up for the future to continue to deliver leading value back to our growers."

Nathan also noted that the board was committed to lifting grower ownership of Zespri and was very pleased to see the early progress made.

The first initiatives, loyalty as shares (LAS) and dividends as shares (DAS), were shaped by grower feedback seeking straightforward options that did not require significant up-front cash.

This year 631 entities participated in LAS, resulting in 327 new shareholders, and 277 shareholders participated in DAS – with the combined result lifting grower ownership of Zespri from 48 to 61 percent.

"Greater grower share ownership is crucial in enabling our industry to make commercial decisions together. It gives growers a stake in the value these decisions create, not only from their crop but also from the overall performance of your marketer."

At the annual meeting, shareholders voted on several resolutions including three positions on the Zespri board. Nathan acknowledged the contribution of grower director Paul Jones, who was not standing for re-election. He has served as a director since 2014, including as deputy chair.

Jonathan Mason (an independent director) and Craig Thompson (a grower director) both successfully stood for re-election.

Lain Jager was elected as a new grower director. Lain is well-known to horticulture as a former Zespri chief executive, who now joins the board as a Gisborne kiwifruit orchard investor, and director of Origin Capital Partners, a private equity fund operating nine SunGold™ orchards spanning 102 canopy hectares. ●

A FAMILIAR FACE AT LEFROY

Lefroy Valley welcomes Keith Vallabh to the sales team.

Keith has over 35 years of horticultural industry experience. After obtaining two Horticulture diplomas at Massey University specialising in agronomy and crop production systems, Keith became a commercial vegetable grower.

His involvement with vegetable growing now spans 30 years including a period running his own business, Pineview Gardens Ltd in Pukekohe. During and after this time Keith served the vegetable industry at VegFed; and subsequently provided valuable service on several committees, including ten years as chairman of Vegetables NZ. Keith has a wealth of experience across many facets of horticulture, including senior roles in horticultural, breeding and fertiliser supply companies. Keith is passionate about our industry.

Keith will be focusing on the Auckland – Waikato regions mainly in an outdoor cropping capacity. A new project for Lefroy Valley is in the cover crop space. This will now be given extra impetus with Keith on board.

> **"Keith has a wealth of experience across many facets of horticulture, including senior roles in horticultural, breeding and fertiliser supply companies**

Warren Hobson, General Manager of Sales and Product Development says, "Our key partner in this area is KWS, a German global company and existing supplier to Lefroy Valley of spinach and bean seed.

Founded in 1856, KWS has been involved in various forms of cover crops for decades. While originally focused on Europe, they have now expanded globally." ●

You can contact Keith on **021 220 5475** or via email **keithv@lefroyvalley.co.nz**

www.lefroyvalley.co.nz

Lefroy Valley quality seeds

Keith Vallabh

WHY USE COVER CROPS?

Warren considers the key benefits:

1. Cover crop mixtures are true root artists: with their combination of taproots and tufted roots, these little helpers loosen the soil and promote soil life at the same time.
2. More is more: cover crops are masters in biomass growth. So it's no wonder that areas cultivated with cover crops are the winners in terms of humus. And they prevent erosion at the same time.
3. Agriculture as a climate protector: with cover crop mixtures, you actively bind carbon in the soil. That is the essence of sustainability. Many growers are using some form of cover crop already. Is it the right option for your unique growing situation? Please feel free to give Keith a call.

YOUNG LEADERS DELIVERING RESULTS

The inaugural Potatoes New Zealand Youth Council has had a busy first half year. I was pleased to meet with the seven members of the council at the Potatoes Conference in August. They have more than proven the value of this new leadership forum.

Kate Trufitt : Potatoes New Zealand chief executive

The Potatoes New Zealand Youth Council pictured (left to right): Catherine James, Samuel Pye, Amber Davy, Harry Maddox, Molly Green, Jamie Wells, (not pictured Bridgett James)

At Potatoes New Zealand we've been listening closely to what matters most to our growers – and one message came through loud and clear: the importance of encouraging young people to get involved in industry representation. Growers told us they see real value in bringing fresh energy and new perspectives into governance roles and industry body work.

They want to see the next generation stepping up, contributing their ideas and helping shape the future of our sector. It's about creating a sustainable and resilient industry, where experience is passed on, leadership is nurtured and young people feel empowered to have a seat at the table.

Hence the Potatoes New Zealand Youth Council was established earlier this year.

Our call for nominations produced a great response. I'm proud to see the diverse make-up of the council, representing potato and seed potato growers, researchers and suppliers, across both North and South Island operations.

Thank you to all seven council members for their contribution so far. It's inspiring to see these young leaders dedicate their time to support the future industry.

Jamie Wells, a Balle Bros grower, chaired the council's first half year. Amber Davy from Eurogrow Potatoes has taken over the reins as Youth Council chair for the next year's rotation.

Increasing engagement

Members of the Youth Council have been out and about speaking to students at Massey and Lincoln universities as ambassadors of our industry. However, there's a lot more we can do to communicate with young people.

Events like the Young Grower of the Year competition are a fantastic way to introduce young people to horticulture. Some of the Youth Council have themselves been contestants.

However, are we doing enough to showcase our successful young growers as fantastic role models? The council would like to see more students come along to these events – to get a look at the skills involved and have a go themselves.

It would be great to welcome more secondary school and tertiary students, particularly those without a family connection to growing, who may not have considered horticulture as a career yet.

Let's make a career in potatoes a chosen pathway, rather than one that young people only discover by chance.

Innovation leadership

As the next generation of growers, the Youth Council is looking ahead at the innovative technology and cultural practices on the horizon.

In late July, the council was hosted at Te Ahikawariki's demonstration farm in Pukekohe. They learned more about the Sustainable Vegetable Systems (SVS) Tool nitrogen management trials, BioScout spore detection technology, smart trapping demonstrations for Potato Tuber Moth monitoring in-field, and soil health research focusing on soil aggregate stability using Slake tests.

By connecting with innovative research efforts, the council members can champion uptake on our farms and increase awareness of practical applications of science in crop management. They encourage us all to embrace change, so we can create a sustainable and productive future for the next generation of growers.

Workforce development

Potatoes New Zealand is working with Te Ahikawariki to align on a new vegetable workforce development programme. The Youth Council is helping to identify pathways for upskilling new entrants to the industry – particularly for the skills that will be increasingly required in the future, for example in applied technology and innovation.

The council is also a sounding board for all young people in the potato industry to support and encourage one another.

The potato industry offers an incredibly diverse range of challenging and rewarding careers for young people across the board. We are beginning to really land that message thanks to the leadership of the Youth Council. Keep up the good work!

If you have any questions, please contact Potatoes New Zealand.

Phone: 0800 399 674

Email: **info@potatoesnz.co.nz**

Website: **www.potatoesnz.co.nz**

POTATOES NEW ZEALAND YOUTH COUNCIL

Amber Davy is Quality and Field Manager at Eurogrow Potatoes, overseeing South Island trials and new variety programmes. Originally from a Taihape sheep and beef farm, she studied at Feilding Agricultural High School before completing agricultural and horticultural qualifications at Lincoln University.

Molly Green is a Territory Manager Upper North Island – Agricultural Solutions at BASF in Auckland. Originally from Lincolnshire, she emigrated to New Zealand in 2008 and completed a plant science degree at Massey University.

Bridgett James is Assistant Store Manager at the Potato Seed Co-Op in Ashburton, where the facility specialises in storing, cutting and grading seed potatoes for McCain's process growers.

Catherine James is a Pukekohe-based horticultural researcher who runs trials for crop protection product development and innovative grower solutions. She is passionate about supporting emerging professionals in the vegetable industry and improving on-farm practices through collaborative research.

Harry Maddox relocated from the United Kingdom to New Zealand seven years ago, quickly establishing himself in horticulture with over five years in potato production. He holds Level 3 and 4 Horticulture Management qualifications and recently took on his own lease block.

Samuel Pye is a 17-year-old high school student from Dorie, near Ashburton on the Canterbury Plains. Growing up on his parents' arable and vegetable farm sparked his passion for potatoes and all aspects of farming, from machinery operation to final product packaging.

Jamie Wells is a Pukekohe-based agronomist with Balle Bros, specialising in potato, carrot, onion, brassica, spring onion and cereal crops. The 2024 Young Grower regional winner and national runner-up graduated from Pukekohe High School in 2012, completing his Bachelor of Agri-science (Horticulture) in 2021.

APPLES AND PEARS **CONFERENCE CELEBRATES RECORD SUCCESS**

The pipfruit industry celebrated both its past achievements and future ambitions at NZ Apples & Pears' annual conference in August. Third-generation orchardist Richard Hill received the sector's highest honour whilst delegates reflected on reaching $1 billion in orchard gate revenue for the first time.

NZ Apples & Pears chair Lesley Wilson, Industry Contribution Award recipient Richard Hill and NZ Apples & Pears Board member Andrew Common

Pictured from left: Karen Morrish, chief executive NZ Apples & Pears; Mike Petersen, chair Scales Corporation; Mark Piper, transition chief executive Bioeconomy Science Institute; and Shane Kingston, chief operating officer apples at T&G Global

More than 300 industry professionals gathered at Nelson's Trafalgar Centre for the NZ Apples & Pears EXPO 2025. The three-day event adopted a fresh format this year, featuring enhanced networking opportunities and more trade stands than previously offered. Six breakout sessions were designed with "an eye to the future but feet firmly on the ground," addressing the challenges and opportunities facing the sector.

The timing of holding the conference in Nelson proved particularly poignant. "The region's recent weather events, and the resulting impact on growers, highlighted once again the realities of climate challenges on the sector," NZ Apples & Pears chief executive Karen Morrish observed.

Pioneering career

Richard Hill was presented with the prestigious Industry Contribution Award.

"Richard is someone who has shaped the careers of many individuals and helped ensure the performance of some of the sector's largest integrated companies," said NZ Apples & Pears Board member Andrew Common, who delivered the citation for the award.

Richard's journey spanning nearly five decades began after graduating from Massey University in 1976 with a Bachelor of Horticultural Science. He initially worked as a Horticultural Advisory Officer with the Ministry of Agriculture & Fisheries in Nelson, where he helped pioneer the implementation of the then-revolutionary 'French Axis System' tree architecture.

Following Richard's move to what he believed was "the best place in the world to grow apples – Hawke's Bay" he transitioned to the private sector, taking the helm as chief executive of Limnos Investments, a Brierley Investments Company. When the operation was sold to EEC Horticulture, he managed the expanded enterprise from the mid-1980s until 2001.

"Throughout his career, and more recently in his time with Mr Apple, he has been instrumental in fostering and developing the careers of many young and aspiring growers," Andrew noted. "Many of today's orchard managers have him to thank for assisting in building their knowledge and capability."

Richard served on numerous industry committees, including as chair of the National Research Committee, and was elected as grower director on the NZ Apple and Pear Marketing Board in 1996, navigating the industry through some particularly turbulent times.

Following deregulation in 2001, Richard played a pivotal role when EEC merged with Grocorp to form Mr Apple, where he pioneered the development of orchard data and analytics tools that delivered what the industry describes as "a step change in orchard performance and profitability."

New milestone for orchard gate revenue

The recognition comes at a particularly significant moment for the industry. Karen highlighted how the conference celebrated reaching the $1 billion milestone whilst setting sights on even more ambitious targets.

"Reaching $1 billion in orchard gate revenue for the first time at the end of 2024 was a major milestone for our sector and one we have been keen to celebrate," Karen explained. "However, now to turn towards our goal of becoming a sustainable $2 billion industry by 2035."

All breakout sessions were packed to capacity, with many requiring standing room only, demonstrating the industry's appetite for strategic discussions about its future direction.

The conference reflected what Karen described as "the industry's ongoing commitment to building a sustainable, productive, and inclusive food sector," combining practical insights with forward-looking strategies.

For Richard, the award represents recognition not just of professional achievement but of personal character. As Andrew concluded in his citation: "Anyone who has ever met him or had the privilege of working alongside him, will attest; he is someone you can always count on. He is someone who will always do the right thing. But most importantly, he is just a really, really good guy."

TomatoesNZ

PCA CONFERENCE IN ADELAIDE

Protected Cropping Australia (PCA) organise a biennial conference in a different growing region of Australia each time. In 2023 the conference was in Brisbane, within distance of the many greenhouse and protected crop growers that operate along the east coast.

Dinah Cohen : TomatoesNZ general manager

This year the conference was in Adelaide, and I hadn't realised how many covered crop growers there were in the North Adelaide Plains, mostly growing under plastic and with tomatoes and capsicums dominating, but strawberries becoming increasingly popular as well.

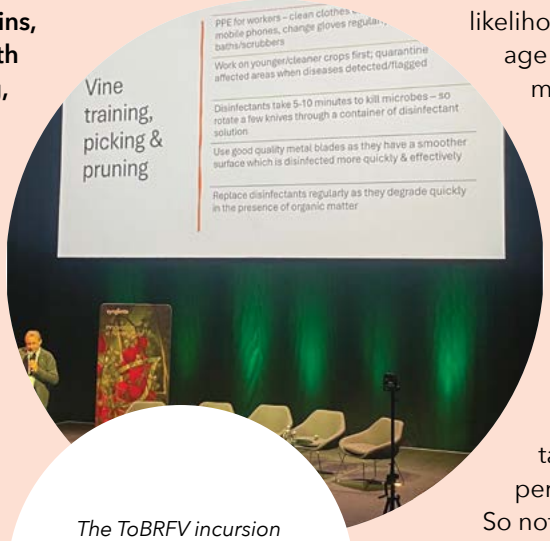
One estimate had the number of growers in the area at around 1850! Sadly, there weren't many local growers who attended this conference, so they missed the opportunity to learn from domestic and international suppliers and of course from chatting to those involved in various aspects of the industry.

I think it is fair to say that in general, Australian covered crop growers appear to face the same issues as those in New Zealand:

1. The cost of energy
2. The cost of labour
3. Biosecurity threats.

These all diminish the bottom line, and added to this is the ever-declining consumption of vegetables in Australia (thought to have decreased by 45 percent in recent years) – a trend that is mirrored here in New Zealand.

Interestingly, while the conference two years ago had a strong focus on vertical farming being the way forward, the huge cost of energy has changed that narrative and vertical farms are thought only to have a place where space is restricted. Instead, medium to high-tech greenhouses are now thought to offer the best balance between input costs (too high in vertical farms) and variable quality of produce (as occurs in outdoor crops, due to climate).



The ToBRFV incursion was a hot topic at the PCA conference in Adelaide, not far from where the first cases of ToBRFV were detected

In terms of technology, there was not too much on offer, but there were discussions about the likelihood of robotic harvesters (that age old discussion!) and how AI might help growers in the future. The consensus seemed to be that robots have a place in the greenhouse, but even with a median wage in Australia of $42.50 per hour, they are too expensive and still not precise enough. On the other hand, AI plays a role in helping growers manage larger greenhouses but for limited tasks, accounting for only ten percent of the current workload. So not a game changer yet.

IPM and banker plants

There was a presentation with some interesting ideas on using banker plants as part of an integrated pest management (IPM) programme. A banker plant is one that is planted in the greenhouse specifically for beneficial insects (BCAs) to use as a 'home base'.

If there is a food source, they will live quite happily in the right environment on the banker plant waiting for when the pests appear. The trial by TomatoesNZ and A Lighter Touch (ALT) observed that the problem is how to then encourage the BCAs into the tomato plants to eat the pests. That trial had some success with breaking off banker plant leaves and spreading these amongst hot spots.

An idea from the conference was to have banker plants in pots so that the whole plant can be moved to where the pests are seen. Some suggestions for where to position banker plants are: near doors, in cold spots, at the ends of rows and in the gutters.

There was even the novel idea of in hanging baskets near vents to try to stop the pests from coming inside. I imagine there would be some health and safety requirements that need to be checked if you plan to try this out.

What to choose as a banker plant will depend on the BCA being used. It is a good idea to talk to your BCA supplier for suggestions, but some tips from the conference were to use spare tomato plants, or a plant that flowers consistently, or having several seedlings of banker plant in one pot to increase the concentration. Also, only sourcing banker plants from a trusted supplier and then monitoring them for pests is key – you don't want to introduce extra issues into your greenhouse.

Some other advice for a successful IPM:

- Be honest with your supplier about how many pests are present so that they can send the right number of BCAs.
- Consider what chemicals were used at the end of the previous crop cycle – are residues still present in the greenhouse that might kill the BCA? Are residues present in the substrate if this is being recycled?
- BCAs can be harmed by environmental chemical use so knowing what your neighbour is spraying and thinking about when you spray weeds near the greenhouse are both important.

Greenhouse tech

Outside of the conference, we visited the brand-new demonstration greenhouse at Apex Greenhouses in Virginia. This was built in conjunction with a number of organisations as a research and extension space and is seen as a grower hub for the region.

> "Australian experience has shown that it is almost impossible to successfully eradicate ToBRFV

The two compartments currently have ToBRFV (tomato brown rugose fruit virus) resistant tomatoes (five rows, each a different variety) and strawberries, on guttering that allows for maximum density while not compromising light availability for the plants.

Apex themselves are trialling some different ideas – the greenhouse is not vented in the tomato section. Unlike in New Zealand, South Australia does not have an issue with humidity, so instead they have introduced a wet wall to add moisture to the environment. It is always exciting to see a brand-new greenhouse and it will be great to hear results of current and future trials.

The field trip to see new greenhouse demonstration facilities showcased strawberry guttering that allows for maximum density while not compromising light availability

Rijk Zwaan ToBRFV resistant tomatoes varieties in a trial at the new demonstration facility at Apex Greenhouses in Virginia

ToBRFV learnings

Finally, for obvious reasons, ToBRFV was a hot topic both in workshops at the conference and in chatting to growers and industry stakeholders. North Adelaide was where the first cases of ToBRFV were detected 12 months prior to the conference, and it would be fair to say that there have been many learnings in that time.

> **The lesson shared was that any plan must be sympathetic to the grower**

Some that were shared with us are: that New Zealand is lucky to have representation of tomato growers with the ability to claim compensation if growers are directed to destroy crops. In Australia, tomato growers can choose to be members of PCA but there is no legislated commodity levy and no seat at the table when unwanted viruses make an appearance.

That said, the advice for New Zealand was that the Australian experience has shown that it is almost impossible to successfully eradicate ToBRFV, and it would therefore be better to agree to a long-term management plan and have this confirmed ahead of time.

The eradication plan that was agreed following the South Australia detections did not allow the movement of fruit from quarantined properties and even now, 12 months on, neither the large grower nor the nursery are in full production. The lesson shared was that any plan must be sympathetic to the grower and ensure they are able to continue trading.

The way growers in Europe deal with this disease was quoted often – high levels of hygiene and growing resistant varieties. South Australian growers hope that the management plan being confirmed since an eradication plan was abandoned in late May, allows growers to follow a similar vein of self-management.

Thank you to the following people and organisations:

- Folco Faber at Apex Greenhouses for showing us around the demonstration site
- The PCA committee for organising this event and for giving the TomatoesNZ delegates the opportunity to attend
- James Bertram of Rijk Zwaan and AusVeg SA for introducing us to growers at the conference and afterwards
- All the growers who willingly talked to us
- And finally, the TomatoesNZ Board for enabling this fact-finding trip.

If you have any questions about anything fresh tomato related, please don't hesitate to contact me:

dinah.cohen@tomatoesnz.co.nz

New Vegetables NZ board directors Gordon McPhail (left) and Rob Lindsay (right)

VEGETABLES NZ BOARD CHANGES

Two new faces – Gordon McPhail and Rob Lindsay – joined the Vegetables NZ Board as directors at the Annual General Meeting on 26 August.

"Both Gordon and Rob have demonstrated they speak up and bring a commercially sound, constructive approach that benefits vegetable growers," says Vegetables NZ chair, John Murphy.

The Vegetables NZ Board is determined to stay in touch with the day-to-day reality its growers face and respond to constructive criticism productively.

"While there are tremendous opportunities in our industry, of recent times, it has been a hard slog for our members financially," John continues. "We urgently need Government action on a national approach to vegetable production."

There were four positions available on the Vegetables NZ Board. Brendan Balle and Jay Clarke remain on the Board for another term following their reappointment. John also thanked Allen Lim, who retired by rotation and did not seek re-election, and Nick Pollock, who stepped off the Board in January 2025.

www.freshvegetables.co.nz

Participants during the first phase in Auckland

LATEST COHORT OF FUTURE LEADERS

Sixteen participants from across the country have embarked on the Horticulture New Zealand Leadership Programme.

The group will be following in the footsteps of more than 320 graduates who have undertaken the highly respected programme since 2002, to develop their leadership knowledge and abilities.

HortNZ chief executive Kate Scott said the initiative is focused on supporting the development of a strong pool of high performing leaders with the confidence and skills to take the industry into the future and achieve its ambitious goals.

"It is very well supported by industry leaders, is horticulture specific, pragmatic, and provides the highest quality training in a friendly learning environment.

"It is also a great opportunity for our future leaders to network with like-minded emerging and current influential leaders."

The programme is delivered in two phases over nine weeks, starting 11 August and finishing 17 October. It includes two residential courses – five days in Auckland and three days in Wellington.

www.hortnz.co.nz

NEW NZGAP **AUDIT AND CERTIFICATION** PROVIDERS

The NZGAP programme provides certification for growers of fresh fruit and vegetables and the associated supply chain. Photo by Tony Benny

NZGAP has selected AsureQuality and QCONZ as its assurance partners following the first review of audit and certification providers in over 15 years.

AsureQuality is an existing audit provider and will be entering into a new contract for NZGAP.

QCONZ is a new provider to the horticulture sector, although the company has experience in other New Zealand primary sector settings. QCONZ is in the process of obtaining the relevant recognitions to start auditing NZGAP programmes.

"QCONZ and AsureQuality demonstrated strong strategic alignment with NZGAP's vision to enable the production and supply of safe and sustainable food resulting in the selection of both organisations to audit all NZGAP programmes and add-ons," says NZGAP committee chair Bernadine Guilleux.

"We want to improve the service for certified operators, digitise the audit process and minimise costs for growers."

SGS will no longer be contracted for NZGAP from 1 January 2026. The change in audit partner will not change the recognition of NZGAP certification in domestic or international markets. This change does not have an impact on those with GLOBALG.A.P. certification via SGS.

> **"We want to improve the service for certified operators, digitise the audit process and minimise costs for growers**

There are no immediate changes to the audit fees as these are set by NZGAP and will be the same regardless of which certification body (auditor) operators use.

More detailed information about transition timeframes and next steps will be sent directly to affected growers and operators.

Established in 1999, NZGAP (New Zealand Good Agricultural Practice) is owned by Horticulture New Zealand and recognised under the Food Act. NZGAP has a GLOBALG.A.P. recognised programme and has developed additional modules for environmental sustainability and social practice, with further development and digital innovations in the pipeline. ●

For any questions about NZGAP audits, contact NZGAP on

info@nzgap.co.nz

or phone 04 470 5867

NEW FACES ON NZGAP COMMITTEE

NZGAP held its Annual Meeting in August. Committee members Allen Lim and Mathew Bannister stepped down after serving maximum nine consecutive years on committee. Congratulations to Catherine Lewis (Lewis Farms) and Cherie Wiklund-Hall (J&P Turner) who have been elected to the committee.

The committee recognised the contribution of outgoing NZGAP general manager Damien Farrelly. After nine years at NZGAP, he has accepted a new role as chief executive of the Fresh Produce Safety Centre.

CHANGES TO FRESHWATER FARM PLANS

The Government has announced amendments that provide a pathway for NZGAP and other industry assurance programmes to be approved to certify and audit freshwater farm plans.

This means that your freshwater farm plan audit can likely be achieved through the NZGAP Environment Management System add-on, rather than a default regional council pathway. This is excellent news and the result of continuous advocacy by HortNZ, Zespri, NZGAP and other industry partners.

The amendment bill also changes the default setting for what size of farm needs a freshwater farm plan. However, regional councils will still be able to set smaller thresholds, and they likely will.

UPCOMING APPROVAL PATHWAY REFORM

HortNZ is preparing to submit on the Agricultural and Horticultural Products Omnibus Bill, which is to be introduced to Parliament in late 2025. This Bill resulted from the Ministry for Regulation's Review into the approval pathway for agrichemical and veterinary medicine products. It proposes changes to the Hazardous Substance and New Organisms Act 1996 and Agricultural Compounds and Veterinary Medicines Act 1997 to improve the joint product approval process.

HortNZ will keep you updated and seek your input as we develop this submission. For more information about crop protection, contact Natalie Wong, senior risk policy advisor, at **natalie.wong@hortnz.co.nz**.

COST RECOVERY FOR ORGANIC PRODUCERS

In August HortNZ submitted on the Ministry for Primary Industries' consultation on cost recovery for organic producers. Further public consultation on the more detailed notices, which will set out the detail of the National Organic Standard and Process Regulations, is expected in early September.

HortNZ hosts a quarterly online policy catch-up for organic growers, with the next one in November. To be added to the contact list for these catch-ups and to receive occasional organic-specific policy updates by email, please email **emily.levenson@hortnz.co.nz**.

SIGN UP

Get the latest horticulture policy and risk updates, industry programmes and events in your inbox and have your say with HortNZ's Weekly Briefing.

Email **comms@hortnz.co.nz** to receive the weekly email.

HIGH RESISTANCE ToBRFV

HREZ

ENZA ZADEN

High Resistance by Enza Zaden (HREZ) is a growing collection of tomato varieties that convey High Resistance to ToBRFV. The HREZ collection includes varieties in all significant tomato types including large plum (Roma), beef, baby plum (grape/snack), cherry, cocktail and tomatoes-on-the-vine (TOV/cluster).

Follow the QR code for more varieties and information on ToBRFV

Or speak to one of our representatives:
email: sales@enzazaden.co.nz
Phone +64 9 963 0122

ENZA ZADEN

Formoza:
Heated Large TOV
Resistances:
HR: ToMV:0-2/ToBRFV/Pf:A-E/Fol:0,1/For
IR: On
Heated Production. Strong and vigorous plant. Maintains fruit size and quality throughout the season. Deep red fruit colour with excellent truss balance and uniformity. Weight approx 180g.

Tomagino Seram:
Heated Cherry
Resistances:
HR: ToMV:0-2/ToBRFV/ToANV/Va:0/Vd:0/Fol:0/For
IR: On
Heated Production.
Strong, well-balanced plant. Productive, generative, with short internodes. Fast colouring fruit, uniform fruit. Great flavour with consistently high Brix. Weight: 18-22g

Icaria:
Heated Mini Plum
Resistances:
HR: ToMV:0-2/ToANV/ToBRFV/Fol:0,1
IR: Ma/Mi/Mj
Heated Production. Strong, well-balanced plant. Productive, with compact trusses. Excellent colour, fast colouring. Great flavour with consistently high Brix. Long shelf-life. Weight: 11-15g.

Avalantino Rei:
Heated Large Cocktail
Resistances:
HR: ToMV:0-2/ToANV/ToBRFV/Ff:A-E/Va:0/Vd:0/Fo
IR: TSWV/On/Ma/Mi/Mj
Heated production.
Open plant habit with regular truss production. Medium to early maturing. Strong against splitting. Excellent flavour and quality. Best grown 6-7 fruit per truss. Weight: 70-80g.

Rhodium:
Heated Large TOV
Resistances:
HR: ToMV:0-2/ToBRFV/Pf:A-E/Va:0/Vd:0/Fol:0,1
IR: TSWV/On
Heated Production. Vigorous, well-balanced plant. High early yield, with regular fruit setting. Generative open plant habit, labour friendly. Firm, shiny red fruit, dark green calyx. Weight: 140-160g.