

# NZGROWER & ORCHARDIST®

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HORTICULTURE NEW ZEALAND

## SUPPORTING GROWER VIABILITY

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MĀORI LAND

44 COPPER  
IN SOILS







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Erin Mai from *The Fresh Grower* in Pukekohe. See page 26. Photo supplied.



## NZGROWER & ORCHARDIST

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# WELCOME NEW DIRECTORS

*Strong, diverse governance is essential to guiding HortNZ through the opportunities and challenges ahead.*

Bernadine Guilleux : HortNZ chair

### That's why it was encouraging to see such strong interest in our recent board elections.

Thank you to the nine candidates who put themselves forward to fill the three vacant director positions. It's great to see experienced people from across our sector step up.

Thanks also to the growers who voted, your voice helps shape the future direction of your industry-good organisation.

I'm pleased to welcome Simon Cook, Dermott Malley and Shaun Vickers to the HortNZ board.

Simon grows kiwifruit and avocados in the Bay of Plenty and is chair of Kiwifruit Vine Health. Dermott chairs Onyx Capital, a vertically integrated horticultural business in Northland, and brings commercial and governance strength. Shaun, a former Young Gower of the Year, is general manager, clients, orchards and business development at Apata Group.



It was an honour to present Dr Stuart Davis with a Horticulture New Zealand Life Member award in July ahead of our annual awards this month.

This award recognises individuals with long and dedicated service as office holders within HortNZ and/or affiliated grower groups. Stuart embodies the spirit of this award; for more than 35 years, he has played a pivotal leadership role in New Zealand's vegetable sector.

Thank you, Stu, for your commitment, passion and the sheer hard work that you have displayed over the course of your career. The HortNZ team and board look forward to connecting with many of you at this year's Horticulture Conferences in Wellington 26-27 August.

There is a strong line-up of speakers to hear from and discussions to participate in; our Annual General Meeting will be held at 4pm on the first day and we look forward to presenting our 2025 industry awards at our gala dinner on Wednesday evening. ●



**THANKS TO THE GROWERS WHO VOTED**, YOUR VOICE HELPS SHAPE THE FUTURE DIRECTION OF YOUR INDUSTRY-GOOD ORGANISATION



# Keeping multiple multisite fungicides in play

For fruit growers looking for robust disease control, multisite fungicides play a pivotal role. The fact that they attack fungal pathogens at multiple sites makes them much less likely to become ineffective as mutations make the disease less sensitive at one site or another. Not only does that make them more reliable in their own right, but using them in combination with the more common single-site fungicides helps keep those products working for longer too.

That's a key reason why it's very good news for local orchardists that there will be no changes to the European Union's maximum residue limit (MRL) for metiram – the active ingredient that powers Polyram® DF – until 2027 at the earliest.

It had been expected that the MRL might be reduced as part of an impact assessment process which was announced in 2023. It's now anticipated that the process will be on hold at least until the end of 2026, with a final decision likely published in early 2027.

Polyram remains registered for use on most markets around the world, but it's likely that fruit treated with it will eventually no longer be accepted into the EU.

As the manufacturers of Polyram, BASF recommend both that growers take full advantage of the opportunity to go on using it while that lasts and that they consider adding Delan® WG, another multisite fungicide with a different mode of action, to their spray programmes.

Tim Herman, Senior Technical Services Specialist – for BASF NZ says, “Polyram and Delan are both registered to protect pipfruit against black spot, so they can be used in tank mixes with single site fungicides to provide high levels of control and minimise the risk of resistance developing. For most of our growers, Polyram or Delan are seen as the first line of defence because it's been so reliable for so long. But if Polyram has to be dropped in the years ahead, Delan will make an ideal replacement as the main fungicide used to treat black spot. It belongs to a different chemical group, but shares that crucial attribute of activity at multiple sites within the fungus.”

While Polyram has a well-earned reputation for enhancing fruit finish, Tim advises that growers trying Delan for the first time need to manage the spray timing to minimise the risk of fruit russetting. Delan should not be applied in cold, frosty or slow drying conditions. Between pink and second cover, when the risk of russetting is at its peak, Delan can be applied at the lower rate of 11 grams for every 100 litres of water in a tank-mix with a suitable DMI fungicide.

“Delan and Polyram share similar attributes and will both provide excellent disease control,” Tim says, “but they are different products and need to be managed slightly differently.”

Black spot control is a high priority for every pipfruit grower, so it pays to take full advantage of the best multisite fungicides available as the foundation of robust preventive programmes.

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# SUPPORTING GROWERS THROUGH CHALLENGE AND CHANGE

*Growers are known for their resilience. But the severe weather events we've seen in recent years, and again in recent weeks, are pushing even some of our seasoned growers to the limit.*

Kate Scott : HortNZ chief executive



HortNZ will continue working alongside the Government, councils and growers to ensure support is targeted and effective

## **The widespread flooding and landslips caused significant damage across parts of the Nelson-Tasman region in June and July.**

Growers in areas such as the Motueka Valley/ Tapawera, Riwaka, Brooklyn and Wai-iti are facing major challenges, with the cumulative impact of extreme weather events taking a heavy toll.

This time, the damage is not just to orchards and crops. Homes, sheds, packhouses, cool stores and worker accommodation have also been affected. Blocked roads and broken infrastructure cut off access to properties and disrupted business operations and community life.



Over 20 growers were affected by the recent floods, with 10 experiencing severe losses. Many have told us of feeling overwhelmed and needing clear, practical support.

HortNZ is working closely with local councils, recovery agencies and central Government to ensure growers' needs are understood and addressed. We've advocating for coordinated assistance now and strategic investment for the future.

That future must include better protection of our productive land.

The growers I've been talking to over the last few weeks want long-overdue improvements in river management, including more consistent gravel extraction, to reduce the risk of future flooding.

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**20+ GROWERS**  
WERE AFFECTED BY  
THE RECENT FLOODS, WITH  
**10**  
EXPERIENCING SEVERE LOSSES

They have also highlighted the urgent need for investment in stop banks and other flood mitigation measures. These aren't just local issues, they're national ones, and solving them will require strong partnership between industry and government.

As always, HortNZ will continue to stand alongside growers and product groups in advocating for solutions and helping ensure the sector has the support it needs to recover, and to keep feeding New Zealand.

In other news, August is Biosecurity Awareness month. This is a timely reminder of the importance of strong biosecurity systems and the need to remain vigilant when it comes to biosecurity risks.

“

**HortNZ will continue to stand alongside growers and product groups in helping ensure the sector has the support it needs to recover**



The risks were brought home earlier this year when Biosecurity New Zealand responded quickly to the detection of a single male Oriental fruit fly in Papatoetoe and then again in Birkdale, Auckland. The efforts of Biosecurity New Zealand, and the cooperation of the community in each area, were a testament to our shared commitment to protecting our growing regions.

And finally, I look forward to joining growers at the Horticulture Conferences in Wellington later this month. The two-day event will provide valuable insights into the issues that matter most from innovation and sustainability to workforce development and succession. ●



# Stronger together.

**As growers, we're constantly reminded how much our industry depends on the forces of nature. The recent flooding in Nelson has shown just how quickly everything can change. Our thoughts and support are with the growers in the region as they recover and rebuild.**

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# SHAPING THE FUTURE OF RSE

*This year's RSE Conference, part of the Horticulture Conferences held in Wellington on 26–27 August, brings industry, government and Pacific partners together under the unifying theme 'Honotahi – Together as One'.*

The theme reflects the spirit of collective responsibility and opportunity within the Recognised Seasonal Employer (RSE) Scheme highlighting a shared commitment to collaboration, innovation and people-focused outcomes.

With more than 30 sessions across two days, the programme is designed to explore both strategic and practical dimensions of the RSE scheme, spanning workforce development, worker experience and policy reform.

The conference will also feature addresses from Immigration Minister Erica Stanford and Associate Minister of Agriculture (Horticulture) Nicola Grigg – reflecting the Government's recognition of the scheme's significance to New Zealand's food and fibre sector.

## Participating workers

Since it began in 2007, the RSE scheme has been a key factor in expanding the horticulture industry.

The RSE scheme enables employers in the horticulture and viticulture sectors to recruit an annually capped number of seasonal workers from eligible Pacific countries to plant, maintain, harvest or pack crops when no suitable New Zealand workers are available.

Under the scheme, RSE workers come to New Zealand for either 7 or 9 months in any 11-month period, and return home between seasons.

The Pacific countries eligible for recruitment under the RSE scheme are Fiji, Kiribati, Nauru, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

In April this year, the Government added Timor-Leste to the RSE Scheme. The RSE scheme also allows for recruitment from other Southeast Asian historical participating countries in exceptional circumstances with the Ministry of Business, Innovation and Employment's (MBIE) agreement.



*Between 2024 and 2029, enhanced support will be provided directly to Pacific governments*

## Recent changes to the scheme

In August 2024 the Government increased the cap on the number of workers by 1250 to 20,750 for the 2024/25 season.

The announcement also saw some significant policy changes, including requiring employers to pay workers an average of 30 hours a week over four weeks.

“

**The RSE scheme has been a key factor in expanding the horticulture industry**

The pause on accommodation cost increases was lifted and the Government also changed the requirement to pay RSE workers 10 percent above the minimum wage to apply only to experienced workers, recognising their productivity.

Workers' visas became multi-entry during a season, allowing workers to return home for significant family events, for example.

The Government also improved flexibility for RSE workers to move between employers and regions.

While in New Zealand RSE workers can also undertake training and skills development not directly related to their role. The RSE Worker Training Programme offers opportunities to develop skills that support reintegration back home.



### Substantive improvements in the pipeline

At the time Immigration Minister Erica Stanford said, "These changes are just the start. The next phase of our work programme will consider substantive, longer-term options to further improve the wider RSE system and worker welfare settings."

Between 2024 and 2029, enhanced support will be provided directly to Pacific governments so partners can shape the outcomes they seek from participation in New Zealand labour mobility schemes.

“

**RSE workers come to New Zealand for either 7 or 9 months in any 11-month period, and return home between seasons**

New outputs include: support to ensure more equitable recruitment and sharing of benefits; increased funding for Liaison Officers; streamlining processes to reduce the burden on labour sending units; more effective pre-departure training mitigating impacts on families that remain at home; more effective reintegration to maximise the skills and experience obtained; and the need for good practice information sharing and research on the impacts of labour mobility both at the Pacific and labour-receiving ends.

The Pacific Agreement on Closer Economic Relations (PACER) Plus is a trade and development agreement between 10 Pacific Island Forum (PIF) members including New Zealand and Australia. PACER Plus includes an Arrangement on Labour Mobility, formulated to strengthen Pacific labour mobility cooperation between PACER Plus participants.

The Strengthening Pacific Labour Mobility (SPLM) programme is the primary way New Zealand supports Pacific labour-sending countries to maximise the benefits of labour mobility.

### 2025 RSE CONFERENCE HIGHLIGHTS

- ☆ **Policy to Practice:** High-level updates from MBIE, MFAT and PACER Plus on regulatory direction and regional cooperation
- ☆ **Voices from the Pacific:** Ministers and senior officials from labour-sending countries – including Tonga, Fiji, Tuvalu, Kiribati, and the Solomon Islands sharing aspirations, challenges, and expectations
- ☆ **Workforce and Wellbeing:** Real stories from RSE workers, employers, and pastoral care providers that spotlight cultural integration, safety and support
- ☆ **Skills Recognition and Training:** Insight into emerging frameworks to credential on-the-job learning and invest in long-term capability development
- ☆ **Workshops and Forums:** Closed sessions for employers and labour-sending units to share knowledge, reflect on lessons, and shape the future

#### RSE Conference

26–27 August 2025  
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It seeks to increase social and economic wellbeing and resilience across the Pacific through relevant, effective and enhanced circular labour mobility participation. ●



  
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The Canterbury regional competition was the first to be held in the region for several years

## SEVEN YOUNG GROWERS TO BATTLE IT OUT

*Seven dedicated young horticultural workers from across New Zealand are finalists in the national Young Grower of the Year competition for 2025. Come and support the next generation by attending the awards dinner on 11 September in Christchurch.*

**They will pitch their knowledge and skills against one another over two days of challenging modules including a leadership questions and answers panel at the national final at Lincoln University and the Airforce Museum of New Zealand, Wigram, Christchurch on 10-11 September.**

The competition celebrates the success of young people in the industry as well as encouraging others to consider a career in horticulture.

HortNZ chief executive Kate Scott says the competition plays an important role in highlighting the wide variety of different career opportunities in the industry.

"Our seven finalists, along with the many other young growers who competed in the regional competitions, epitomise the skill, passion and commitment of the talented people working across the sector.

"What has really stood out is how much all the contestants enjoy their work, the training and career progression that has been provided to them, through on and off the job training, and their enthusiasm for raising awareness to other young people of the many great career opportunities the industry offers.

"Thank you to the organisers and to all the regional Young Grower organisers countrywide. The regional competitions and the national Young Grower of the Year final could not happen without the commitment of so many industry professionals across the country who give up their time to help organise them.

"Good luck to all of our finalists."

To find out more about the Young Grower of the Year national final and to secure tickets to the awards dinner, go to [www.younggrower.co.nz](http://www.younggrower.co.nz).





### **PHOEBE SCHERER - BAY OF PLENTY**

Phoebe, aged 29, from Tauranga, is a technical lab manager for Apata, gained a degree in biology and evolution and did her OE before taking a seasonal job with Fruition Horticulture.

The company offered her a full-time role as an assistant consultant - where she "plunged straight into the deep end and loved it".

Last year, she joined Apata, a post-harvest service provider for New Zealand kiwifruit and avocado growers.

"I really enjoy being able to collect data about what is going on in orchards and give growers information," she says. "I particularly like that you can make improvements in an orchard in such a short time period, just in a season, that help growers to grow even better fruit."

"The young grower competition is so important for the development of the next generation of horticulturists and to get people inspired."



### **STEVEN RINK - CANTERBURY**

Steven, aged 30, a production manager for Oakley's Premium Fresh Vegetables in Southbridge, grew up in South Africa.

He gained a degree in conservation and ecology before heading to New Zealand in 2019 for a year of backpacking and fell in love with the sector through a holiday job.

At Oakley's, he's progressed from an assistant to manager role and says he's had exceptional support to develop his skills.

"It's just great," he says. "There is no better feeling than harvest day when there are bins full of produce ready to be sent to the packhouse and then all over New Zealand, to feed people."

"The young grower competition plays an important role in highlighting the young talented growers coming through the sector."



### **LYDIA GOODMAN - CENTRAL OTAGO**

Lydia Goodman, aged 26, from Cromwell, assistant orchard manager at Central Orchard Management and Packing Manager at CentralPac, was raised on a farm in England.

After moving to New Zealand, she transitioned from cattle and crops to cherries.

"I literally fell into it when I was a backpacker," she says. "I just loved it, the outdoor work and the passion and leadership in the industry. I have been here ever since."

"One of the best things is teaching the team how to do their job, and seeing the passion develop as they learn and understand things like the physiology of a tree. That really fuels me."

"The young grower competition develops technical skills and builds connections with like-minded professionals."



### RHIANNON MORRELL - GISBORNE

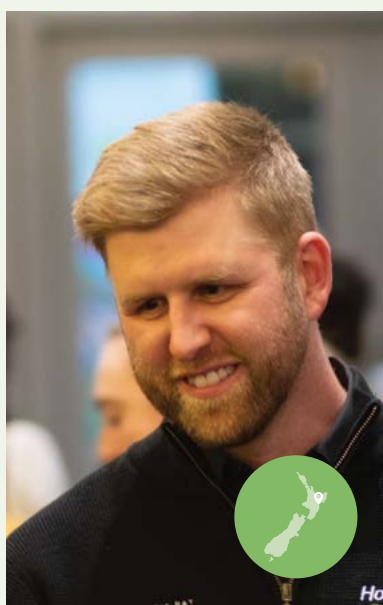
Rhiannon Morrell, aged 25, is a member of the technical team for apples with Craigmore Sustainables.

She was planning to go to university but took on a job in vegetable growing in the meantime and enjoyed it so much she decided to make horticulture her career.

She is now studying for the NZ Certificate in Horticulture (Fruit Production) Level 4.

"My job involves a lot of data collection and metrics to help make informed decisions about the trees," she says. "It's the nitty gritty stuff and I really enjoy that there is something new every day."

"I would really like to see more high school students coming along to support the young grower competitions to find about the sector and all the different career options that are available."



### SAM CARTER - HAWKE'S BAY

Sam Carter, aged 29, from Hastings, assistant manager for T&G's Pakowhai Sector, gained a degree in law and geography while doing holiday stints with the Johnny Appleseed company in Hawke's Bay.

“

**It's an important competition because it really tests and stretches you**

"I went back after finishing at university, did a full season and just fell in love with the industry," he says.

It was his first time entering the Young Grower competition and he thoroughly enjoyed it.

"It's an important competition because it really tests and stretches you, promotes the industry to others and also promotes leadership and growth within the industry. I'm really looking forward to the final."



### AMELIA MARSDEN - NELSON

Amelia Marsden, aged 29, is a kiwifruit manager at Willisbrook Orchards in Brightwater.

She grew up on a dairy farm on the West Coast of the South Island, gained a Bachelor of Agriculture and began her career in the dairy sector.

However, a wrist injury due to a cow kick saw her switch to horticulture and she hasn't looked back.

"I really enjoyed working in dairy farming but I noticed a lot of differences in horticulture," she says.

"Agriculture has come a long way in terms of accessibility for females but I went from being the only female in my dairy job to working with a lot more. There is less brute strength required which makes horticulture very accessible for everyone."

"The young grower competition is valuable for both personal development and promoting the industry to others."





### JACK HADDON - PUKEKOHE

Crop manager Jack Haddon became interested in horticulture after getting a school holiday job with Sutherland Produce in Bombay when he was 15. He joined the company full-time at 17 and moved to Balle Bros in 2022.

Now aged 22, he oversees the cauliflower and cabbage operation for the company.

"There's a lot to it," he says. "I like being outdoors a lot of the day but also the variety - no day is ever the same - and the problem-solving involved."

"I'm operating large machinery and the complex systems and computers that run those. I'm using maths skills, managing information and data, working with spreadsheets and you have to know all about health and safety and risk management."

“

**I like being outdoors a lot of the day but also the variety - no day is ever the same - and the problem-solving involved**

"There is a lot of on-the-job and external training available. I have had so much input offered to get me to where I am." ●



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From left, David Mardon, Iain Mardon and Iain's dad Philip Mardon are pictured on the family property at Pernel Fruitworld, Hastings, in 2012. Photo by Glenn Taylor, Hawke's Bay Today

## LEGACY OF THE QUEEN

*The Golden Queen peach is a prized fixture of Hawke's Bay, but her birthplace may surprise you. CARLY GIBBS looks back at her 116-year history.*

**Kiwifruit orchards are part of the Bay of Plenty's identity, but few would know the region also holds status as the birthplace of the Golden Queen peach, says orchardist Graham Dyer.**

The Omanawa kiwifruit grower owns a rare piece of history in the form of a Golden Queen peach canning label from Tauranga's The Hawkridge Orchards, which operated during World War 1.

The cannery was co-owned by "Major Mayfield", and a Mayfield relative worked for Graham and his wife, Mavis, doing their accounts in the 1960s. "Mrs Mayfield" passed on a tin wrapper to Graham.

Graham told *NZGrower & Orchardist* that brown rot led to the virtual overnight demise of the Golden Queen peach in Tauranga. After that, the variety moved to Hawke's Bay and Gisborne.

### **Pioneering a new variety**

Graham says the queen's time in Tauranga, albeit short, was significant. Greerton orchardist, Edwin Reeve, grew the clingstone variety from a seedling in 1909, unceremoniously below a pig sty at his orchard and colonial house on Cameron Road.

In an excerpt from *Tauranga 1882-1982: The Centennial of Gazetting and Tauranga as a Borough*, it's reported that Edwin sourced fruit from Ōpōtiki to supply customers in Rotorua, including peaches grown by missionaries and given to Māori, known as Paukina or Pumpkin Peach.

From their stones, he grew several varieties on his property. The most successful specimen took three years to bear fruit and, after being shown at a horticultural show, was tested by industry experts who declared it "all that could be desired for dessert, preserving and canning". Originally called Reeves Golden Queen, it later became Golden Queen.



It was a late variety, averaging 21cm in circumference, with yellow flesh, a slight apricot taste, tough skin and expected to "take the front rank in all known varieties".

### Tauranga: 'Not for peaches'

In Journal 50 of the Tauranga Historical Society, Tauranga's Violet Macmillan writes that as a child, she lived across the road from Edwin and came home from school one day to see two men, one of whom was Mayfield, peering into Edwin's hedge at the lush foliage of the very first Golden Queen peach tree.



*Picking the Golden Queen at W. Taylor's orchards, Longlands, in the 1960s. Photo courtesy of Hastings District Council, [hastings.recollect.co.nz](http://hastings.recollect.co.nz)*

“

### It was a huge economic thing for Hawke's Bay

The rights to purchase this edible bounty and propagate the budwood were won by Auckland nurserymen, Messrs. D. Hay and Son, for a sum thought to be between £50 and £100. A manager was sent to gather the budwood, take it to Auckland, and destroy the trunk and stump. Sales of young trees were then purchased by Mayfield and his relative, Mr Chater, and some went overseas, including to Australia.

Mayfield planted them at his Hawkrigde Orchard on Waihi Road, Bethlehem.

When the trees came into bearing, Mayfield opened a canning factory on the property around the outbreak of World War 1. English-born Mayfield, who had retired from the army, returned to England and rejoined his regiment. Chater was left in charge of the cannery, staffed mostly by women.

The women arrived at work in buggies, gathering fruit in baskets that were taken back to a canning shed via horse and sledge.

They then sat at a table in the shed, peeling and preparing peaches, and packing them into cans. Syrup was added, lids soldered on, and they were dunked in water in a boiler and cooked. Then, a blob of solder was dropped to seal a hole, allowing air and syrup to escape.

The venture lasted just a few years when the peaches were attacked by brown rot. Reflecting on this time, Graham says, "Tauranga's got a heavy rainfall and high humidity, and it's not for peaches. The whole industry moved to Hawke's Bay."

Mayfield's land was later sold and his house was relocated. Today, Mayfield House is a sports pavilion at Tauranga Boys' College.

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Graham Dyer with his peach canning label from Tauranga's The HawkrIDGE Orchards. Photo by Carly Gibbs



Mayfield's canning factory in Bethlehem around 1915

### The queen takes Hawke's Bay

Fast forward 100 years, and Summerfruit New Zealand technical advisor Richard Mills says, the Golden Queen has thrived in Hawke's Bay, but the threat of brown rot never disappeared.

"This fungal disease is always present wherever the species is grown, particularly under certain weather conditions of rainfall and temperature," he says.

“

**The tonnage is now small compared to what it used to be**

"We now have agrichemicals to minimise the disease, which were not invented during the period of growing in Tauranga. In Hawke's Bay in some seasons, we still fail to fully control brown rot, and in that vein, one might be able to grow peach in the Bay of Plenty, in theory."

John Paynter, the founder of the Yummy Fruit Co, recently finished his 75th full-time summerfruit season. He recalls when he was young, two growers in Hawke's Bay planted the Golden Queen faster than anyone else – the Hope and Sykes families.

It soon grew in abundance, and today, it is used as the rootstock for most of the commercial peaches and nectarines, plums and apricots that grow in New Zealand.

It is also one of two peach varieties that Wattie's in Hawke's Bay relies on for canned peaches and the peach component of their fruit salad.

Peaches were first canned in Hawke's Bay by Frimley Canning Factory (1903-1913), but this was before the queen's time, and Frimley canned Mary's Choice and Kalamazoo. Wattie's was the first to can Golden Queens, followed by Wyona Cannery (1950s and 60s).

Bruce Mackay, agricultural manager at what is now Heinz Wattie's, says the Golden Queen reached peak production from the 1960s to the 80s.

"It was a huge economic thing for Hawke's Bay. The tonnage is now small compared to what it used to be," Bruce says, explaining that the processed fruit and vegetable industry is under pressure from cheap imports and year-on-year declines in demand. As a result, the canning industry has shrunk.

Newly retired grower John Altham of Sunfruit spent 55 years growing fruit in Hawke's Bay and Hamilton, and says fewer Kiwis are also preserving fresh fruit, which has likewise shrunk peach orchards. And Golden Queen is temperamental, meaning growers "do get the stitch quite quickly".

John says the Golden Queen prefers a climate even drier than Hawke's Bay's Mediterranean climate, and that is why it's still grown in large amounts in "desert-like" Shepparton, Australia.





Women placing peach slices into cans on the rotary filler at Wattie's in the 1950s. Photo courtesy of Hastings District Council, [hastings.recollect.co.nz](http://hastings.recollect.co.nz)



Bruce Mackay, Agricultural Manager at Heinz Wattie's, says Golden Queen tonnage is now small compared to what it used to be. Photo by Florence Charvin

### Changing times

Wattie's grow blocks of Golden Queen themselves to ensure supply.

"The difficulty is to get any significant change in the industry now," Bruce tells. "The industry isn't big enough to support a research programme or a massive change. So, we continue to refine what we're doing and do it as well as we can. The big thing about processed fruit or vegetables is that it just has to be consistent, and Golden Queen is one of those varieties that does that."

"The other variety we use at Wattie's, Tatura, matures three weeks earlier, so it gives us a spread of risk in both the growing and harvest and the production."

Retired third-generation growers and brothers David and Philip Mardon of Pernel Fruitworld supplied Wattie's with Golden Queens from the 1950s to the 2000s.

Philip says that in the queen's heyday, Sir James Wattie paid them four pence a pound, but he put the price up to four pence, three farthings as an incentive for more growers to start planting them.

“

**Golden Queen is temperamental, meaning growers "do get the stitch quite quickly"**

"And quite a few more did, and he brought the price back to four pence, and there was a hang of a row.

"I can remember being in a meeting and he said, 'Well, I'll grow them in Gisborne', which they then did, but they had two problems - one was brown rot, it's a wetter climate, and they had silver blight, so the production of Golden Queen shifted back to Hawke's Bay."



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Queen Elizabeth II and Prince Philip outside the Wattie's Canneries factory as they leave Hastings for Waipawa in 1954. Photo courtesy of Hastings District Council, [hastings.recollect.co.nz](http://hastings.recollect.co.nz)



IN THE QUEEN'S HEYDAY, SIR JAMES  
WATTIE PAID THEM  
**4 PENCE A POUND**



GOLDEN QUEEN IS  
**ONE OF TWO** PEACH  
VARIETIES THAT WATTIE'S IN HAWKE'S  
BAY RELIES ON FOR **CANNED PEACHES**

### Irreplaceable legacy

Philip recalls that an advantage of Golden Queen was that it could be harvested in just two picks. "Whereas earlier (varieties) need more picks to get the best out of them."

“

**...nothing ever has matched the  
quality of the Golden Queen**

A disadvantage was that it frequently rained during harvest.

"Golden Queen were usually harvested the first two weeks of March, sometimes earlier, but if we'd had a long dry spell, as sure as eggs, we would get an easterly and get three or four days of rain right at the peak of Golden Queen, and it was known as 'Golden Queen weather'."

Both Philip Mardon and John Paynter say that despite her challenges, no peach has ever lived up to its majesty.

"We've tried to look at other canning peaches that would be a replacement or spread the canning season," John says, "But nothing ever has matched the quality of the Golden Queen".

Philip agrees, "The Golden Queen always reigned supreme." ●



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Andrew Corbett and Ian Corbett have been business partners for more than 25 years, based on Kimbolton Road just outside Cheltenham

## MUST BE DOING SOMETHING RIGHT

*Seventy-five years after Corbett Bros began growing potatoes in Manawatū, opportunity is still knocking. That's not to say business has been easy. But by staying flexible, keeping a close eye on markets and looking after their staff, neighbours and community, the Corbetts have found a successful formula. It has worked for three generations and is now driving the fourth generation.*

John Gauldie

**Potato prices in New Zealand are yet to recover from last year's oversupply which saw export prices crash from \$1200 per tonne to as low as \$300.**

Ian Corbett and business partner Andrew Corbett have cut back some spud production this year, leaving about 150ha total under cultivation. But they know not every grower has the flexibility to rebalance supply with demand.

"Every grower you talk to is different to the next one. Like us, what we're doing is completely different from someone else's situation. But something's got to change."

With this year's production the Corbetts are looking at different markets, trialling new varieties and

heritage potatoes. They have got into SnackaChangi Chips for Griffin Foods, My Food Bag and low carb potatoes, with Ian's son Nathan helping diversify the business, including a return to livestock.

"It changes every day, you've just got to keep trying," Ian says. "Where the industry goes from here, we just don't know."

As the fourth generation, Nathan says there will always be potatoes growing under the Corbett Bros umbrella, but it might not be the 150ha they are now cultivating.





"For me if we can get into these new markets, that seems to be pretty exciting," Nathan says. "We're actually getting approached with opportunities - not having to go and find them. People are coming to us with some things that we never ever thought about."

"We'll still do exporting but if these markets work out, then perfect. Otherwise we'll just rein it back in. It may only be 100ha or something like that."

By leasing land for stock grazing, the Corbetts have a win-win solution with current primary sector dynamics. It's also history repeating, says Nathan.

"Dad and Andrew are just solely growing potatoes, whereas Rex my grandfather used to be farming as well."

The leased land is peace of mind for the Corbetts, ensuring they will have enough land to fall back on for cropping. That said, they haven't been cropping the leased land, because their first priority is to look after the landowners they have worked with for generations.

The Corbetts rotate crops on about 25 different farms in the district, some of them for more than three generations now.

The Corbetts take on pugged paddocks for the farmers, repairing the damage by working up the paddocks properly, freeing up the compacted layer and cultivating the crops - often utilising gear that the farmers don't have themselves.



*Nathan Corbett is the fourth generation to work in the family business*

"The really expensive part of cropping is ploughing," says Nathan. "Which is one of the most important things to do. Terry Corbett does the ploughing and he does an outstanding job. It gets that soil structure back in again. So it's a way of them getting their paddocks ploughed, they get a cheque and then a contractor comes in afterwards and just sows in grass. It's a direct benefit to their farm."

"A few years ago it was quite hard to get land and secure it," says Ian. "Without our relationship with the landowners, we wouldn't have a job anymore. We don't own much land ourselves, so we couldn't grow. But now the farmers want to lease it out. So it's a golden opportunity for Nathan to come in."



## PLANT FOR SUCCESS

### Early Sweetcorn

**Nirvana & Xanadu:** 20cm cobs, good husk cover and excellent flag. Slightly tapered with excellent colour and flavour. Easy pick with strong disease package. Nirvana is 2 days quicker. Look to use **Launch** as a mid-late variety, 6-8 days later maturing.

### Watermelon

**Candyman & Candystore** are market standard stripey's. **Sugarsweet** is a black round melon. Essential Seed types **SugarRush & SugarCrunch** lead the market. Also available Micro and Seedless watermelon.

### Rock Melon

**Inca & Mayan Gold:** 1.6-1.9kg, 12-14°Brix with excellent internal colour and flavour. Both are sutured with small cavities, strong vines and easy setting ESL types. For early season **Aurous** and late **Olmecc**.



*Belts the dog with Ian Corbett*

Even though these days farmers are approaching the Corbetts to crop their land – including paddocks that are not really suitable or too wet for potato cultivation – Nathan knows how important those relationships are for the future business.

“As Dad said, we’re privileged enough to be on their land in the first place, so we go above and beyond to make sure that we leave it better than when we went in. We might only plant a third of the paddock but we’ll still work the whole paddock up for them.”

“We always like to try and help out as much as we can,” Ian says, which means treating the land with respect. “If you’ve been growing there for three generations, you must be doing something right because if you wreck their paddocks, you won’t be coming back on again.”

Corbett Bros employs 12 staff – all full time and long term. Some have been working there most of their lives, having lived through the industry’s heyday.

“These fellas have all grown up with it, they’re used to pumping things out because they’ve been brought up with it,” says Nathan.

Back in the fifties and sixties, the area north of Feilding and Rangiwahia became known for excellent spuds thanks to the ideal well-draining volcanic soils. The region was cropped extensively. The Feilding potato processing factory owned by Wattie’s was a major focus for local growers.

But that all began to change as Canterbury’s high-volume growers achieved bigger yields with more settled weather and large-scale irrigation. McCain acquired the Feilding factory in 2001, before closing it down in 2006 and shifting production to its Timaru plant.

Now as older staff head into retirement, Corbett Bros is looking outside the industry to find young people keen enough to learn.

“In the past it’s been easy, but it’s quite difficult when new people come in,” Nathan continues. “All of a sudden what takes, say 10 minutes normally, takes half an hour.

“

**Without our relationship with the landowners, we wouldn’t have a job anymore**

“But I keep saying to Dad that we’ve got to teach these people, otherwise we’re not going to be here in the future. When we get a big order come in, well, it would be our fault if we haven’t trained them. You’ve really just got to stop, slow down and teach them. Because there’s so much that goes on, it’s complex, there’s a lot to it.”

Some of their new recruits come from Palmerston North with no experience in the industry whatsoever, but prove themselves quick learners and enthusiastic.

“The hardest thing is getting people that are keen enough to do it,” says Ian. “You’ve got to go through a few to find them. But they’re out there.”

Once they find good people, Ian says they look after their new staff. It’s part of being a good employer and part of the community.

The Corbetts are also known for their Christmas paddock – a couple of acres provided for school kids around the district.

“We open it up for Christmas and we just say, get a bucket full, bring your kids or your grandkids out, go digging yourself,” Ian says. “Most people are good as gold but you know there are those people who are going to bring a van and fill it up and then go to market. So you normally lose a bit, but you get kids from town who wouldn’t have a clue what a potato is and they come out and hand pick.”

Nathan agrees. “The thing is, you see the little kids up there running around and they’re all excited and they got the little bucket and then they go back and then that’s how they get into it. Then they cook and sit down and eat them. They’ll sit down together as a family. How many smiles and how many people eat that meal throughout Christmas time? You get more satisfaction out of doing it than not doing it.” ●



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Des and Kristy Samuels manage the 2ha farm on Matakana Island

## THE DAY MATAKANA ISLAND HOSTED **A BLUEBERRY LEGEND**

*On a frosty mid-week morning, a remote grower on Matakana Island off Tauranga's coast was busy preparing for a visit from blueberry royalty.*

Zoe Hunter  
Photos by Ant Low

**While the world was still asleep, Des Samuels and his whānau were putting down a hāngi for their special visitors from across the Tasman.**

Today was the day the Kiwi blueberry grower would host one of the industry's biggest players.

As the sun rose over the Tauranga Harbour, the silhouette of a barge easing out from the mainland emerged through the grey fog.

On board was the 'godfather' of Australia's blueberry industry and Mountain Blue Orchard founder Ridley Bell on his inaugural trip to Matakana Island. Travelling with him was his daughter Natalie Bell and her husband Paul Lloyd who own Tallogum Berries in Northern New South Wales.

Waiting for them on the other side was Samuels and his whānau.



Samuels manages the 2ha farm of almost 11,000 blueberry plants, growing varieties from the world-renowned Australian breeder.

"I've always said if you want to be the best, you've got to rub shoulders with the best," he says.

Tauranga-based global berry marketer BerryCo NZ introduced growing blueberries in pots under covered tunnel houses at commercial scale to New Zealand in 2017.

BerryCo licenses growers (Samuels) to grow Mountain Blue Orchard's Eureka and Eureka Sunrise varieties, marketed under the 'Blue Royal' brand across New Zealand and South East Asia.



The first blueberry plants were planted on the Matakana Island whenua – owned by Hamiora Whānau Trust – in 2019. Samuels manages the blueberry farm with four other Māori entities in Tauranga Moana under the Matakana Berry Partnership.

Berries grown on the island have since been sold as far as Viet Nam's Ho Chi Minh City.

Bell, who introduced the first blueberry into Australia in the mid-1970s and now has more than 200ha under cultivation, was eager to see first-hand how his berries grew in the island's unique climatic conditions.

"It gave me an idea of some of the challenges they're facing and, therefore, what we need to be looking at in our breeding programme to make sure we cover what's important to them here on the island."

Walking the blueberry tunnels with Bell, Samuels says he learned more about caring for young plants. That included how removing fruit can help redirect energy into the roots and encourage strong long-term growth, as well as using seasonal triggers to manipulate crop maximisation.

"It's that sort of stuff that can translate into years of good yields. That was certainly a 'wow' moment," he says.

"What we learned from Ridley was great. Some of it can be a game-changer for us. We're gathering knowledge from someone who has tested it all."

Bell says he is always happy to help.

"In our business, we never have secrets. We have made a point of being as open as possible in our company and we found it has never hurt us, it has always benefitted us."

For Bell, excellence has always been the benchmark when it comes to blueberries.

"Over the years, I've made it a practice to work only with the best," he says. "We aim to use the best 10 percent of characteristics in every year's crosses. What you see then is an incremental improvement in crunch, flavour and size."

It was the mid-2000s when Bell recognised the importance of earliness in fruit development.

"I started identifying the earliest-flowering plants in our seedling and selection blocks and began making crosses from those," he explains.

"By pushing the limits on earliness, we were able to develop varieties that flower and fruit before entering dormancy. That's when we began calling them 'very low chill' or even 'no chill' varieties."

With growing global interest in health and wellness – and blueberries being prized for their antioxidant properties – Bell says the industry is well positioned.

He is mindful that time will come when there's oversupply and prices will be difficult to maintain. But when there is, Bell will be ready.



Mountain Blue Orchard founder Ridley Bell talking with Des Samuels

“

I've always said if you want to be the best, you've got to rub shoulders with the best

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The hāngi on Matakana Island with whānau and visitors

To future-proof the business, Bell and his team have begun breeding varieties specifically suited for machine harvesting. They've invested in a state-of-the-art harvester from Holland and are now evaluating which new varieties are most compatible with this technology, especially for fresh-market production.

"We're working on characteristics that the plant and fruit needs to make them suitable for machine harvest," he says. "Technology will change our industry."

“

**We have a passion to be the best we can be. That's what gets us up in the morning**



During the cross-cultural visit to Matakana Island, the two blueberry growers also discovered an unexpected cultural connection to the rural Australian village of Tabulam.

It was there that Samuels' late mother Mere Matekino Palmer (née Samuels) once worked with the Tabulam and Lismore Aboriginal communities as an early childhood education advisor, sharing the same community as Bell's blueberry farms.

Raised on Matakana and neighbouring Rangiuaea Island in the 1930s, Mere Palmer later received an MBE in the 1990 Queen's Birthday Honours for her services to Kōhanga Reo.

"That was a pretty special moment of discovery," Samuels says. "What mum demonstrated through her work is what was sowed into me. The blueberries have been a tool to help building relationships."

At peak harvest from October to December, the blueberry farm has about 50 workers. Most are backpackers from Argentina, Chile and Germany as well as locals who live on the island.

Up to 1.5 tonnes of blueberries are picked each day during the peak season, averaging about 4.5kg per tree. The berries are then delivered to the packhouse in Paengaroa.

During the 2024 harvest season, they reached 20 tonnes per hectare.

“

**What mum demonstrated through her work is what was sowed into me. The blueberries have been a tool to help building relationships**

His wife Kristy Samuels says there was no typical day on the blueberry farm.

"During peak harvest it's full on. It's a 7am start and we work until lunchtime when it gets too hot," she says.

"The pickers usually go home or have a swim at the beach and come back at 4.30pm and work through until about 7.30pm."

Alice Moore, general manager of BerryCo, says grower returns have been steadily rising for the past three years.

"Blue Royal volumes are expected to double in the next five years, spurred on by strong consumer demand both domestically and in export markets."

Alice says consumers are not only drawn to Blue Royal berries' superior size but the sweet flavour that is "redefining taste expectations in the blueberry category".

"We have had such great feedback since introducing these berries to the New Zealand market."

As for the future, Samuels says he hopes to continue expanding the blueberry business.

"Because it's on our own land, we have a sense of ownership. It's a legacy. I'm starting something up for my children and grandchildren, not just my own but others too," he says.

"We have a passion to be the best we can be. That's what gets us up in the morning."

A 75-year-old Bell, who is nowhere near retirement, also remains energised by the process.

"Every day I go out there is like unwrapping a Christmas present and you're looking at these beautiful new blueberries." ●



# GENESIS: CONTINUING TO EVOLVE

*Genesis Nurseries was born from the strategic merger of two long-standing, owner-operated nurseries – bringing together over 45 years of hands-on nursery expertise. This combined legacy and rich heritage has positioned Genesis as a trusted leader in New Zealand's fruit tree industry, known for a commitment to quality, innovation and forward-thinking practices.*

Today, Genesis is focused on further exploring emerging market opportunities, building relationships and shaping the seasons to come. Our recent presence at local conferences and EXPOs has reinforced the value of collaboration and our commitment to supporting world-leading growers across Aotearoa.

At the heart of the work taking place at Genesis is variety development, technological progress and strong partnerships. We are proud to be driving innovation from our base in Hawke's Bay, working alongside customers and stakeholders to strengthen the horticultural industry and empower orchardists throughout the country.

“

**We are proud  
to be driving  
innovation from  
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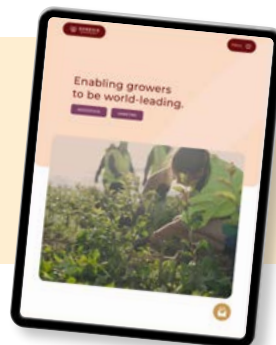
Genesis new look panels on display at recent industry events

General manager Chris Hurrey is leading a passionate, dedicated team. Morale is high. The nursery is thriving. Our team is hard at work lifting trees, harvesting rootstocks and preparing for a strong season ahead. Trees are currently dormant – ideal for lifting and replanting – ready for dispatch in late July and early August 2025. These trees were budded in the summer of 2024.

Meanwhile, rootstocks are being lifted and graded from stool beds as preparation is well underway for planting in spring 2025, ahead of summer budding in 2026. The team at Genesis are also preparing peach seedlings for propagation and planting in late October.

Taking a moment to reflect on the Genesis journey, the team extend their heartfelt gratitude to all growers and customers for choosing Genesis Nurseries as your trusted nursery supplier and invite you to secure your trees this winter. ●

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Erin Mai says multi-stakeholder partnerships need to support and reward growers through genuine collaboration



## SUSTAINABLE PROFITS AT CRISIS POINT

*Programmes to make horticulture more sustainable are delivering important results but they can't be considered successful while margins shrink and growers go out of business, says Erin Mai from The Fresh Grower in Pukekohe. She believes horticulture needs to move the dial on the most important sustainability metric: profit.*

Erin Mai : *The Fresh Grower* chief financial officer

**We talk a lot about innovation and sustainability, but let's be frank - growers run businesses, and no business can keep meeting rising compliance expectations if the commercial model isn't viable.**

It's not about blame; it's about recognising that resilience only happens when expectations and rewards are aligned. We cannot be expected to do more with less while market prices continue to shrink.

This tension is something I experience firsthand: farming in a tight-knit team, engaging with buyers and regulators, and juggling commercial pressures alongside long-term structural commitments.



Growers are essential to the supply chain, yet the power balance, especially in the vegetable sector, remains structurally lopsided. Growers have long operated as "just the way things are" or "price-takers", but I don't believe it has to stay that way.

The challenge isn't about rebalancing power; it's about strengthening grower capability, cohesion and confidence for growers to participate in multi-stakeholder partnerships as equal partners, not just rule-followers.

Many growers are already part of industry frameworks and compliance structures, but few would call these relationships "partnerships" in the collaborative sense.



Growers are expected to meet standards, report data and adjust practices, but often without the financial recognition, capability support or pricing stability needed to make those efforts viable. Sustainability without profitability is just theory. And theory doesn't feed the nation.

“

**It's not about blame; it's about recognising that resilience only happens when expectations and rewards are aligned**

One of our challenges is that growers' collective voice is fragmented. There is a wide diversity in growing systems, regions and business models – and that can lead to conflicting interests or limited coordination when it comes to advocacy. Some growers focus on export, while others rely on domestic markets. Some are family-run, while others are corporates. These differences make it harder to build unified pressure for structural change. This is something that, to be honest, requires more empirical research to fully understand.

I was born and raised in Ho Chi Minh City, Viet Nam, in a Vietnamese-Chinese immigrant family, where agriculture was how my mother's side first established themselves. That connection to farming likely explains why I fell for my now-husband, Ryan Fong, and eventually joined his family's fresh produce business in New Zealand, now in its 75<sup>th</sup> year of vegetable growing

Although my professional background is in business management, project management and tertiary education, I'm now pursuing a second Master's degree focused on Sustainability and Agricultural Business, with the aim of contributing both academically and practically. I'm also looking ahead to a PhD to deepen my research.

One concerning finding I've come across in my research so far is that grower viability is often overlooked in food system design. There's a lack of detailed, empirical insight into how Small and Medium-sized Enterprise (SME) horticultural growers – particularly vegetable producers – navigate business resilience in practice. This missing layer of understanding puts the entire food system at risk, because sustainability begins at the ground level.

So far, I haven't found a formal horticulture framework that fully delivers on the three pillars of sustainability – People, Planet and Profit – in a way that is scalable, sustained and equitable. Many rely on NGO or donor support. Few create real structural change.

Still, some international models come close: Japan's Eco-Farmer programme is a strong example of promoting sustainable and environmentally friendly agricultural practices that is government-supported both through policy and financial assistance.



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“  
I’m especially proud of the older generation, whose deep belief in the soil and the sun reflects a philosophy of working with nature

*New Zealand’s growers are not waiting around for regulation before implementing sustainable farming practices*

The UK’s Innovative Farmers Network also advances resilience through farmer-led practices, while Viet Nam’s VECO/Rikolto partnership demonstrates how sustainable farming can be linked to improved income through traceable value chains.

Reflecting on these examples brought me back to something I was taught in primary school in Viet Nam: VAC, which stands for “vườn, ao, chuồng”, or ‘garden, pond and livestock’. It’s a closed-loop system where vegetable waste feeds pigs, pig waste fertilises ponds and pond water nourishes crops. It is circular, low-input and efficient.

It did not rely on audits or certifications then, but delivered genuine sustainability across all three pillars. Supported by national education and still actively promoted by the Vietnamese Government today, it reinforced the importance of knowing where food comes from and how to protect it.

This was my first exposure to a truly sustainable food system, and it still shapes how I think about resilience today.

In New Zealand, I see early signs of similar thinking through aquaponics, composting and Māori-led land integration. How far we go with these approaches will depend on how resilient the sector is first.

Innovation cannot happen without a strong foundation. Growers are asked to support innovation frameworks that promote sector profitability in theory, but they remain high-level and have not translated into real price stability or margin protection for vegetable growers, especially those who do not export.

Certification frameworks can play a helpful role in ensuring that growers who are already doing the right thing are recognised and not disadvantaged. However, if sustainable regulations are going to level the playing field, they also need to account for the very different starting points growers are coming from, and avoid unintentionally excluding those who are doing their best with tight margins and limited support.

Not all sustainable innovation comes from external partnerships. Growers are already motivated to farm sustainably; not because of a framework, but because it’s common sense. New Zealand growers are not waiting around for regulation to act.

At *The Fresh Grower*, for instance, we embedded environmental practices into our business long before certain standards became mandatory. These weren’t tick-box exercises; they were strategic decisions to future-proof the business while remaining proud of how we grow.

I’m especially proud of the older generation, whose deep belief in the soil and the sun reflects a philosophy of working with nature. Practices like crop rotation, cover crops, fallowing land and working with soil health experts etc have existed for generations. They are not new science but old wisdom, passed down and practised to protect the long-term health of our growing systems.

“

**This was my first exposure to a truly sustainable food system, and it still shapes how I think about resilience today**



I believe that new or better partnerships involving growers could contribute to more sustainable outcomes, but only if they are co-designed, genuinely collaborative and grounded in the realities of how vegetable operations actually work.

They must include practical tools, and investment in areas like financial literacy and business resilience. I often say to my family: an idea might sound good, but if it isn’t practical, it’s probably not the right idea to follow.

In other words, even if not through formal structures, growers should be supported through pricing mechanisms and long-term buyer relationships. They must recognise existing grower practices, reward transparency and avoid turning sustainability into a marketing label rather than a long-term commitment. All of which fall under the spirit of a well-functioning multi-stakeholder partnership model.

These don’t have to be adversarial. In fact, buyers and consumers benefit too from stable, resilient supply chains. It’s about creating shared outcomes, not passing pressure down the chain. ●



## LOOKING BEHIND THE SHOCK HEADLINES

In July, the New Zealand Herald ran with the headline: "Food shock: Prices soar in June as fruit and veges follow butter and cheese spike," quoting Stats NZ's Consumer Price Index (CPI) data. Stuff reported that "vegetable prices rose faster than the CPI" over the past year but overlooked that this rise followed more than a year of declining prices.

Read the NZIER report *Making the economic case for vegetable production in New Zealand* on the HortNZ website: [www.hortnz.co.nz](http://www.hortnz.co.nz)

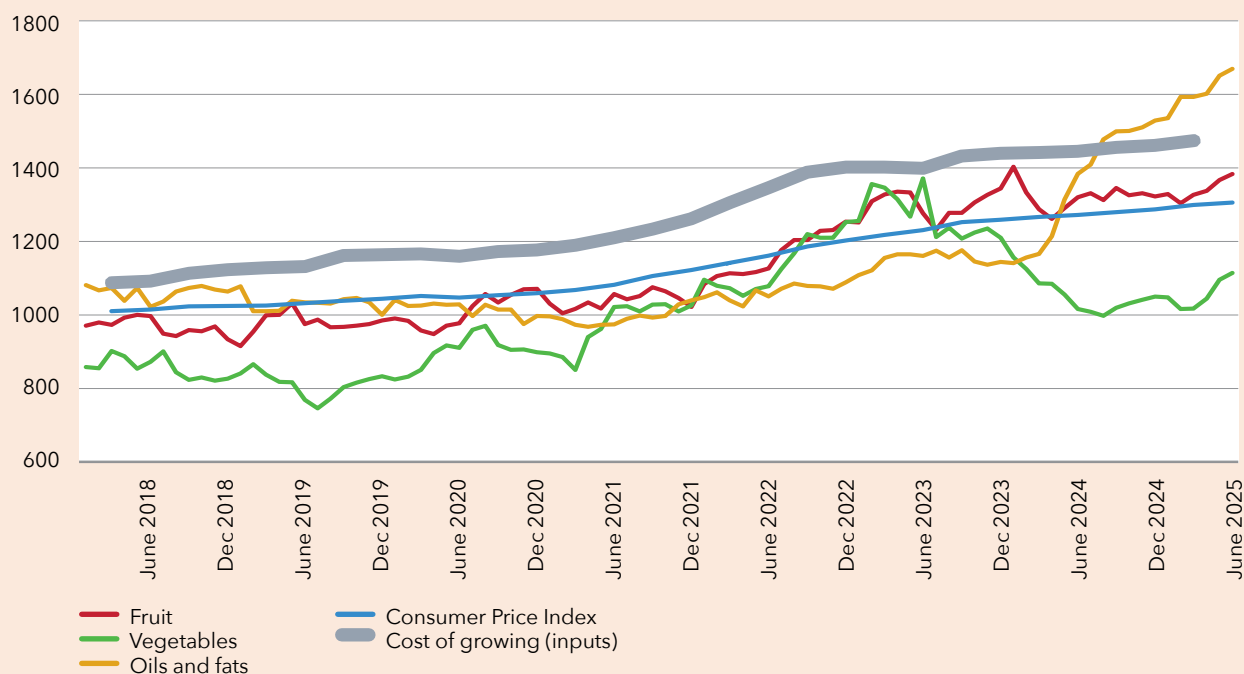


To simply keep pace with inflation, vegetable prices would have needed to climb nearly 20 percent; instead, they increased by only 9.6 percent. Vegetables remain relatively affordable compared to other staples like oils and fats.

"From my own observation," says Erin Mai from *The Fresh Grower*, "and what has been published in the industry, it's also worth noting that retail prices rarely reflect realities at the farmgate."

The October 2024 NZIER report commissioned by HortNZ *Making the economic case for vegetable production in New Zealand* explored the reality of how rising input costs and tight margins threaten domestic vegetable production. It highlighted the critical role of growers in ensuring variety and affordability for consumers and stressed the need to recognise their contribution as a priority in wider food system conversations. Supporting grower viability remains essential if New Zealand wants to preserve both supply and affordability, Erin says.

### Vegetable price index still low compared to other groceries



Data sourced from Stats NZ shows the Consumer Price Index overall, specific food price indices and the Producer Price Index (Horticulture and Fruitgrowing)



*Anaru Timutimu is chair of Māori Kiwifruit Growers Incorporated*

# UNLOCKING MĀORI LAND A COMPLEX ISSUE

*A recent report commissioned by Horticulture New Zealand has found that more Māori land is being converted to horticulture. HELENA O'NEILL spoke with horticulture leaders Anaru Timutimu and Tom Keefe about some of the challenges involved, including access to capital for Māori.*

**Māori horticulture is well established in New Zealand with successful businesses across a wide variety of crops. In particular, Māori own 12.2 percent of kiwifruit land in New Zealand, with close to 2100 hectares.**

Anaru Timutimu is chair of Māori Kiwifruit Growers Incorporated, an advocacy group that has been established for eight years.

"Māori have been in the [kiwifruit] industry for 45 years, so kind of long-term players. We make up about 10 percent of the volume coming out of New Zealand."

Kiwifruit orchards are the most prevalent land use for Māori horticulture growers (36 percent of Māori horticulture land). The Māori share of kiwifruit land has increased from just over nine percent in 2019 to 12.2 percent in 2024.

Orchards are spread from Kerikeri in the north, predominantly in the Bay of Plenty, Gisborne, and then down to the top of the South Island at Nelson.

"We're perpetual, we're long-term players, and that's one of our strengths. We've got great connections, not only whakapapa, genealogical and iwi connections, but other interests like dairy, sheep and beef, and other horticulture. The term tangata whenua says it all."

The *Snapshot of Māori in horticulture 2024* research, undertaken by Business and Economic Research Limited (BERL) for HortNZ, found the gross output from Māori horticulture during 2024 was \$305 million, up from \$220.5 million in 2019.



While horticulture currently comprises just over one percent – 5715ha – of Māori farmland, this is growing steadily. The industry employs 4000 Māori workers.

The amount of Māori land in horticulture has increased by 50.4 percent since 2017 and now represents about seven percent of total fruit and vegetable producing land in New Zealand.

Kate Scott, chief executive of HortNZ, says this figure is notable, given that overall, there has been a decline in the amount of land in horticulture.

“One of the key priorities in the Aotearoa Horticulture Action Plan is increasing Māori-owned land in high value horticulture, so it is heartening to see the data trending in this direction.”

Anaru is one of Tauranga Moana’s elected regional representatives, has whakapapa links to both Tauranga and Tuhoe Iwi, and has also been involved in Māori land development in a variety of roles. He says that a lot of Māori land is not used to its full potential.

“I used to work for the Māori Trustee, and I’ve had various projects and initiatives in Māori land, and a lot of Māori land is underutilised. It’s just the way it’s structured; it’s really hard to make decisions. When you have multiple-owned land, it’s difficult unless you’ve got a well-operating trustee group and administrations. That’s difficult.

“When you’re trying to develop, with regards to getting loans, that can be difficult as well. Approaching a bank or mainstream lenders, they will typically shy away from securing the [shared] land asset for loans.”

Anaru says this is quite hard, and he respects those Māori Land Trusts and incorporations who have been good growers and farmers and great successes for shareholders and their people.

“I know that in the kiwifruit industry, a lot of long-term partnerships have been organised. Whether that’s with post-harvest operators or with non-Māori investors in kiwifruit, it’s been relatively successful, although it can take decades for those Māori orchards to become independent.

“Back in the 1980s, there was a big push for Māori land to become more productive, and so the predecessor to the current Te Puni Kōkiri, the Department of Māori Affairs, had programmes and was able to organise some funding to get those orchards set up. They organised loans that were eventually paid back, and that was great for those communities.”

He says that some of the partnerships, like co-investment partnerships, mean that you’re not in full control of the orchard for another 20 years.

“That’s a different kind of cost. But if it works for that community then that’s their right.”

The Māori Land Court is often a required party in managing and arranging paperwork for financing, such as Certificates of Ownership, which can take significant periods of time.

“The Māori Land Court is hugely under-resourced, you can put an application in and it might not be seen for 12 months. Even for something very simple. That doesn’t favour development of Māori land either. It’s kind of between a rock and a hard place.”

Tom Keefe is the chair of the Ngāti Pāhauwera Development Trust and says Māori land and whether it is underutilised is a complex discussion.

Tom Keefe  
is chair of the  
Ngāti Pāhauwera  
Development  
Trust

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The Ahuwhenua Young Māori Grower Award is back in 2026. T&G's Grace Rehu won the last edition in 2023. Entries close 3 December 2025, so contact HortNZ to enter! Photo by John Cowpland

"It's difficult to talk generically on Māori land because some land is being very well utilised while other land remains undeveloped, ungoverned and sitting vacant. There are areas of unutilised Māori land that have potential to better contribute to GDP [Gross Domestic Product] but there are barriers that relate to multiple ownership, little-to-no governance, access to capital and expertise and actual access to the lands."

Tom says access to capital and expertise to develop the blocks remain significant challenges.

"[There are] views on debt being secured on land so some consortium with good leadership would be a positive option. Māori businesses face the hidden cost of multiple ownership, and sometimes business expertise therefore the ability to learn and evolve becomes an opportunity cost lost."

He says prospective land-based businesses on multiple-owned land have a hidden cost associated with multiple ownership and achieving total agreement.

Diverse realities mean different lenses through which whānau look, and sometimes business expertise is not available, but the passion is. The Māori Land Court is tasked with balancing those competing interests rather than assessing pure economic logic.

Despite the challenges, the future of Māori in horticulture is very positive, he says.

"Collectively if we can work together we can open markets that are not available through scale."

The Government is currently pursuing several regulatory reforms to lift capital access, simplify planning and boost export receipts.

## WHENUA DEVELOPMENT

The Government has decision support materials to help develop land use scenarios including horticulture. Te Puni Kōkiri provides information about realising the value of the whenua including available investment and funding options. The Ministry for Primary Industries has a programme to support Māori landowners to transform underutilised whenua and improve the use and management of primary sector assets. For information about the Māori Agribusiness Pathway to Increased Productivity (MAPIP) programme, contact MPI's dedicated Māori Agribusiness team.



[www.mpi.govt.nz/funding-rural-support/maori-agribusiness-funding-support/](http://www.mpi.govt.nz/funding-rural-support/maori-agribusiness-funding-support/)

Last year former Reserve Bank of New Zealand Governor Adrian Orr spoke at the MyFiduciary Conference in Taupō.

"Māori are too often in the category of being under-served by the financial system, in both access and relevant financial products. This should disappoint all New Zealanders, in part given that the Māori economy remains one of the largest potential sources of economic growth." ●





This year Seeka has upgraded three coolstores with eco-friendly refrigerants. Photo courtesy of Seeka

# DON'T GET CAUGHT OUT IN THE COLD

*The cost of topping up environmentally damaging refrigerant in coolstores and walk-in chillers has gone through the roof over the last decade.*

John Gauldie

**However, an estimated 80 percent of horticulture users are not yet benefitting by transitioning away from older refrigerants – risking further eye-watering cost increases as the Government works to turn off the tap by 2037.**

A large coolstore refrigeration system might contain 500kg of refrigerant. Such systems can leak at the rate of 10 to 20 percent per year. The costs of topping up the charge of a large facility could now exceed \$50,000 a year.

In June Seeka Limited released details of a refrigeration overhaul in its 2025 Sustainability Report, noting that refrigerant leaks were the largest source of CO<sub>2</sub>e emissions among activities directly controlled by Seeka.

This year Seeka has upgraded three coolstores with eco-friendly refrigerants, with 800kg of high-impact greenhouse gases safely destroyed. Lloyd Franks, Sustainability

Manager at Seeka, says transitioning to modern coolstore infrastructure is a priority.

“We want to ensure that we are leading the way in sustainable and efficient coolstore technology,” Lloyd says. “We also want coolstores that maintain the fruit at an optimal temperature without any risk. So modern coolstores help us achieve both of those things.”

Alongside midlife retrofits of three coolstores, Seeka also completed construction of its fourth new generation coolstore using ammonia – a natural refrigerant. In total Seeka owns 11 coolstores facilities in New Zealand of varying size.

“Ultimately, we would love to be operating on natural refrigerants across the board and that is something that’s likely in the long term. But today we’re transitioning to lower the impact in terms of what’s practical.”



## KEY POINTS

- ✓ An estimated 20 percent of horticulture users of coolstores and walk-in chillers have upgraded to more eco-friendly refrigerants
- ✓ Topping up costs for older synthetic refrigerants can now exceed \$50,000 annually for large facilities
- ✓ Government is phasing down availability of synthetic refrigerants by 2037
- ✓ Natural refrigerants are better for the environment but require system overhaul
- ✓ Safely destroying old refrigerant has value through Emissions Trading Scheme credits

James Heckler from RefDestruct, a service provider that safely destroys refrigerant, says primary producers (particularly dairy, red meat and seafood) are using a large proportion of the remaining synthetic refrigerant in New Zealand. Supermarkets have generally already switched to natural refrigerants like carbon dioxide.

"Within the primary sector the really big coolstores tend to run on ammonia, another natural refrigerant, and that has its own challenges with safety and compliance. So a lot of the synthetic refrigerant is in the smaller scale coolstores.

"The refrigerant just sits in the background and does what it's meant to do until it doesn't. And then you're facing some big, unexpected costs."

James says waiting for a leak or major breakdown (which tends to happen during peak production) before retrofitting refrigerants is one of the worst things you can do – the environmental harm is done and any chance of recovering value from the old refrigerant is lost.

The Trust for the Destruction of Synthetic Refrigerants runs Cool-Safe, a product stewardship scheme that is accredited under the Waste Minimisation Act by the Ministry for the Environment. Cool-Safe disposed of Seeka's refrigerant.

Cool-Safe's research estimates that horticulture users make up approximately 9 percent of the wider commercial and industrial users of refrigeration in New Zealand.

"We estimate that about 20 percent of the systems in the horticultural part of the sector have been upgraded from synthetic refrigerants to either naturals or retrofitted with much lower impact synthetic gases," says Matthew Darby, a Cool-Safe trustee and refrigeration industry veteran.

That means the remaining 80 percent will face increasing costs and dwindling supply as New Zealand phases down the use of the most damaging synthetic refrigerants.

## Synthetic versus natural refrigerants

High Global Warming Potential (GWP) synthetic refrigerants are primarily hydrofluorocarbons (HFCs) that can be thousands of times more polluting than carbon dioxide. For example, leaking one kilogram of R-404A, a high GWP refrigerant commonly used in horticulture, has an equivalent emissions to using 1500L of diesel, making any leaks extremely detrimental to the environment.

Over recent decades, new 'fourth generation' synthetic gas refrigerants have been developed with lower GWP – primarily hydrofluoroolefins (HFOs) and hydrochlorofluoroolefins (HCFOs). Many refrigeration systems built for HFC refrigerants can be retrofitted with these lower GWP alternatives. This greatly reduces the environmental impact of leaks – up to 70 percent lower, James explains.

"These new synthetic gas refrigerants also tend to be 8-10 percent more energy efficient, so you get an energy efficiency boost as well."

In contrast to high and low GWP synthetics, natural refrigerants are substances that exist naturally in the environment, including carbon dioxide (CO<sub>2</sub>), ammonia (NH<sub>3</sub>), and hydrocarbons like propane. These have extremely low GWPs and can be more cost-effective and energy efficient.

“

**These new synthetic gas refrigerants also tend to be 8-10 percent more energy efficient, so you get an energy efficiency boost as well**



However, existing synthetic refrigerant systems cannot be easily retrofitted to natural refrigerants, which makes natural refrigerants a much more costly upgrade generally reserved for large new-build coolstores. These systems are complex and have additional safety requirements.

## More expensive and harder to find

Refrigerants make up around two percent of global CO<sub>2</sub> emissions. The New Zealand Government is reducing the volume of HFCs permitted to enter the country, part of its obligations as a signatory to the Kigali Amendment to the Montreal Protocol.

New Zealand is working to reduce the volume of HFCs imported into the country by 80 percent by 2037. Every year until then the volume permitted for import is reduced, resulting in higher prices as supply is squeezed. HFCs like R-404A and R-507 are especially under pressure.





## NEW ZEALAND IS WORKING TO REDUCE THE VOLUME OF HFCs IMPORTED INTO THE COUNTRY BY 80% BY 2037

In addition to reduced volumes, when a synthetic refrigerant comes across the border into New Zealand, the importer has to purchase New Zealand Units (NZUs), the primary unit of trade within New Zealand's Emissions Trading Scheme (ETS), to offset that refrigerant. The higher the refrigerant's GWP, the more NZUs required. Although carbon market trading prices have softened from highs in 2022, they seem to be rising again. Those rising costs are also passed on to the end user.

### Retrofit, new build or better leak detection?

Mid-life coolstore retrofitting to a lower GWP synthetic refrigerant will certainly have a positive impact on the environment. However, each user will need to calculate the cost benefit based on their situation and current market rates, Matthew says.

For new build coolstores, the future operating expenses need to be considered alongside the higher capital expenditure for natural refrigerant systems.

"As the price of carbon goes up again I think we're getting pretty close to parity if that trend continues."

However, if sticking with high or low GWP synthetics is the best solution for operators now, better leak detection will certainly pay off – something Seeka has also invested in.

Matthew says: "Proactive leak testing – so having technicians leak test very, very regularly – and also having electronic leak detection systems which are sniffing all the time, the return on investment on that kind of spend is better now than it's ever been."

A big factor is the age of current installations and value of the investment. Degradation of the system builds slowly over time leading to very tiny leaks. An old installation can quickly become very expensive to maintain and top up.

"Users are right to sweat the asset," he continues. "If you're still operating an HFC plant by 2030 that you might have installed in 2015, you've done well. But by then your system is going to be up for replacement or upgrade or expansion anyway. So it just makes sense that your next step is into a natural refrigerant solution."

“

**We want to ensure that we are leading the way in sustainable and efficient coolstore technology**

### Your old refrigerant has value

Because HFC refrigerant imports are controlled by the New Zealand ETS, they retain some of their value at the end of their life. Collecting and destroying the refrigerants in an approved destruction plant can release ETS credits which can be sold to fund the collection and destruction process. Both Cool-Safe and RefDestruct use this mechanism to fund their operations – there is no Government funding involved.

Cool-Safe is currently completing an onshore destruction facility so that export is not required.

### Get the right advice for your situation

Ultimately your refrigeration contractor is the best source of advice about retrofitting or switching to natural refrigerants.

"There is no single answer," Matthew says. "There are always going to be things to consider – size, serviceability, location. So any end users considering their options really do need to be talking to trusted advisors who have knowledge and experience." ●

## It's time for a cool change.

We can help you make the move from legacy high global warming potential refrigerants like R404a and R507 to modern equivalents that are 70% lower in GWP. Switching can save you money and ensure you are ahead of the changes to phase out older refrigerants, which will become harder to source in the future. We supply the new refrigerant in exchange for the existing refrigerant in your system. The old refrigerant is destroyed – not re-used.

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*Delivering premium-quality fruit and vegetables to market requires more than just good produce; post-harvest processing is a critical stage that demands smart engineering, technical expertise and strong partnerships.*

**Wyma Solutions, headquartered in Christchurch, has established itself as a global leader in post-harvest handling equipment by doing exactly that.**

With over 50 years of experience, Wyma specialises in designing and delivering full-line solutions for washing, polishing, conveying, drying and packing fresh produce. Their success comes not only from local innovation but from a commitment to collaborating with like-minded partners to create seamless end-to-end systems.

Wyma operates in more than 40 countries and serves a wide variety of sectors, including root vegetables, pipfruit, stonefruit, citrus, nuts and other fresh commodities. Their global footprint means they bring broad technical experience and insight to every project – while maintaining a local presence and understanding of New Zealand's growing conditions and industry needs.

According to territory manager Peter Molloy, collaboration is key. "We specialise in produce handling, weighing, packing, sorting and bin handling," he explains. "By building relationships with other world-class manufacturers such as Manter, Flikweert, and Burg, we can deliver integrated solutions that are customised to each grower or packhouse. With our local presence, our team is equipped and committed to supporting our customers' needs through project execution and beyond. We are passionate about seeing local industry thriving, and work hard to contribute to this reality."

Together, Wyma can process a diverse range of produce – from carrots and potatoes to apples, kiwifruit, onions, citrus and even avocados. By combining technologies across the handling and packing chain, Wyma is able to design systems that maximise efficiency, protect product quality and reduce waste.

One area where Wyma has made significant advances is packaging innovation. Today's consumers and retailers are increasingly demanding environmentally responsible packaging options – and Wyma is helping New Zealand processors meet those expectations without compromising speed or performance.



High speed weigher and bagger from Manter

An example of this is the **MoNo Clipper** machine from their partner Manter. This high-speed bagging solution eliminates the need for traditional plastic clips by using recyclable paper or PE (polyethylene) mesh bags with metal-free sealing. "This technology helps reduce plastic use and offers a more sustainable alternative for packhouses seeking to improve their environmental footprint," says Peter.

Sustainability is not just a buzzword for Wyma. From water recycling systems to energy-efficient equipment, the company continues to focus on smart solutions that deliver both performance and long-term value. Their systems are engineered to evolve with businesses as they grow, adapt to changing markets, and respond to increasing regulatory and consumer pressure.

"Innovation happens through collaboration," Peter adds. "We work closely with our customers and technology partners to design systems that aren't just fit for today, but also for the future."

As the horticulture industry navigates rising costs, labour challenges and sustainability targets, companies like Wyma are helping New Zealand growers and packhouses stay competitive – at home and on the world stage. ●

Enquiries please contact Peter Molloy 027 384 5938 or email [peter.m@wymasolutions.com](mailto:peter.m@wymasolutions.com)





# TPP THREAT UNABATED



*Twenty years since it arrived in New Zealand, the Tomato Potato Psyllid (TPP) carrying *Liberibacter* – the bacteria that causes damage in Solanaceae crops including zebra chip disease in potatoes and death of tomato plants and tamarillo trees – remains one of New Zealand’s most economically damaging biosecurity incursions. Developing effective management strategies for this destructive pest remains a key priority for both Potatoes New Zealand and TomatoesNZ’s research programmes.*

Paula Lleras and Iain Kirkwood : Potatoes New Zealand  
and Dinah Cohen : TomatoesNZ

At the end of June, around 30 growers gathered at the Pukekohe Demonstration Farm along with a further 30 online participants for an excellent seminar on the Tomato Potato Psyllid (TPP). The workshop began with a reminder of key TPP facts (lifecycle and identification) and continued by reviewing previous work conducted and the latest developments in research and control strategies.

The seminar was a joint effort of Potatoes New Zealand and TomatoesNZ with funding from Te Ahikawariki, demonstrating the value of collaboration to tackle this pest – which affects potatoes, tomatoes, capsicum, eggplant as well as tamarillos. In potatoes a ‘zebra chip’ black stripe appears and in tomatoes deformed or stunted fruit appear. In both cases the crop loss is significant.

## Liberibacter

At the seminar Jessica Vereijssen from Plant & Food Research (a group within the newly created Bioeconomy Science Institute) shared the latest understanding of TPP (*Bactericera cockerelli*), and in particular the *Liberibacter* bacterium that infected TPP can transmit: *Candidatus Liberibacter solanacearum* (CLso).

In potatoes, zebra chip disease is a recent discovery, documented in the southern United States and Mexico in the early 2000s. However, CLso was not known as the causal agent of zebra chip disease until TPP reached New Zealand (likely from California) and New Zealand scientists first identified and named the bacterium in 2009. (Note that different species of *Liberibacter* were already known, including *Candidatus Liberibacter asiaticus* primarily known for causing Huanglongbing, also known as citrus greening disease, in citrus trees.)



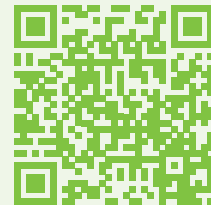
Growers gathered at the Cronin Road Pukekohe demonstration farm for a TPP seminar in June

Currently the CLso ‘type’ in New Zealand is found only in the Americas and New Zealand. Other types found in Europe and North Africa affect carrots, celery and other crops.

There is no treatment for CLso. Jessica noted that, for various reasons, many unknowns remain about transmission and what changed to make TPP and CLso become such a problem in recent decades.



**IN GREENHOUSE SPRAYING, GROWERS CAN USE NOZZLES WITH NARROW ANGLE CONES ANGLED UP INTO THE CANOPY**



The Bioeconomy Science Institute's research has so far found that CLso doesn't survive outside of the insect or the plant, so is not transferred on machinery or equipment (ie not mechanically transmitted). However, tomato growers at the workshop commented that they have found evidence to suggest this isn't the case. This is one area where more research could be focused in the future.

### **'Hot' psyllids**

Only 3-5 percent of TPP are thought to be 'hot', meaning they carry the bacterium. Once a 'hot' TPP has fed on a plant, the plant will become infected.

The process can take as little as 5 minutes from a psyllid feeding on a plant to the infection being spread – although the first noticeable symptoms (upward rolling of leaves, yellow to purple discoloration) only appear 3-4 weeks later.

Scouting practices have been developed for both crops but the tiny psyllids are notoriously difficult to spot. It is more common for growers to notice the symptoms of CLso first.

Growers use yellow sticky traps as part of their monitoring, however efforts to develop a lure have so far been unsuccessful because there is no known TPP pheromone.

“

**...netting is an expensive solution and requires some skill to lay and adjust**



The economic impact of TPP in New Zealand varies by region as well as season by season. Not much is known currently about why some seasons have a high pest pressure and others don't.

Roger Blyth from Seed and Field, who also presented at the seminar, works with Canterbury potato growers, who were particularly hard hit in the 2021 season. That led to the establishment of the Canterbury Potato Liberibacter Initiative (CPLI), funded by a committee of Canterbury growers and processors, with additional financial support from Potatoes New Zealand.

### **Management and agritech**

There are many groups of control chemistry available, however the challenge with contact products is spray coverage. In both potatoes and tomatoes, TPP tend to prefer the underside of the leaf, which can be hard to target when spraying. It's essential to have a spray set up that maximises under leaf coverage otherwise there is a tendency to think that the chemistry isn't working.

As such, the angle jets on boom sprayers are probably giving the best results. In greenhouse spraying it's been noted that air can boost coverage as well as the use of an adjuvant to help spread the droplets. In potatoes, drone sprayers have also been used in Canterbury to decent effect, although leaf coverage results are average.

Resistance management remains a concern. The seminar highlighted the role of agronomy to prevent stressed plants, which become targets for psyllids. Agritech can be used to monitor inputs, irrigation and resulting yields particularly in row ends. Growers might be better off planting a nature strip in high traffic headland areas to attract beneficials.





Beneficial plantings of Phacelia at a trial site in Matamata. Photo courtesy of the Bioeconomy Science Institute

The CPLI is due to wind up this year, but one remaining project is to find out the feeding sources of psyllid during winter. African boxhorn has already been determined suitable hosts for TPP development – leading to huge removal programmes in Canterbury run through Potatoes New Zealand.

“

### The economic impact of TPP in New Zealand varies by region as well as season by season

Some potato growers in New Zealand are having success putting down psyllid netting, which is also used overseas for large areas under cultivation. However, netting is an expensive solution and requires some skill to lay and adjust. Although TPP does not colonise potatoes under mesh, other pests do get through, plus the mesh will prevent beneficial insects from reaching their prey.

Netting is not a practical solution for greenhouse tomato plants. While most pests are likely to enter through the ventilation, which would be a small area to cover with a net, this would also limit the air flow and prevent further problems with a build-up of humidity.

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*Enelling the future*

## TPP STRATEGIES FOR GREENHOUSE TOMATO GROWERS

-  Early introduction of *Engytatus nictoninae* on banker plants when seedlings are first planted
-  Sticky traps in areas of the greenhouse known to have had previous populations of TPP
-  Regular monitoring for TPP different life stages but also for the more obvious signs of *Liberibacter*, such as psyllid sugars
-  Correct spray set up to target small hot spots
-  Check outside greenhouse for plantings (for example boxthorn) that might harbour TPP
-  Talk to your Biological Control Agent supplier about using other predators such as *Buchananiella whitei* or *Tamarixia triozae*

## TPP STRATEGIES FOR POTATO GROWERS

-  Agritech-supported agronomy to reduce plant stress
-  Effective spray delivery systems
-  Switching Modes of Action to manage resistance
-  Non-synthetic chemistry such as agricultural oils
-  Biological Control Agents – predatory and parasitoid insects including *Tamarixia triozae* (approved and released)
-  Beneficials – planting multi-species nature strips to attract native hoverflies
-  Controlling overwintering hosts – boxthorn removal and native poroporo
-  Psyllid netting – particularly in high generation seed crops

### IPM trials outdoor

Research to integrate reduced chemical use with a wider biological and cultural pest management programme is ongoing. Frances MacDonald from the Bioeconomy Science Institute was working on an Integrated Pest Management (IPM) trial for potato tuber moth in Pukekohe when TPP first arrived in the country.

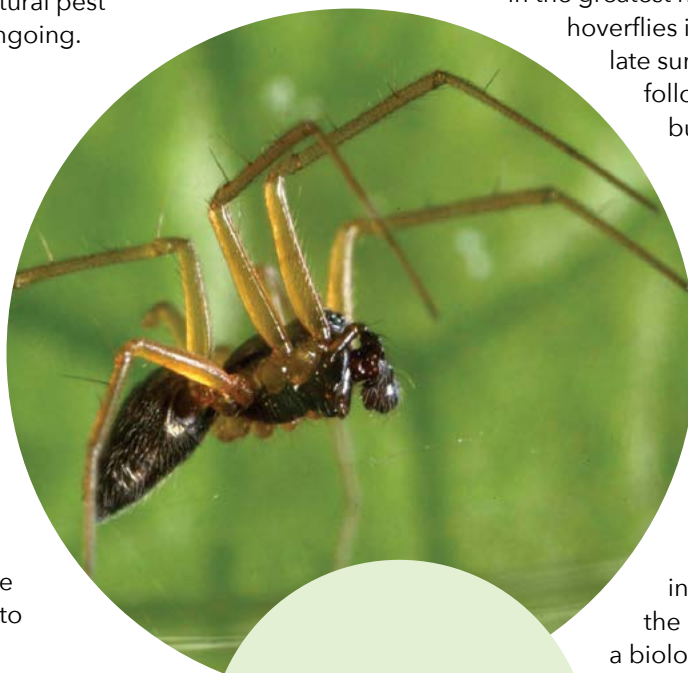
Quickly shifting gears, the resulting studies and further trials in Matamata and Canterbury have provided deep insight into beneficials and how to reduce synthetic insecticide applications. The trials in Matamata looked at food grade agricultural oils as alternatives to standard insecticides.

Although over-use of oils may have some impact on yield, the rate of application showed no significant statistical difference between treatments, proving that significant insecticide reduction can be achieved. However, it's also worth noting there was some evidence that mineral oils can kill beneficial insects while repelling the TPP.

Field studies also identified naturally occurring beneficial insects in potatoes. Lacewings appear in the greatest numbers in spring and hoverflies in summer. Sometimes in late summer ladybirds show up, followed by nabids or damsel bugs in autumn.

Beneficial planting studies showed Phacelia can be an important reservoir for hoverflies. The trials also confirmed that regional approaches are key: what works in Pukekohe and Matamata will be different from what works in Canterbury.

In 2016 the EPA approved an industry application to release the parasitoid *Tamarixia triozae* as a biological control agent for TPP. *T. triozae* was released over three years to 2020 and has become established in Hawke's Bay and Canterbury, however it failed to establish in Auckland – possibly due to insecticide use. The long-term survival of the parasitoid and its contribution to suppressing potato psyllid populations requires further study.



*Spiders out at night are the unsung hero among native predators of TPP and other pest insects. Photo courtesy of the Bioeconomy Science Institute*



### Greenhouse IPM trials

At the seminar Lex Dillon presented learnings from the TomatoesNZ / A Lighter Touch programme trials in commercial tomato greenhouses. The beneficial insects *Engytatus nictoninae* and *Buchananiella whitei* have both shown promise – but given the short period of time that a ‘hot’ TPP feeding on a plant takes to infect a plant, it doesn’t completely eliminate the risk of Liberibacter.

Some other learnings include the introduction of banker plants allowing *E. nictoninae* to survive when there are no pests to eat. This also encourages the *E. nictoninae* to breed, building up the population for when TPP do become a problem. The leaves from the banker plants can then be broken off and transferred to areas of the greenhouse where known infestations have happened previously.

For all crops that show symptoms of CLso, it’s essential to carefully remove infected plants, place them in a sealable bag before moving away from the planting area, to avoid the risk of further distributing any remaining TPP. ●



For recordings of the presentations please see TomatoesNZ YouTube channel or visit the Potatoes New Zealand website: [potatoesnz.co.nz/about/resources/webinars/](https://www.potatoesnz.co.nz/about/resources/webinars/)

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# Greenhouses

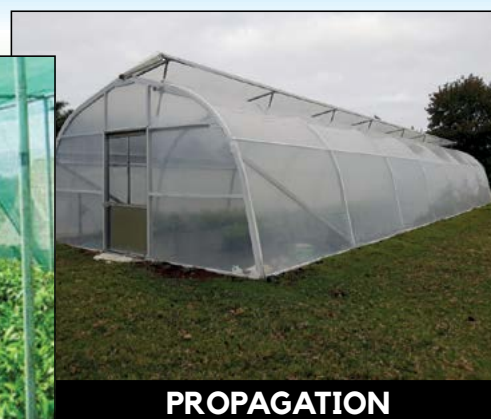
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# 2025 Annual General Meeting

## Notices of Motion



Go to [www.hortnz.co.nz](http://www.hortnz.co.nz) for up-to-date information on the Horticulture New Zealand Annual General Meeting (AGM) and related documents. A proxy form and AGM information will be provided to eligible growers by email and by post where we do not hold an email address for voting members. If you do not receive this information, please contact [info@hortnz.co.nz](mailto:info@hortnz.co.nz).

These motions will be considered at the Horticulture New Zealand AGM being held at Tākina Wellington Convention and Exhibition Centre, 50 Cable Street, Wellington on Tuesday, 26 August 2025 at 4pm.

### MOTION 1

That the Minutes of the 19th AGM of Horticulture New Zealand, held on 30 August 2024 at Mercury Baypark Events Centre, 81 Truman Lane, Mount Maunganui be taken as read and confirmed as a true and correct record of that meeting.

Proposed by the Horticulture New Zealand Board

**Explanatory note:** A PDF of the Minutes of the 2024 AGM will be available on the Horticulture New Zealand website [www.hortnz.co.nz](http://www.hortnz.co.nz). If you have any questions or would like a hard copy, please email [info@hortnz.co.nz](mailto:info@hortnz.co.nz)

### MOTION 2

That the combined Chair and Chief Executive's message for the financial year ending 31 March 2025, as published in the Annual Report be taken as read and adopted.

Proposed by the Horticulture New Zealand Board

**Explanatory note:** A PDF of the Annual Report will be available on the Horticulture New Zealand website [www.hortnz.co.nz](http://www.hortnz.co.nz). If you have any questions or would like a hard copy, please email [info@hortnz.co.nz](mailto:info@hortnz.co.nz)

### MOTION 3

That the audited Financial Statements for the year ended 31 March 2025 be adopted.

Proposed by the Horticulture New Zealand Board

**Explanatory note:** A PDF of the Annual Report and Financial Statements will be available on the Horticulture New Zealand website [www.hortnz.co.nz](http://www.hortnz.co.nz). If you have any questions or would like a hard copy, please email [info@hortnz.co.nz](mailto:info@hortnz.co.nz).

### MOTION 4 TO MOTION 10

There is a suite of Motions related to the Horticulture New Zealand Constitution, these Motions and explanatory notes are detailed in full on the Horticulture New Zealand website [www.hortnz.co.nz](http://www.hortnz.co.nz). The Motions cover revocation of the Constitution and adoption of a replacement Constitution to allow for reregistration under the Incorporated Societies Act 2022. There are then further Motions to modernise the Constitution and Motions to make specific amendments to the Constitution.

### MOTION 11

That the 2026/27 year levy rate for the purposes of the Commodity Levies (Vegetables and Fruit) Order 2024 remain and be set for the domestic sales at 0.14% of the price received at the first point of sale, for export sales to remain and be set at 0.14% of the price received after the deduction of all offshore costs and for processed sales to remain and be set at 0.14% of the notional process value.

Proposed by the Horticulture New Zealand Board

**Explanatory note:** The Commodity Levies (Vegetables and Fruit) Order 2024 allows a maximum rate to be set for vegetables and fruit at 0.15% for domestic sales and processed sales taken at the first point of sale and at 0.15% for export sales at the first point of sale after all offshore costs (including international freight) have been deducted. For processed vegetables and



processed fruit, the levy is deducted from the notional process value, which is defined in the Order. At the AGM levy paying growers may set any rate up to the maximum for the next calendar year. The current rate for vegetables and fruit is 0.14%. This levy funds the activities of Horticulture New Zealand. The Board recommends that the levy rate be set and remain at 0.14% for the 2026/27 year; this will commence on 1 April 2026 and continue through to 31 March 2027.

## MOTION 12

That the directors' remuneration increases by 2.2% from the 2024/25 level for the 2025/26 financial year as follows:

Position	Current	Proposed
Director	\$33,051	\$33,778
Vice-chair	\$41,052	\$41,955
Chair	\$88,898	\$90,854

Proposed by the Horticulture New Zealand Board

**Explanatory notes:** The Independent Board Remuneration Committee reviewed Director remuneration data and considered a modest increase of 2.2% was in line with Institute of Directors guidance for an organisation of the size and nature of Horticulture New Zealand.

The Director's fees are all inclusive; therefore, no additional per-diem fees will be paid for Board sub-committee meetings and regional or industry committee meetings attended on behalf of the Board.

## MOTION 13

That the Budget for the year ended 31 March 2026 be endorsed.

Proposed by the Horticulture New Zealand Board

**Explanatory note:** A copy of the Budget for the year ending 31 March 2026 is available on request. Please email [info@hortnz.co.nz](mailto:info@hortnz.co.nz).

## MOTION 14

That PKF Kendons, be appointed auditors for the year ending 31 March 2026.

Proposed by the Horticulture New Zealand Board

**Explanatory note:** PKF Kendons were selected after a competitive process was run for external audit services. This was the first time Horticulture New Zealand have gone to market for these services since BDO Wellington were appointed for the year ended 31 March 2017.

If you require further information about the AGM or would like a hard copy of any of the AGM documents, go to the Horticulture New Zealand website [www.hortnz.co.nz](http://www.hortnz.co.nz) or call us on 0508 467 869 or email [info@hortnz.co.nz](mailto:info@hortnz.co.nz).





*The kiwifruit industry is among those looking for ways to reduce copper use, such as reducing the amount of copper needed to accelerate leaf fall prior to pruning*

# COPPER IN ORCHARD SOILS – ARE WE KEEPING TRACK?

*Copper in its many forms remains a key part of horticultural production – valued for its role in disease control, its essential function as a micronutrient for plant growth and development, and in some deciduous crops, as a tool to help accelerate leaf drop.*

Tayah Ryan : Lighthouse Horticulture

**However, copper is also one of several heavy metals that can accumulate in soils over time. The potential for elevated copper levels to disrupt natural ecosystems and impact soil quality is well documented, but because of its inherent complexity we still have a way to go in understanding the levels and potential impacts on productive soils in New Zealand.**

This is not a new concern. Various industry groups have investigated soil copper levels and its accumulation, and have attempted to quantify its effects on soil quality over the years. Yet it remains a complex issue to manage, given the variability of soil types, the interactions within the soil environment, and the slow, long-term nature of copper accumulation. However, to maintain the long-

term sustainability of our productive land and the crops that grow upon it, our sector needs to be both proactive and probably better aligned in both monitoring and strategic efforts to enable lower inputs over time.



## How much is too much?

Soil copper guidelines have gained more attention in recent years. For a long time, the commonly referenced benchmark by the New Zealand Water and Waste Association was 100mg Cu/kg but various other values have also been in circulation over the years, creating confusion and a lack of consistency. There has also been little guidance on what to do if levels approach or exceed ecological values.





IN ONE RECENT STUDY, **TOTAL COPPER LEVELS ON NEW ZEALAND AVOCADO ORCHARDS** VARIED WIDELY FROM **18.4 TO 196.7 MG/KG**

Manaaki Whenua Landcare Research (a group within the newly created Bioeconomy Science Institute) has more recently done work to develop Ecological Soil Guideline Values (Eco-SGVs), providing more detailed guidance by considering the effect of soil type and accounting for natural background copper levels (Cavanagh & Harmsworth, 2023). The proposed default Eco-SGV (95mg Cu/kg) is broadly like that suggested previously, but on soils with higher organic carbon, cation exchange capacity and pH (i.e. 'tolerant' soils), a higher tolerance of up to 135mg/kg is still likely to afford the same protection. New 'cessation levels' from 190mg/kg on 'sensitive' soils to 350mg/kg on more 'tolerant' soils suggest when active management or changes in practice should be considered.

Eco-SGVs are still being discussed, but several councils are already using them in their reporting. 'Cessation' is unlikely to mean stopping copper use completely, but signals the need for closer monitoring and proactive soil management.

### Horticultural situation

Copper is included as one of many soil health and contaminant factors as part of the Regional Councils' State of the Environment monitoring programmes. There have also been several research studies done in the past 20 years that investigated copper levels in soils of different horticultural sectors. Most reports show significant variability between sites, but generally mean values (i.e. most sites) were still within the acceptable range.

In vineyards tested as part of a research study in 2003–2004, around 75 percent of the 43 vineyards sampled had total copper levels less than 75mg/kg, while a small number had levels at 150–260 (Morgan & Taylor, 2003).

Avocados, which rely on regular applications of copper fungicides for the control of fruit rots, have been included in published studies and through industry monitoring programmes. In one recent study, total copper levels on New Zealand avocado orchards varied widely from 18.4 to 196.7mg/kg (Matse *et al*, 2024).



**75%**  
**OF THE 43 VINEYARDS**  
**SAMPLED HAD TOTAL COPPER LEVELS**  
**LESS THAN 75MG/KG**

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The avocado industry is reliant on copper fungicides for fruit rot control, and encourages growers to undertake regular soil testing

The kiwifruit industry saw an increase in annual copper use after the arrival of *Pseudomonas syringae* pv. *actinidiae* (Psa). On top of regular use of copper sulphate associated with advancing leaf drop in autumn, it became a renewed concern and sparked a monitoring programme of 11 orchards from 2010 to 2018 looking to understand baseline levels and potential accumulation over time (Lowe et al., 2019). As expected, total copper did increase during the eight-year period on most of the monitored orchards. Average levels ranged from 21 to 76mg Cu/kg. At those levels, no relationship was found between copper levels and associated soil microbial biomass carbon, one measure of soil health.

“

**There is no doubt that research and innovation will play a key role in reducing copper inputs over time**

Results presented in the State of the Environment monitoring programmes undertaken by Regional Councils around New Zealand tend to show higher levels of copper from horticultural land compared to other land uses, and generally increasing levels over time. However, regional variation is evident.

If copper use continues (dependent somewhat on annual input amounts), it would be expected soil levels will continue to rise on horticultural land. The rate of accumulation and the true impact on soil health and ecology on a site-by-site basis are less known.

### The role of monitoring

Keeping track of total copper levels in soil is worth considering where copper is applied year after year. Several industries already recommend this. Because copper builds up slowly, testing every three to five years is likely sufficient to keep an eye on accumulated levels.

For many labs, 'total copper' is not included in standard soil test packages and must be specifically requested. Be aware that the upper limit levels shown on soil test reports may not align with the Eco-SGVs discussed here. Labs often set their limits based on plant nutritional requirements, which can be quite different from the thresholds used to assess soil quality and ecological protection. At least one testing facility I spoke to was keen to investigate the inclusion of proposed Eco-SGVs on test reports to provide further guidance to growers on soil health.

### The role of research and innovation

There is no doubt that research and innovation will play a key role in reducing copper inputs over time. This is no easy task – many horticultural sectors continue to rely heavily on copper for its broad-spectrum disease control, low residue profile, cost-effectiveness, user safety, and suitability for organic production. For several minor crops, there are still no viable alternatives that offer the same level of efficacy.

That said, the rapid growth of the biopesticide industry in recent years provides some hope. While unlikely to replace copper completely, these products could help reduce annual inputs by substituting at certain points in the season or as part of integrated programmes.



## COPPER: MANAGEMENT OPPORTUNITIES FOR GROWERS



### Soil health

Improving overall soil quality can help reduce the bioavailability – and therefore the potential toxicity – of copper. Building organic matter through inputs such as compost and managing pH is a long-term strategy that supports better soil structure and microbial activity while helping bind copper in less available forms.

### Understand your copper levels

Testing across different blocks or properties can highlight where copper levels may be higher. This knowledge opens the door to site-specific management – such as adjusting rotations or prioritising low-input programmes on blocks where levels are trending upwards.

### Consider alternatives where possible

Look for opportunities to substitute copper with other products at certain times of the year, reducing total annual inputs without compromising disease control.

### Explore technologies to reduce soil deposition

Some research has suggested strategies to minimise copper reaching the soil, such as mulching or precision-application technologies. However, practical considerations remain. Mulch, for example, may still need to be removed to avoid copper accumulating in the leaf litter layer over time.

One challenge with older chemistry like copper, is that much of our current use is still based on research carried out (often) decades ago. Revisiting this through targeted research – particularly for industries still heavily reliant on copper – could help re-evaluate minimum viable rates or highlight commercial formulations with lower recommended rates that maintain efficacy while reducing overall inputs. This is not something growers should trial on their own, as reducing rates without proper validation risks loss of disease control or resistance development, but it is an area where coordinated research could provide valuable guidance.

Finally, application technology offers another promising pathway. Advances such as precision sprayers, spray recapture systems and other related technologies have

the potential to significantly reduce per-hectare inputs by improving application efficiency and potentially reducing the amount of copper spray physically hitting the soil. ●

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- Cavanagh, J.-A. E., & Harmsworth, G. R. (2023). *An implementation framework for ecological soil guideline values*. Manaaki Whenua – Landcare Research, Lincoln, New Zealand. Envirolink Report.
- Lowe, T., Miller, S., Laughton, M., & Green, S. (2019). Copper in kiwifruit orchard soils. *New Zealand Kiwifruit Journal*, April/May 2019, 34–35.
- Matse, D. T., Geretharan, T., van Gorp, E. F., Anderson, S., Jeyakumar, P., & Anderson, C. W. N. (2024). The potential impact of long-term copper fungicide sprays on soil health in avocado orchards. *Environments*, 11(6), Article 109.
- Morgan, D. J. W., & Taylor, M. D. (2007). Copper accumulation in vineyard soils in New Zealand. *New Zealand Journal of Crop and Horticultural Science*, 35(2), 123–132.

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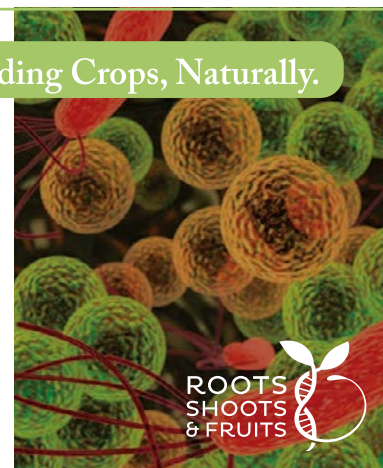
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*Multi-row sprayers are becoming increasingly prevalent on orchards with modern, narrow canopies*

## OPTIMISE SPRAYING COVERAGE FOR CLEAN FRUIT

*Spray applications are an essential part of sustainably growing high-value, clean fruit.  
We often rely on very small amounts of selective plant protection products to  
control pests or diseases.*

Dr Sean Gresham : AgFirst Consultants Hawke's Bay

**For some products it almost looks ridiculous putting a couple of tablespoons of product into a 2000L tank, knowing that it will be successfully spread over a few thousand trees, proving effective in preventing crop damage.**

Sustainable integrated pest and disease management utilises the best plant protection products, applied at

the right time, at the correct rate and with good coverage of the parts of the tree or vine that need to be protected. Good spray coverage is critical to successful sustainable fruit production, where we want to use as little product as possible while ensuring good control and minimising risk of over-spray, drift losses and residues on harvested fruit.

Research focusing on optimising spraying is being undertaken as part of the Smart and Sustainable programme, funded by NZ Apples and Pears and the Ministry for Primary Industries' Sustainable Food and Fibres Futures fund (now replaced by the Primary Sector Growth Fund). This year's research focused on establishing a baseline understanding of how canopy size and density influence spray deposits.

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*Drones allow for very timely spray application due to their speed and are particularly useful when ground conditions don't allow tractors to enter the orchard*

This was done using ground sprayers (axial fan airblast versus tower-type) compared with aerial application (helicopter or drone). To do this we applied a known concentration of yellow food colouring then collected the leaf samples from the inner and outer canopy at different heights. Dye was then extracted from each sample using a known quantity of water. The concentration of extracted dye was measured using a spectrophotometer which told us the amount of spray deposit in each sample. In total, we measured nearly 1500 samples – so we managed to get a reasonably clear picture of spray application efficiency.

## The key findings were:

### **Droplet size matters – especially on larger trees**

For the ground-based sprayers we tested fine droplet nozzles (most typically used by growers for seasonal crop protection applications) compared to air-induction nozzles (larger droplets, commonly used to reduce spray drift risk) using the same application volume (500L/Ha) and the same dye concentration. The leaves sprayed using coarse droplets had lower deposits than those sprayed using standard fine droplet nozzles – 10 percent lower on the smaller trimmed canopy and 26 percent lower on the larger 'standard' canopy (4.5 x 2m spacing).

### **...a higher volume of spray is needed to achieve good coverage on larger trees**

Similarly with aerial application, helicopter applications require very coarse droplets to reduce drift risk. Because drones fly much slower, closer to the canopy and produce much less down-draft they can use finer droplets. Our study found lower deposits of dye applied by helicopter compared to those applied by drone.

Our study confirmed that there is a trade-off when using coarse droplet size – lower drift risk but a slightly lower amount of product ends up in the 'right place'.

### **Spray volume matters**

In general, a higher volume of spray is needed to achieve good coverage on larger trees (with greater height, width and density). The complicating factor is that smaller, narrow-canopy trees are typically planted on shorter row widths. The traditional method for accounting for these differences was to calculate tree-row volume (TRV) and adjust spray application volume accordingly.

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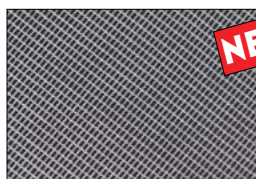
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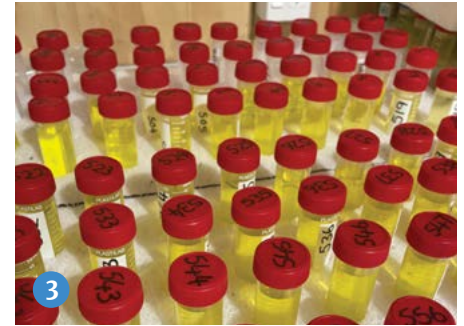
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1 Water sensitive papers turn blue when spray droplets come into contact and are a good tool for evaluating spray coverage, 2 Yellow dye tracer was used to measure how much spray was deposited on leaves or 'artificial leaves' (plant tags), 3 Samples were rinsed in water to extract the dye then measured on a spectrophotometer

Our experiment found that although there were higher deposits on smaller trees with narrow row spacing, TRV did not completely account for the differences observed. One explanation is that when you have narrower row spacing (in this case 3.2m versus 4.8m) the sprayer must travel a greater distance each hectare (3.1km total on narrow rows versus 2.1km on wide rows). The net result is that the amount of spray delivered to each metre of row as the sprayer drives along needs to be less on narrow rows to achieve the same per hectare rate.

**“ Good spray coverage is critical to successful sustainable fruit production ”**



This suggests that the traditional TRV model for spray volume adjustments may not suit modern planar canopies with narrow row-spacings. The original TRV worked well accounting for the decrease in spray volume from around 3000L/Ha on massive 20' x 20' style plantings to the 2000L needed for 'high density' 4.5m x 2m orchards using M9 rootstocks. But that relationship does not seem to directly apply to the narrow systems that are increasingly prevalent.

### **Concentrate spraying achieves higher deposits**

The application rates for all plant protection products used for tree fruits are expressed as the amount per 100L applied as a dilute application to the point of run-off. The volume of spray required to achieve 'point of run-off' is dependent on the canopy size, density and row spacing (as discussed above). However, most spray applications are applied as 'concentrate' sprays - typically at two to four times lower volume than required for dilute applications, with the rate per 100L increased by the same factor. Our findings showed that on average ten to twenty percent more product applied was deposited on leaves when spraying concentrate compared to dilute spray.

The main reason for higher deposits with concentrate spraying is that when spraying to the point of run-off, some amount of product that hits the target leaves drips off. With concentrate spraying, more of the applied product is retained on the target canopy.

Dilute applications are still useful in some situations. For example, products that need to be absorbed by the plant usually benefit from the additional drying time afforded by dilute applications. In addition, some products need to drip down into hard-to-reach areas, which won't occur when using concentrate water volumes.

### **Sprayer type**

Axial fan airblast sprayers are the workhorse for spraying tree fruit. Newer tower-type sprayers are increasing in prevalence and are well-suited to narrower, uniform canopies, with some designs adapted to spray multiple rows at the same time. We confirmed that tower sprayers deposit a greater proportion of spray with better uniformity of coverage but can struggle to reach the top of very tall trees without careful adjustment. The tower sprayers bring the air and spray output closer to the canopy, so less of the spray is lost to the ground or punched through the 'target zone' and into the next row. Tower type sprayers can cost almost twice as much as traditional airblast sprayers, so there needs to be a clear benefit for your orchard to justify the investment.

### **Conclusions**

Optimising your spray deposition is essential for sustainable and profitable fruit growing. Due to the diversity of tree forms, sprayer types, weather conditions and sprayer set-up options, no single prescription can be made. Our research is focused on quantifying the influence of these factors so that we can better utilise the wealth of data and computing power available to growers. However, the best sensor will remain the keen eye of an experienced grower, and the best decision will always be that made by a person with dedication to growing excellent, high value, clean fruit. ●





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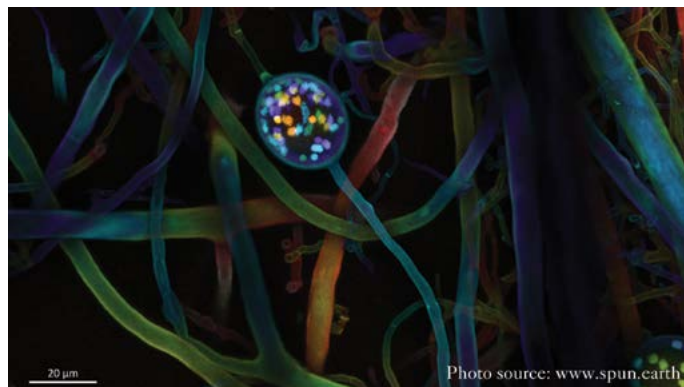
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*Imagine a single input that is scientifically proven to enhance soil health and environmental goals, whilst providing both biotic and abiotic protection, increased fertiliser efficiency and yields – mycorrhizal fungi is that input.*

**The interest in propagation of AMF (arbuscular mycorrhizal fungi) for horticulture is increasing due to their role in plant nutrition and health, enhancing the quality of vegetables for human nutrition whilst improving productivity and profitability.**

A powerful biological partner, mycorrhizae combine traits of both nitrogen fixing and phosphorus solubilising, indicating big potential as a sole biofertiliser for most crops and climatic situations. A meta-analysis of 112 experiments showed that both yield and plant nutrition were significantly improved by inoculation in 92 percent of cases.

Modern agriculture has become heavily reliant on synthetic fertilisers, yet much of what is applied to the soil never reaches the crop. Significant portions of nitrogen and phosphorus are lost through leaching or run-off – a wasteful, costly cycle with serious environmental consequences contributing to groundwater contamination of freshwater ecosystems.

In comparison, mycorrhizal fungi form a symbiotic relationship with plant roots. Extending into a vast underground network of superfine hyphae, they explore the soil beyond the reach of roots. In doing so, they access water and otherwise unavailable nutrient reserves, especially phosphorus through enzyme release – making better use of existing soil reserves and reducing the need for repeated fertiliser applications. Plants can acquire as much as 80 percent of their phosphorus from mycorrhizal fungi.

Plant health and resilience is a major attribute. The presence of arbuscular mycorrhizal fungi enhances root structure and helps to suppress soil-borne pathogens by occupying physical space, stimulating microbial

competition and improving immune response. In compromised soil with excess copper, high sodium, root-knot nematode infestations, drought and even replant issues – mycorrhizal fungi have been shown to help mitigate toxicity and support plant tolerance. By improving root growth, function and nutrient selectivity, these fungi can reduce the uptake of harmful elements and enhance plant resilience, providing promising biocontrol.

Mycorrhizal fungi are the base of the food web, an ancient support system for much of life on Earth. Playing a vital role in regulating the global carbon cycle, they are crucial for achieving net-zero emissions, with an estimated 13.12 gigaton of CO<sub>2</sub> transferred from plants to fungi annually. This represents a massive carbon pool and the most effective carbon capture storage unit globally.

Nutrients are exchanged for carbon-derived sugars produced by plants which are permanently transferred into the soil through the glyco-protein AMF secrete, known as mineral-associated organic carbon. Healthier root systems and improved soil structure further support this carbon storage function, offering a biological pathway to climate-resilient growing systems that work for farmers.

By bridging the gap between traditional ecological processes and modern farming systems, the use of mycorrhizal fungi is backed by science, is crop-specific, and easy to apply. Reintegrating these symbiotic organisms, growers can adopt more sustainable practices – reducing input reliance while maintaining yield and quality.

Although mycorrhizal fungi have existed since the first plants grew on Earth, it's not about going backwards. It's about moving forward, with biology on your team. ●

For the full article including sources visit <https://rd2.co.nz/mycorrhizal-fungi-in-commercial-horticulture/>







Alchemy Gisborne grower Jason Galloway and his family are investing in added value products for finger lime

## CAVIAR FROM WASTE

*A new finger lime initiative with citrus growers Alchemy Gisborne in conjunction with Callaghan Innovation's Biotechnology Group and the Bioresource Processing Alliance is a great example of how growers can leverage science support to innovate and increase orchard and farmgate revenue.*

Aimee Wilson

**Jason Galloway and his wife and two daughters are involved in the family business Alchemy Gisborne and they are hoping to have some new products to bring to market next year.**

"Finger limes have definitely got the most potential for added value," Jason says. "They've got three different and distinct uses – seeds, peel and the fruit itself."

Finger limes (*Citrus australasica*) are known as 'citrus caviar' because the uniquely-shaped fruit contains many small pearls, which are sought after for both high-end culinary uses and by the international cosmetic industry for use in exclusive beauty products.

Finger limes, which are rich in calcium, magnesium, potassium, phosphorus and Vitamin E, grow on a rare rainforest tree, native to Australia.

Jason says there is a lot of waste fruit that comes with finger lime growing, because of the nature of how it is grown.

"It's quite a different fruit from any other citrus.

"The plants are particularly thorny – I mean next level, which means having to wear gloves up to your armpits to pick the fruit.

"Given the nature of the tree, you're going to get a lot of damage to the fruit."

He says Poverty Bay had experienced a huge amount of finger lime plantings in recent years, and Alchemy Gisborne wanted to be ahead of the game in terms of creating a viable market for second-grade fruit.







*Look closely at the finger lime tree and you'll see it is particularly thorny*

## GET SUPPORT TO ADD VALUE FROM ORCHARD AND FARM WASTE

Funded by the Ministry of Business, Innovation and Employment (MBIE), the Bioresource Processing Alliance (BPA) supports industry-led projects that aim to create additional economic value from low value bioresources. These initiatives align with the Aotearoa Horticulture Action Plan, which includes a focus on optimising waste value streams.

Thirteen innovative horticultural projects are benefitting from more than \$1 million in research funding, thanks to BPA's support and expertise.

BPA funding has supported many successful projects in the horticulture sector, including the development of an innovative beverage, Kabocha Milk, from waste kabocha squash; New Zealand Extract's development of high-value bioactives from grape seed and other low value raw materials; and OVÄVO freeze-dried avocado powder from process-grade fruit.

The BPA also supports student projects, with current Master's projects in the horticulture industry including the creation of fibre from apple pomace and the development of grape-marc derived biochar and its potential to improve soil fertility and mitigate carbon emissions.



He has been working with senior food technologist Campbell Ellison from Callaghan Innovation to develop an automated process for the second-grade fruit to separate the pearls from the skins, and then process the separate fractions to extract fragrance and oils from the seeds and skins.

“

**Creating an avenue to connect primary industry with R&D expertise is important**

The Callaghan robotics team of Kit Wong, Luke Holibar and Chong Deng designed a machine to separate the pearls from the fruit under pressure, vastly improving the efficiency of what was once a laborious job done by hand.

A second part of the project involved finding the best way to preserve the pearls. Campbell says that after some research they were able to extend the chilled shelf life of the second-grade fruit from under a week to well over a month, creating cost savings for the grower through reduced waste and transport costs.

He said that further work could investigate stability at ambient temperatures which would reduce costs further.

Jason says this is not yet commercialised and would form part of the next phase of the project.

The actual processes developed are commercially sensitive, but creating opportunities for second-grade fruit is crucial given the recent increase in interest in finger lime growing in Poverty Bay.





The small pearls in finger lime, known as 'citrus caviar', are highly sought-after

Alchemy Gisborne owns the IP of the new technology, particularly as they had invested \$20,000 of their own money into the project, and had three years to use it under conditions of the funding contract.

"We have had great pleasure in finding a way to add further value to an amazing little citrus fruit, and we're optimistic it will be the way forward," Jason says.

The project was supported by the Bioresource Processing Alliance (BPA). BPA support is available to businesses in all primary sector industries, including horticulture, helping them to access relevant R&D from one or more of BPA's partners.

"Creating an avenue to connect primary industry with R&D expertise is important," says Dr Nicky Solomon of the BPA.

"Researchers from the BPA alliance oversee the funding applications, but

every commercial application must be supported by an industry partner whose driver is to commercialise the research aspect - we request they contribute 20-30 percent of the project cost to show their commitment," she says.

**"Finger limes, which are rich in calcium, magnesium, potassium, phosphorus and Vitamin E, grow on a rare rainforest tree, native to Australia"**



Alchemy Gisborne currently supplies domestic supermarkets with their first-grade fruit, and have partnered with a local hospitality company to supply freeze-dried powders for garnishes and drinks.

Now using the new robotic technology, they were also able to start designing special trays to capture the pearls once they have been extracted - for the second-grade waste fruit.

"We're just wanting to tackle it one job at a time, but the opportunities are very exciting," Jason says. ●

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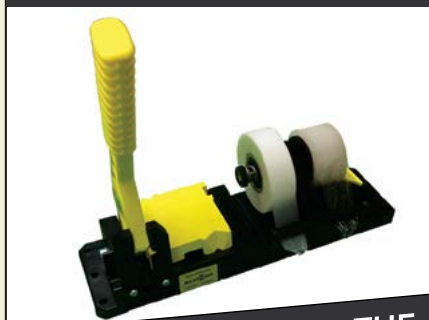
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Zespri signed four MOUs during the Prime Minister's trade delegation to China in June

## CHINA MARKETERS DIG DEEP AS **EXPORTS SURGE**

*On the back of the recent trade delegation to China led by Prime Minister Christopher Luxon, second quarter trade data confirmed the last 12 months' extraordinary surge in exports to New Zealand horticulture's largest market. Zespri's Michael Fox and Rockit's Grant McBeath comment on the challenges faced by our marketers.*

John Gauldie

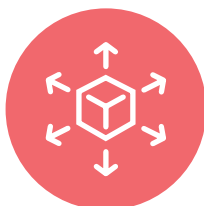
As far back as September hopes were high that we were about to experience a cracker growing season for kiwifruit and apples – the two crops that make up the bulk of exports to China. Conditions varied but, by and large, that promise played out with another great kiwifruit season and a return to form for pipfruit.

Strong supply shifted pressure onto the marketers to secure premium pricing for increased volumes – despite China's challenging macro-economic conditions (which became even more challenging as the season progressed) and, particularly for apples, a global market with plenty of fruit around.

### Surge in sales

China (including Hong Kong) had already become horticulture's largest market in 2022 and exceeded \$1 billion (FOB) in export receipts for the first time in the year ending June 2024, according to the New Zealand Horticulture Export Authority 2024 report. This year, that total has rocketed up, with provisional Stats NZ export figures pointing to well over \$1.5 billion in the same period.

Falling in the middle of the export season, a large part of that figure captures growth in kiwifruit sales in China over the last season as well as this season, which started in February/March.





"We had a really strong 24/25 season - increasing both volume and value, selling around \$1.4 billion dollars' worth of fruit across Greater China," says Zespri's head of global public affairs Michael Fox, referring to the geographical area including Taiwan.

"Mainland China made up about 80 percent of this in 24/25, with \$1.1 billion in sales. Volume was up 43 percent over the previous season. This season [25/26], volume will be up 8 percent in Mainland China, with 46.2 million trays."

This season China will make up 22 percent of all Zespri fruit shipped and 29 percent of SunGold™.

Starting earlier this year, apple exports into China have also risen sharply. Grant McBeath, chief executive at Rockit Global says Stats NZ fruit export statistics show Rockit™ apple exports to China are up almost 120 percent in volume (kilograms) from January to June 2025.

"Fifty percent of our business is in China, it's clearly our number one market."

The company has no shortage of supply - Rockit apple volumes are growing significantly after some tough growing seasons.



**FIFTY PERCENT OF OUR BUSINESS  
IS IN CHINA, IT'S CLEARLY  
OUR NUMBER ONE MARKET**

"Building demand ahead of supply is really the challenge. We're well up year-on-year but a bit behind target of where we want to be to maximise orchard gate return for growers."

Grant points to challenges with China's economic recovery, its wholesale markets as well as the uncertainty and disruption caused by Liberation Day tariffs on global supply. "A lot of fruit has found its way to China."

Nevertheless, the Chinese consumer seems to have a near insatiable appetite for New Zealand's best produce.

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In-store displays of Zespri RubyRed™ Kiwifruit in China



In store display of 2025 season Rockit™ apples in a Pagoda store in China

## Untapped potential

Over ten years after Rockit exports began, the brand continues to grow its footprint and Grant says it remains a market of enormous potential for Rockit's high quality and premium packaged fruit.

“

**China is a market where you need a certain speed to react, which you can only get with a strong local presence**

Likewise, Michael says Zespri still has plenty of work to do to grow in the Chinese market as it works to double the value of fruit exports to China over the next decade.

Michael says, “As we have more fruit in the years to come and grow our geographic footprint, we are also ‘going deeper’ so that we can increase the per capita consumption of kiwifruit.

“At the moment, Taiwan has with annual per capita consumption of Zespri kiwifruit of around 15 pieces with Hong Kong not far behind. In mainland China we’ve reached an average of one piece per capita, highlighting the enormous growth potential in a market of 1.4 billion people.”

Zespri's local presence is key to its strategy, he says. “We have strong long-term relationships with our distributors, wholesalers and retailers in China, and these local partnerships will help grow our presence, along with the strength of the Zespri brand.”

## Trade delegation

In June Zespri Board chair Nathan Flowerday was part of Prime Minister Christopher Luxon's trade delegation to China, during which Zespri signed Memoranda of Understanding (MOUs) with four of its long-term distribution and retail partners in China.

The agreements are with Joy Wing Mau and Goodfarmer, the kiwifruit marketer's two largest distributors in China; and with retailers Pagoda and Xianfeng Fruit, the largest fruit shop chains in China with around 7500 outlets between them.

Collectively the four companies represent around 80 percent of Zespri's business in China, with the MOUs outlining a shared ambition to grow sales and sell fruit in 120 cities, up from the current 60, by the 2033/34 season.

Grant also joined the Prime Minister's delegation and Rockit signed a strategic partnership with Xianfeng Fruit – the first time that Rockit has had such a high-level endorsement at a signing ceremony.

“I think the Prime Minister leading these delegations is incredibly important,” Grant says. “And for Rockit to be part of a high-level trade delegation like this lends a lot of gravitas to our brand. For our clients, individually to meet the Prime Minister and the other ministers there, it really has an impact. It's impressive to see the Government in action.”





Rockit Global chief executive Grant McBeath visits a Rockit display at a Greenery Fruit Co store with members of the Rockit Sales and Marketing team

### Local business

Rockit is also growing its local presence. Grant had been doing business in China for 18 years in various roles before becoming Rockit's chief executive last September. He highlights the importance of being on the ground.

"China is a market where you need a certain speed to react, which you can only get with a strong local presence. So China is our only market with its own dedicated general manager reporting directly to me."

Like Zespri, Rockit has also dealt with counterfeiting – in particular in a dispute with a local company selling apples using tube packaging similar to Rockit's. In June the High People's Court of Zhejiang ruled in favour of Rockit.

"Any high performing brand is going to attract some counterfeiting, but this ruling is really important," Grant says. "It builds a lot of confidence that the courts take this sort of IP infringement very seriously, so that was a good outcome."

Beyond kiwifruit and apples, China remains a key export market for cherries and dried peas. Kiwiberries regained market access late in the season, but has successfully restarted exports.

"Smooth customs clearance and on-time distribution have reinforced grower confidence in our export pathway," says Geoff Oliver, chair of NZ Kiwiberries Growers Inc. "With that foundation in place, we're collaborating closely with packers and logistics partners to increase volumes and deliver consistent, premium-quality kiwiberries to China next season." ●

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# QUALITY SELLS

*‘Quality sells’ was the underlying theme of the 2025 Summerfruit NZ conference, which attracted more than 200 delegates to a rather damp Blenheim in late June.*

Andrew Bristol : Summerfruit NZ communications manager



*Kaikōura MP Stuart Smith and Associate Agriculture Minister Nicola Grigg chat with Summerfruit NZ chair Trudi Webb and chief executive Dean Smith at the 2025 Summerfruit NZ conference*

**All the speakers and the Kick the Dirt field demonstrations had a focus on quality: its importance, from a consumer point of view, and what growers are doing.**

Through new growing techniques and advances like AI and robotics, growers can increase quality and make it easier to achieve consistent quality by reducing reliance on labour – the cost of which is increasing the world over.

Louise Beard, Director at FORWARD Insight & Strategy, outlined the results of the research she carried out for the summerfruit industry this season.

“We found that consumers love and want to buy and eat the summerfruit the New Zealand industry produces,” she says.

“They love the taste, flavour and variety. They also love the novelty and anticipation, and have an emotional connection to summer and nostalgia.

“However, consumers also find summerfruit a challenge, because it varies across the season, category, variety, and retailers and channels.

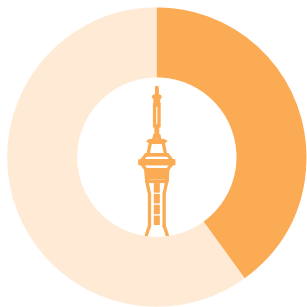
“This is a risk for the industry as our research shows that if a consumer has a bad experience, it will take them one to three weeks to buy summerfruit again. This is why the industry must focus on quality, throughout the supply chain.”

Louise also says that consumers will respond to information about the fruit they are buying.

“We should be telling our story so consumers can make informed, and not ill-informed or un-informed decisions. AI is only as good as the data and information that is going into it.

“A commitment to quality is also a commitment to communications. For example, if a peach variety is crisp and not soft, say so. If the quality of the plums makes them better suited to a salad, say so. That way the guess work is taken out of the consumers’ decision.”





WITHIN TWO DECADES, **40%**  
OF THE NEW ZEALAND POPULATION  
WILL LIVE IN AUCKLAND. WHY?  
BECAUSE THAT'S WHERE **MOST**  
MIGRANTS WANT TO LIVE

During Kick the Dirt, the field trip held on the afternoon before the conference, delegates visited the Caythorpe Family Estate. There, Simon Bishell, a fifth-generation grower, talked growers through their UFO (Upright Fruiting Offshoot) cherry orchard, planted in 2021, which also uses Valente bird net and rain film.

“

**Growth doesn't just happen by staying where you are**

Simon is very data and evidence driven, seeking to save money and increase quality, with every decision.

'I have four criteria for any new investment decision,' said Simon. 'One, reduce labour; two, reduce labour; three, reduce labour; and four, add value. In other words, reducing labour equals added value. At Caythorpe, we aim to work smarter, not harder. Also, growers seldom complain about having too much time on their hands.'

Professor Paul Spoonley, emeritus professor at Massey University, outlined how the demographic makeup of New Zealand has changed – and will continue to change.

Paul encourages the summerfruit industry to plan how to meet its future labour needs, saying New Zealand is "just a bit too casual about it".



## Please vote in the Summerfruit Commodity Levy referendum before 25 August

Summerfruit growers have until Monday 25 August to vote in the 2025 Summerfruit Commodity Levy referendum.

The referendum is a measure of support for Summerfruit NZ and the activities it carries out on behalf of growers.

The referendum proposes that the Summerfruit Commodity Levy continues **unchanged** in order to fund:

- product development
- research, including market research
- market development
- protection or improvement of plant health
- biosecurity activities
- development and implementation of quality assurance programmes
- education, information, or training
- grower representation
- the day-to-day administration of Summerfruit NZ.



If you have not received voting papers, either by mail or email, please **immediately** phone:  
Andrew Bristol, Summerfruit NZ  
Communications Manager:  
021 021 62 021



If you would like to discuss the referendum, please phone:

Trudi Webb, Summerfruit NZ Chair:  
027 296 6092

Dean Smith, Summerfruit NZ Chief Executive:  
027 461 6020



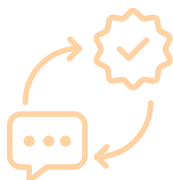
To find out more about the referendum, you can go to the Summerfruit NZ website:  
[www.summerfruitnz.co.nz/commodity-levy-renewal/](http://www.summerfruitnz.co.nz/commodity-levy-renewal/)





“  
I have four criteria for any new investment decision,’ said Simon. ‘One, reduce labour; two, reduce labour; three, reduce labour; and four, add value. In other words, reducing labour equals added value.’

Caythorpe Family Estate grower Simon Bishell discusses their UFO growing system, augmented by advice and reflection from Dr Gregory Lang, an expert from Michigan State University



## A COMMITMENT TO QUALITY IS ALSO A COMMITMENT TO COMMUNICATIONS

“Our country’s reliance on temporary, migrant workers is a risk. Two thirds of our recent Gross Domestic Product growth is also down to immigration.

“New Zealand is seeing an emptying out of the regions. Within two decades, 40 percent of the New Zealand population will live in Auckland. Why? Because that’s where most migrants want to live.

“Also, like most countries in the world, New Zealanders are aging. This will have a major impact on workforce supply, particularly in the regions.”

The conference also heard from last year’s Young Grower of the Year winner Grace Fulford.

Grace spoke openly about her decision to leave the family business.

“Growth doesn’t just happen by staying where you are,” she says. “Every opportunity I have said yes to has taught me something valuable.”

She encourages family businesses to let younger members go.

“It’s not the same as losing them. Let them go and learn, and come back.”

“

**We should be telling our story so consumers can make informed, and not ill-informed or un-informed decisions**

Grace says young people want meaning in their work. “The next generation is passionate about sustainability, and finding growing systems that work for everyone.”

Grace also touched on TikTok, while questioning the role it can play in young people’s lives.

Dean Smith, Summerfruit NZ chief executive, says the conference was a truly positive experience.

“The most rewarding aspect for me was witnessing our industry come together, enjoying each other’s company and strengthening those crucial connections. It’s often said, but bears repeating: our people are truly our industry’s greatest asset.” ●



# GROCERY SUPPLY CODE



*The Commerce Commission is looking at the operation and effectiveness of the Grocery Supply Code. Basically, it is looking at the regulated grocery retailers (Foodstuffs and Woolworths) to see if they are operating in good faith.*

Antony Heywood : Vegetables NZ chief executive

**Vegetables NZ believes that growers have the right to sell their products at a profit and be able to effectively manage their risks.**

The Commerce Commission wants to promote competition and efficiency in the grocery industry by:

- promoting fair conduct, and prohibiting unfair conduct
- promoting transparency and certainty about the terms of agreements
- contributing to a trading environment that supports competition, confident participants and a diverse range of suppliers in the grocery industry.

Having recently returned from Australia and seen what they are doing with their grocery code of conduct, I feel we (New Zealand growers) could learn a little from our Australia brothers and sisters, and step up in a couple of areas.

The first area to consider is 'what is reasonable behaviour?' – as outlined under any pub test: Would an everyday person agree that this behaviour is fair and reasonable?

Once 'reasonable' is defined, we can tackle margin: What is a fair margin for both parties?

If a grower gets 20 percent of the profit pie from the sale and the retailer gets 80 percent, is this reasonable? Benefits, costs and risk all need to be considered when answering this question.

“

**If a grower gets 20 percent of the profit pie from the sale and the retailer gets 80 percent, is this reasonable?**

Example – a grower grows produce for \$3, sells it for \$4, and the retailer sells the produce for \$8. 'Is this fair?' (Any discount is usually shared by the parties, so this increases the risk to the grower, and lessens the profit disproportionately.)



**A GROWER GROWS PRODUCE FOR \$3,  
SELLS IT FOR \$4, AND THE RETAILER  
SELLS THE PRODUCE FOR \$8  
IS THIS FAIR?**



**Vegetables NZ  
AGM 2025**

The 2025 Vegetables NZ annual general meeting (AGM) will take place at 5pm on Tuesday 26 August at the Tākina Convention and Exhibition Centre, Wellington as part of the Horticulture Conference.



This is an opportunity for grower members to provide feedback and have a say about the future of Vegetables NZ. At this particular AGM, proposed changes to Vegetables NZ's constitution will also be voted on.



We are keen to see as many growers as possible in person at the AGM, which will be followed by a grower dinner.

For more information about the AGM, visit: [www.freshvegetables.co.nz/news-and-events/events/2025-agm-agenda-remits-and-proxy-form](http://www.freshvegetables.co.nz/news-and-events/events/2025-agm-agenda-remits-and-proxy-form)



THE COMMERCE COMMISSION WANTS TO PROMOTE COMPETITION AND EFFICIENCY IN THE GROCERY INDUSTRY BY:



**PROMOTING FAIR CONDUCT,  
AND PROHIBITING  
UNFAIR CONDUCT**



**PROMOTING TRANSPARENCY AND  
CERTAINTY ABOUT THE TERMS  
OF AGREEMENTS**



**CONTRIBUTING TO A TRADING ENVIRONMENT THAT  
SUPPORTS COMPETITION, CONFIDENT PARTICIPANTS AND  
A DIVERSE RANGE OF SUPPLIERS IN THE GROCERY INDUSTRY**

### Change the risk narrative

This is where I feel we can really add value to the conversation. It involves understanding a couple of fundamental parts to any negotiation. This first is 'build the expectation'; and the second is 'understand your supply agreement'.

- 1 Be clear in the undertaking and the risk: If I do this (forecast, grow to forecast, deliver to forecast) you will pay this at this volume – no buts or maybes.
- 2 Caveat: Growing outdoor crops is not a perfect science as climate can affect final outputs, so give a contingency. If I grow more or less of what we have agreed, what is our fall-back position?
- 3 Product specs are important. However, we do not grow straight cucumbers – so make sure you have a relationship with your supplier that removes all surprises before the product turns up at the distribution centre. Communicate regularly on what is happening and reinforce the expectation. Remember the tighter the spec, the higher the cost (mainly on the grower).
- 4 GET TRAINED ON THE SUPPLY AGREEMENT. The code sets the rules and the rights of both parties. It is best practice to know your supply contract so that it becomes an enduring document for mutual benefit. Remember the code is the road rules, and you are able to drive to the appropriate speed without all the road cones.

### Expressions of interest

Vegetables NZ is offering three positions on a supply agreement training course. Be the first person to email Vegetables NZ communications manager, Andrew Bristol ([andrew.bristol@freshvegetables.co.nz](mailto:andrew.bristol@freshvegetables.co.nz)) with the code KNOW YOUR SUPPLY AGREEMENT, and be into win a free course registration.

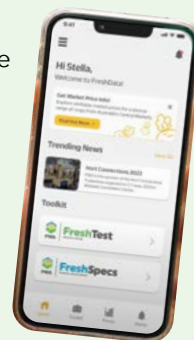
### Wholesale market

The last piece of the pie is understanding the wholesale market.

Fresh Markets Australia has just released an app called FreshData ([www.freshmarkets.com.au/freshdata/](http://www.freshmarkets.com.au/freshdata/)), which delivers verified market prices from Australia's central markets. Its purpose is to enhance market transparency with reliable, verifiable price data. It consolidates the data from the market floor and aggregates the data to give market insights. It provides price trends for better decision making by growers and other related parties.

To make better informed decisions on selling produce, New Zealand growers need to be better informed. A tool like FreshData would give the New Zealand grower the necessary information to make a profitable decision.

**Call to Action:** FreshData is not available in New Zealand. To get FreshData into New Zealand, we would need the wholesalers to lead the project. If you think our wholesaler friends need to start this project, please flick me an email: [antony.heywood@freshvegetables.co.nz](mailto:antony.heywood@freshvegetables.co.nz) ●







## SVS TOOL WORKSHOP IN GISBORNE



Vegetable and arable growers are invited to participate in a workshop focused on the Sustainable Vegetable System (SVS) Tool held in conjunction with FAR and their Maize Winter workshop on Tuesday, 12 August. This practical session will support growers with on-farm nutrient management practices and support with meeting compliance requirements. For more information, please contact Arjune Dahya: [arjune.dahya@hortnz.co.nz](mailto:arjune.dahya@hortnz.co.nz)

## RELIEF FOR FLOOD AFFECTED GROWERS



To support growers affected by the flooding in Nelson-Tasman, HortNZ is standing up the Growers Relief Fund Incorporated (RN: CC55709), an incorporated society with full charitable status. Donations can be made to the fund via internet banking:

**Growers Relief Fund Incorporated 02-0506-0163915-001**

The Motueka Fruitgrowers Association has been approved a grant from the New Zealand Fruitgrowers' Charitable Trust to pay for growers that may require consultancy work. This funding support could be used for providing advice on tree recovery, budgets, helping quantify loss or standalone projects related to flood damage. Please approach either AgFirst or Fruition Horticulture if you need assistance (other consultants may be approved if needed).

## NZGAP COMMITTEE ELECTION AND ANNUAL MEETING



NZGAP will be hosting its Annual Meeting on **14 August via Teams (online meeting)**, including committee election results, motions received from members and an update on finances. The meeting will be recorded and shared for anyone who is unavailable to attend on the day.

**Register for the NZGAP Annual Meeting on Teams via the QR code**



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