

NZGROWER & ORCHARDIST®

VOL 99 | NO 09 | OCTOBER 2026

HORTICULTURE NEW ZEALAND

TOUGH COMPETITION BUT A LOT OF FUN

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THAN YOU THINK

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BLACKCURRANT
EXTRACTION



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AS Wilcox agronomist James Blair is the 2026 Young Grower of the Year. See page 22.

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NZGrower & Orchardist is produced by Horticulture New Zealand and is free for all levy payers. The magazine is partially funded by a grant from the NZ Fruitgrowers' Charitable Trust to ensure all fruit growers in New Zealand receive a copy each month. The magazine is also supported by Vegetables NZ, Process Vegetables NZ, TomatoesNZ, Potatoes NZ and Onions NZ.

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

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NZGrower & Orchardist:

ISSN: 3021-3606 (Print)

ISSN: 3021-3614 (Online)

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FACING THE FUTURE

With the General Election only weeks away, HortNZ's focus is continuing to ensure growers' priorities are clearly in front of decision-makers.

Bernadine Guilleux : HortNZ chair

Our election advocacy released earlier in the year set out the practical policy settings needed to support a productive, resilient and growing horticulture sector.

That advocacy is deliberately focused on the issues growers need action on now.

This includes stable and workable resource management settings, water security, strong biosecurity, access to effective crop protection tools, a skilled and reliable workforce, efficient infrastructure and fair, competitive markets.

These all affect growers' ability to invest, produce, employ people and get high-quality fruit and vegetables to New Zealanders and our global markets.

HortNZ's role is to be clear, credible and solutions-focused, so ministers, MPs and officials understand both the pressures growers are facing, and the opportunity horticulture represents for New Zealand's economy, food security and regional communities.

At the same time, the HortNZ Board has been looking beyond the election cycle.

Developing the organisation's next strategy is about positioning HortNZ to serve growers well into the future, including beyond 2030.

The environment growers operate in will continue to change, from climate and freshwater pressures to labour, technology, market access, consumer expectations and the pace of regulatory reform.

To remain effective, HortNZ must be focused on what growers need most from their national organisation.

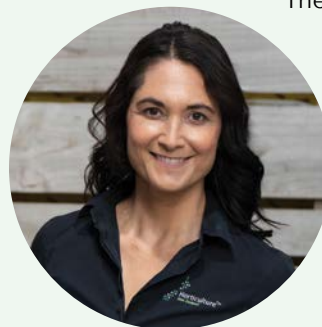
This is strong advocacy, sound evidence, practical support, trusted relationships and the ability to bring product groups, district associations and growers together around shared priorities.

The new strategy will be an opportunity to test where HortNZ adds the greatest value, how we strengthen our voice, and how we ensure the organisation is financially sustainable, future-facing and connected to growers across the country.

Our election advocacy and future strategy are closely linked.

One is about the decisions needed now; the other is about building the capability, influence and alignment needed for the decade ahead.

Together, they are about setting HortNZ up for success beyond 2030. ●



www.hortnz.co.nz/assets/About-Us/Corporate-documents/HortNZ-Election-Manifesto-2026.pdf



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WORKABLE RULES FOR WORKFORCE

Two recent labour developments – with the Recognised Seasonal Employer scheme and the new Employment Leave Act – deserve attention.

Kate Scott : HortNZ chief executive

Growers see the value of good workforce policy settings every day: enough people on the ground, rosters that work, workers who know the job, and businesses that can plan with confidence.

Poor policy shows up just as quickly, in extra paperwork, uncertainty, cost and pressure at the worst possible time.

That is why workforce policy matters so much for horticulture, and why two recent labour developments deserve attention: welcome changes to the Recognised Seasonal Employer (RSE) scheme, and the need for further action on the new Employment Leave Act before it comes into force in 2028.

These issues sit within the bigger direction set by the Aotearoa Horticulture Action Plan (AHAP), which aims to double the farmgate value of horticulture production by 2035 while improving prosperity for our people and protecting our environment.

One of its five outcome areas is simple but critical – nurture people.

That's about recognising growers and their teams, seasonal and RSE workers, Pacific families, Māori growers and enterprises, contractors, packhouse staff, advisers, researchers, rural communities and the consumers who rely on healthy food.

HortNZ has welcomed the Government's decision to modernise the RSE scheme. The scheme has supported horticulture, workers and Pacific communities for almost two decades, but growers have been clear that it needed to be simpler, clearer and more workable.

The announced changes include graduated accreditation, clearer expectations for trusted employers, a more transparent cap process, stronger complaints processes and more flexibility for workers to carry out related tasks while their main work remains planting, picking, packing and harvesting.

For growers, the changes should provide greater certainty when planning seasonal labour needs. For RSE workers and Pacific partners, clearer rules and stronger safeguards should make the system easier to understand and navigate.

Good policy recognises that seasonal work depends on trust, timing and practical administration. When employers have certainty and workers have clear information and strong pastoral care, the whole system works better.

The new Employment Leave Act, which will replace the Holidays Act from 6 August 2028, is another reminder that employment settings need to reflect the way people actually work in horticulture.

We all know this is not a nine-to-five sector – work changes with weather, harvest windows, crop maturity, market requirements and the availability of people. Fruit does not wait to be harvested because there is a weekend or public holiday.

The sector relies on permanent staff, local seasonal workers, RSE workers, casual workers and fixed-term teams, often working side by side at the busiest points of the year.

HortNZ supports fair leave rules, but remains concerned that the new 12.5 percent Leave Compensation Payment has not been designed to reflect this reality.





Australia (Aussie) Leilua, pastoral care lead at Lewis Farms, spoke about the RSE scheme at the New Zealand Horticulture Conference in July

A rule that may look straightforward on paper can become complicated when applied across different contracts, hours and roles during harvest. For growers, the concern is both cost and complexity. For workers, clarity also matters.

The potential impact is very real. It affects wage bills, payroll systems, business planning and the confidence growers have to employ the people they need.

HortNZ is continuing to test the likely economic impact, including for RSE and piece-rate work, so the debate is grounded in real sector experience.

HortNZ submitted on the Bill, alongside Summerfruit NZ, and presented these concerns and modelling to the Select Committee. Despite that, the Bill passed unchanged. The main pathway for further changes now is via an amendment, and HortNZ will continue seeking a workable pay-as-you-go approach.

The RSE reforms are a welcome example of practical policy improvement. The Employment Leave Act now needs the same lens.

Fair rules must also be workable rules. If settings create unnecessary cost and complexity for seasonal businesses, they risk making it harder for growers to invest in people, plan with confidence and return value to workers and regional New Zealand.

HortNZ will keep advocating for changes that support fair outcomes, practical administration and a productive horticulture sector. That is central to the AHAP challenge – growing value by growing people, capability and confidence across the sector. ●



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Peter Reynolds and Wendy James at the Horticulture Conference where Peter accepted the Horticulture Bledisloe Cup

AN HONOUR FOR PUKEKOHE VEGETABLE GROWER'S FAMILY

When Peter Reynolds arrived at his table at the 2026 New Zealand Horticulture Conference gala dinner, he was surprised to find himself seated with government and industry leaders – but they were unusually quiet.

"I soon found out they were worried they'd give the game away," laughs Peter, whose name was called soon afterwards as the recipient of the Horticulture Bledisloe Cup.

The sector's highest honour, the cup recognises outstanding and meritorious contribution to the horticulture industry.

Peter's long career in farming and growing has spanned potato, onion and pumpkin production, as well as cattle and sheep farming, and kiwifruit production.

He has been a staunch advocate for growers, technical innovation and best practice, supporting numerous research projects across the 15 blocks around Pukekohe and Tuakau that made up the multi-generational family business.

He has also championed environmental stewardship, showing how shelter belts, riparian planting systems, advanced soil control mechanisms along with cropping and grazing land rotation systems go hand in hand with commercial success.

He also played a role in uniting diverse grower groups, leading to the establishment of Potatoes New Zealand and Onions NZ.

At 72 – after what he describes as "70 years farming and the two years before that thinking about it" – he is easing into retirement on a 50-acre block where he is fencing off wetlands, undertaking extensive native planting and farming cattle.

"Blown away" to receive the cup, he sees it as an honour for his extended family and the wider Pukekohe community.

The Reynolds family has deep roots in the district, with his father's ancestors arriving from Ireland in 1865 and his mother's in 1911.

"They leased and bought some little plots to work, with small-scale dairy, potatoes and grain.

"In their pockets they bought barberry seeds for hedging. They grew plants and sold them all over the North Island. This was very useful after the war, when there was no metal for fencing. Farmers used the barberry hedges to control animals and for shelter and to keep animals out of waterways. They also brought acorns with them to grow

oak trees. A lot of the oak trees around the area were planted by my family, including at the Pukekohe Racetrack."

Peter's father Tom began farming with his father and uncle before five years overseas during WWII, returning in 1946 and marrying Maureen Flynn in 1949.

"During the war Dad was an armourer – repairing equipment, guns and cannons in makeshift workshops in the back of army trucks.

"Following the war, he came back and got stuck into farming. There were no tractors around here then; it was all horses. As tractors came along Dad started modifying equipment to use behind the tractors along with other farmers and engineers.

"Through the years very good engineering businesses have developed in Pukekohe building world-class field and packhouse equipment, and a lot of that grew out of people building what they needed for their own farms and sharing ideas."

"Whatever worked on your farm might work on another, and the next year there might be a good idea from another farm that would work on yours.

"I've always found farmers share that way. You can walk onto any farm in the world, and you are mates right away, sharing ideas."

Tom and Maureen had seven boys, then three girls. Through the 1950s and 1960s, they farmed sheep and grew onions. Tom developed an early-harvesting onion, which the Reynolds still grow, ready for harvesting just as stocks of the Pukekohe Long Keeper variety run out.

All of the brothers wanted to farm and started while still at school, leasing some land and growing potatoes and onions.

In the 1970s, the business expanded, purchasing and leasing more land, moving into beef and growing potatoes, onions, pumpkins and kiwifruit. Much of the transportation and packing of the produce has been undertaken by the family business.

"Our produce has taken many honours at the Pukekohe Show. The show is very dear to our hearts. We have always been proud of the success of our potatoes and onions over several generations. Also, some of our ancestors used to have their fruit in the show. We still grow enough onions to enter."

From the outset of his career, Peter attended research and field days and hosted trials, before also stepping into sector leadership with grower groups.

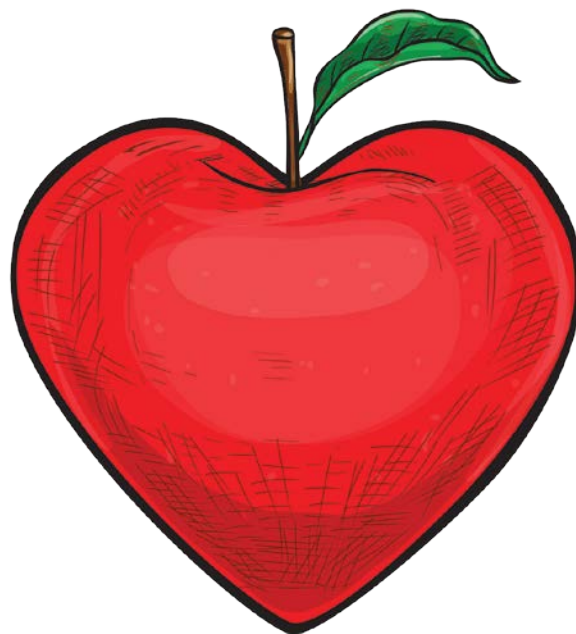
"We've been very aligned with research. Researchers would come here and know we would look after their trials.

"Our parents encouraged us to get involved with grower groups, but when we were younger, we were too busy playing rugby. In 1982, I started going to Pukekohe Vegetable Growers meetings and was soon being sent



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Some of the seven Reynolds brothers in the Pukekohe paddocks in the 1960s



Roughly six decades later, harvest time looks a lot different

to conferences as a delegate. I have been to many conferences and grower meetings over the years, and I have enjoyed meeting other growers from around the country. This has led to lifelong friendships with other growers and industry personnel throughout New Zealand and overseas."

With most of the Reynolds brothers retired, two farms have been sold, others leased and they are selling their packhouse equipment and some of the farm equipment.

"All the next generation have worked in the business, with none of them deciding to make it a career. We're happy with that. We were given that choice as young people. There was no compulsion to stay farming; we just all wanted to.

"People leasing our land really appreciate it because our farms have good, well-structured soils and we have developed the farms to very high standards and installed modern, automated irrigation systems and other infrastructure.

"In the future I see promoting the understanding of the costs of producing healthy food as a key challenge facing horticulture.

"Increasing compliance costs being imposed by councils and government are a hindrance to business and I've made many submissions to government and councils over the years pushing back against unworkable regulations.

"We also need to support young people who want to get into the industry. I've done a fair bit of mentoring, and we give young fellas leasing our land a hand and lend them equipment – because that's how we got going. Our uncles used to lend us their tractors at weekends. Those opportunities are so important.

"I see the opportunities for the sector in the technological developments coming over the next 10 years – particularly drones, not just for spraying, but for a whole range of other work too."

When Peter returned to his table at the dinner, there was plenty of conversation with his fellow diners, including Agriculture Minister Todd McClay, Potatoes New Zealand chief executive Kate Truffitt, and HortNZ's chief executive Kate Scott and chair Bernadine Guilleux.

The congratulations haven't stopped since, with many people contacting him and sharing memories of the business.

"I want to thank HortNZ for recognising me. It was totally unexpected, as was being made a life member of Potatoes New Zealand last year. I am blown away; it's been a real highlight.

"Another highlight of my life is being a child of Tom and Maureen. It's been a very good life being one of the Reynolds. It's in our DNA to enjoy what we do, look out for others, and that is how we have lived our lives." ●



Taiohi visit Honolulu retailers to see how Māori kiwifruit growers' fruit is promoted and sold in an international market

MAI I MAKETŪ KI HAWAI'I – FROM MAKETŪ TO HAWAI'I

The Potaka Whānau is giving its rangatahi a view of the kiwifruit industry from under the vines to the export market – and encouraging them to see themselves leading it.

**GROWING
TOGETHER 2035**
AHAP aligned

NZGrower & Orchardist is celebrating the Potaka Whānau Taiohi Leadership Programme, which aligns with the Aotearoa Horticulture Action Plan (AHAP) pillar *Māori are strong in horticulture*. AHAP supports strong Māori participation in horticulture, land stewardship (kaitiakitanga), economic aspirations and leadership – nurturing people and whenua for generations. Developed collaboratively with input from industry, government, Māori and science partners, AHAP is the guiding compass to double the farmgate value of the horticulture sector by 2035 while improving prosperity for our people and protecting our environment.

When Waitioriori Potaka's friends asked about her trip to Hawai'i, the 15-year-old had plenty to explain: orchards, coolstores, supermarkets, fruit quality and the long journey New Zealand kiwifruit makes to reach an overseas customer.

It was an eye-opening experience for a teen who says she knew little about kiwifruit before joining the inaugural Taiohi Leadership Programme.

When she was too young to work under the vines, she contributed during whānau orchard holidays by preparing kai, doing dishes and helping with lawn mowing by picking up sticks and oranges so they didn't get caught in the mower.

In Hawai'i, she saw the other end of the supply chain. "When we went to all the shops to see our fruit on display, that was the most memorable part of the trip. That was really cool."



Tutekaharoa Potaka and Ngahu Wikiriwhi Potaka during a retail visit in Honolulu

The fruit on the shelves was not quite from the Potaka block. Zespri had arranged for the whānau's Hayward fruit to travel to Hawai'i, but it was still at the port when the group visited. A barcode check did, however, trace Zespri SunGold™ to an orchard about 3km from their own Maketū home.

For Heston Potaka, Waitioriori's father, following fruit from vine almost to market was the point. Few growing families get that opportunity, he says, particularly young people who rarely see what happens beyond harvest.

From vine to market

The 10 taiohi are all great-grandchildren of Hine and Wiki Potaka, who helped develop the family orchard (see companion article starting on page 14). They travelled from 31 May to 6 June as part of a pilot partnership between the Potaka Whānau and Māori Kiwifruit Growers Manatōpū (MKGM), the national body representing Māori growers.

The trip cost about \$60,000 and was supported by the Pita Ngahu Potaka Trust, MKGM, Zespri and Seeka. The wider programme combines cultural and industry wānanga, an international market visit and a formal report-back, which the taiohi will deliver at the MKGM annual meeting in November.

Hawai'i was chosen for commercial and cultural reasons. MKGM's commercial arm, Māori Kiwifruit Growers Limited (MKGL), exports there through Collaborative Marketing. Approved by Kiwifruit New Zealand, the programme allows MKGL to export in partnership with Zespri and manage the fruit's marketing in Hawai'i, helping develop the market and create value for New Zealand growers.

Just as important was the indigenous-to-indigenous connection between Aotearoa and Hawai'i. The market had been on MKGM's list since 2016, and chair Vance Skudder says shared whakapapa made it a natural first destination. He says the initiative took the Flight of the Amokura as its theme, referencing the seabird's association with Pacific voyaging.

The young participants visited Fresh Aloha Direct's warehouse, toured major retailers, met importer and grower Alec Sou, and learned how New Zealand fruit is stored, promoted and distributed. They also visited Kamehameha Schools and MA'O Organic Farms, where agriculture, education and indigenous leadership are closely connected.

More than a commercial tour

Tutekaharoa Potaka, 17, says visiting Native Hawaiian communities and schools showed him their shared commitment to language and community. "It helped me realise it was more than just kiwifruit."

His older sister, Te Manawaputahi Potaka, 19, was struck by how clearly Zespri kiwifruit stood apart in the Hawaiian market. Its packaging, displays and quality were noticeably different, but so was the way local people spoke about it.

"It was like, 'This is the best fruit in the world' - the New Zealand kiwifruit - 'and then this is the other kiwifruit'!" she laughs.

Some fruit from other countries being sold in Hawai'i was of a quality that might be rejected in New Zealand, she says.

At the same time, she was impressed by how strongly the Hawaiian schools and farms were driven by what they could provide for their communities - from indigenous language and traditional navigation to good food.

Leadership begins at home

The experience is part of a much longer education underway at home in Maketū. The Potaka Whānau's Hayward orchard is just under 8ha and has been in kiwifruit for about 50 years.

Four years ago, the family began Maketū Ūkaipō, bringing the cousins home during the summer holidays for orchard work (when they are old enough to be employed by Seeka), whakapapa, marae visits, kapa haka, research, public speaking and leadership development.

Participation is expected, but the work is matched to age and circumstances. Te Manawaputahi, for example, works in Rotorua, so her contribution includes accompanying Heston to industry meetings and annual meetings, including those involving Zespri.

As her aunt Billie-Jean Potaka Ayton puts it, to much whānau laughter: "You just have to do it if you're a Potaka."

Beyond the vines

Heston wants the rangatahi to understand that a kiwifruit career is not limited to manual labour. A global industry also needs scientists, lawyers, accountants, marketers, technology specialists and governors. Orchard work gives them grounding, he says, but need not limit their ambition.

Ngahu Potaka, a secondary-school teacher for 25 years and the architect of Maketū Ūkaipō, says leadership days with Seeka, Zespri and Māori Kiwifruit Growers have helped the rangatahi imagine themselves in senior professional roles.

During the summer programme, they also research their future aspirations and present them to the group. The

younger cousins hear their tuakana talking about university and the opportunities it could create.

"It makes tertiary education the norm for our whānau," Ngahu says. "But it's empowered by the kids themselves, not us adults."

As a whānau, they are growing generational leadership, he says: "The kids are those future leaders." ●

HE RANGATIRA AHAU - I AM A LEADER

Ngahu wants every taiohi to understand that they have valuable skills and the capacity to help lead their whānau into the next generation.

That matters beyond one family. Māori Kiwifruit Growers chair Vance Skudder, himself a kiwifruit grower of 50 years, says the programme is about succession and showing rangatahi that the industry reaches far beyond the orchard and packhouse.

He says Māori growers bring particular value to the supply chain through their heritage, whakapapa and enduring connection to the whenua. "Our orchards are generational. We're not fly-by-nighters; we are lifers."

The Potaka taiohi bring a distinctive perspective because their view of the international supply chain is grounded in four or more years of work, he says. They can move into marketing, exporting or other professional roles knowing where they started and understanding the whenua behind the fruit.

Interest is already spreading. Other regions have asked to send their rangatahi next, while the programme has attracted attention from the United Arab Emirates.

Job and exchange opportunities have also been offered in Hawai'i.

Vance says the programme will "100 percent" be repeated. He hopes its first participants will show those following them how far the industry can take them. "The world is your oyster - and it's through kiwifruit."

The Potaka Whānau is thinking big. They recently told overseas visitors to their orchard that they would like one of their mokopuna to become Zespri's chief executive one day. Billie-Jean says it was said with humour, but they meant it.

The rangatahi have also submitted CVs to Zespri, Seeka and MKGM for summer opportunities. Billie-Jean and Heston say they have seen a huge increase in the young people's confidence - particularly in their ability to speak to large groups and host international visitors at Maketū.

Perhaps the strongest result was closer to home. In their presentation after the trip, the cousins agreed: "We feel we are tighter as a family now."

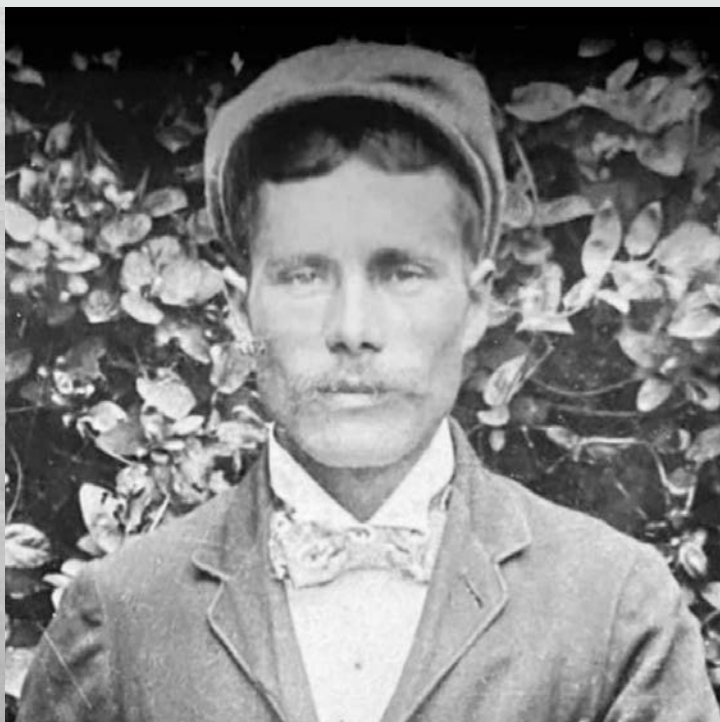


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The latest generation of the Potaka Whānau continue the connection to Maketū farming that began with their great-great-grandparents, Riripotaka and Rangitauninihi Ngahu

NANNY AND KORO'S PLAN

For the Potaka Whānau, a 50-year-old kiwifruit orchard is more than an asset. It is the foundation of an intergenerational plan to protect land, create opportunity and grow people.

Carly Gibbs

When a real estate agent recently asked Heston Potaka whether he was local, he laughed. How long had he been there?

"A thousand years," he replied.

The answer was playful, but the point was serious. The Potaka Whānau traces its connection with Maketū, near Te Puke, to the arrival of the Te Arawa waka. Its orchard on Tapsell Road is land carried through generations, protected by tūpuna and deliberately prepared for those still to come.

"You look after the land and the land looks after you," Heston says.

That responsibility was handed down by Heston's great-grandparents, Riripotaka and Rangitauninihi Ngahu, and grandparents Wikiriwhi 'Wiki' and Hinetara 'Hine' Potaka.

The five siblings who now hold the orchard through the Pita Ngahu Potaka Trust have a simple name for that responsibility. Their youngest brother, Te Tuhi, described it during a family conversation: "It's Nanny and Koro's plan."

Billie-Jean Potaka Ayton says their job is to fulfil that plan – and ensure the next generation understands it well enough to continue it in its own way.

From dairy to kiwifruit

The plan has never stood still. The property began as a dairy farm. In the 1970s, while Wiki and Hine were away on a working stint in Fiji, their son Pita Ngahu "Blackie" Potaka and his brother began converting part of it to kiwifruit.

Blackie's interest in the emerging industry grew while working for kiwifruit grower Bruce Wills on No. 3 Road

in Te Puke. He decided the Potaka Whānau could do the same on its own land.

The neighbours were sceptical. "You guys are crazy," Billie-Jean recalls being told. "You don't grow kiwifruit here; this is dairy-farming country."

But the orchard succeeded.

Wiki agreed to plant the remaining dairy land, and nearby relatives and farmers followed in a 'domino effect'. Today, kiwifruit stretches across land in Maketū once considered unsuitable for it.

The Potaka Whānau also claims, with friendly rivalry, a place among the first Māori kiwifruit growers. The late Kihi and Maria Ngatai, of Matapihi, were pioneers from the same era. Heston's diplomatic solution is that the Ngatai Whānau were first within Ngāi Te Rangī, and the Potaka Whānau were first in Te Arawa.

The family's Hayward orchard is just under 8ha, with original vines now about 50 years old and being replanted. It is leased to Seeka because Deborah, Billie-Jean, Ngahu and Heston live away from Maketū; only Te Tuhi remains locally. Yet the whenua continues to draw all five siblings and their children home.

Great-grandparents Wiki and Hine Potaka were part of a pioneering generation of Māori kiwifruit growers in New Zealand



A modern-day marae

The old packing shed tells a similar story of adaptation. After a major kiwifruit industry downturn, when the orchard only just survived, Hine turned the building into a training centre for Māori early-childhood education.

More recently, the whānau renovated it again, adding bedrooms, two lounges, a large kitchen and fireplace, while retaining the scale and beams of the shed. About 30 mattresses can be laid out and everyone has a key.

The family calls it its "modern-day marae". Christmases and birthdays are held there. People come and go, cousins reconnect, and a group message helps organise practical jobs such as the mowing lawns around the shed. The building has gone from packing fruit to educating people and now serves as the whānau's gathering place and classroom.

The shift into education reflected Hine's own life. A farmer and educator, she became national president of the Māori Women's Welfare League, worked for the Māori Education Foundation, contributed to the early kōhanga reo movement and received an OBE.

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The original Maketū Ūkaipō taiohi cohort with their parents in 2023

In 1990, she established Āwhina Whānau Education Services Trust, which offered a three-year qualification in Māori early-childhood and whānau education. Heston says she later sold the programme to Te Wānanga o Aotearoa, where it continues today.

Education was equally non-negotiable for her mokopuna. The siblings were expected to attend university or learn a trade. They were also trained in the legal and practical responsibilities of the orchard.

When Blackie died while several were still studying, they were able – not without a difficult period of “muddling through” – to take over and later buy out another family interest.

Growing the next generation

Now they are making that preparation more explicit for their own children. Ngahu, a secondary-school teacher for 25 years, created Maketū Ūkaipō about four years ago, adapting cultural and leadership programmes he had run with students.

The aim was to fulfil his grandmother’s wish to keep the whānau connected to one another, their marae and their whenua.

“Many of us live away from Maketū, and we all had young families,” he says. “We wanted to create something that would bring us back as a family to our tūrangawaewae, to our whenua.”

Each summer, the cousins stay in the whānau shed and work together for two to three weeks. Their days begin with

breakfast and a wānanga, where they lead karakia and share research about their whakapapa, pepeha or a tūpuna. The older kids (employed by Seeka) then head into the orchard to thin kiwifruit supervised by Ngahu and Billie-Jean.

The rangatahi are paid adult rates because they are doing an adult’s job, Ngahu says. Each year, they negotiate a pay rise with the Seeka orchard manager, deciding as a group what their experience is worth and choosing one cousin to represent them.

The negotiation teaches them to value their skills, choose their own leaders and speak for themselves. Once the first pay arrives, they also discover tax – opening discussions about society and responsibility.

The reality of a six-to-eight-hour day also sets in quickly. Thinning is straightforward but monotonous, teaching work ethic and mental resilience. Younger kids earn pocket money from the trust for doing jobs around the shed including the cleaning and the dishes, supervised by one of the aunties or uncles.

Last year, the trustees asked the rangatahi to develop a 10-year plan for the whānau. They considered the future of the shed, the orchard and how its income should be used.

Among their priorities were spending more time together and adding another orchard to the trust’s portfolio to create value and help provide for the generations to follow.

“That told us as trustees that the programme had been a success,” Ngahu says.



Two of the five Potaka siblings, Billie-Jean Potaka Ayton and Heston Potaka. Photo by Carly Gibbs



Heston Potaka's children - Waitioriori, 15, Te Manawaputahi, 19 and Tutekaharoa, 17. Photo by Carly Gibbs

For him, Maketū Ūkaipō is captured in everyday family moments: parents working under the vines alongside their children; his mother, Lyn Potaka, preparing kai for her mokopuna; and a niece ringing in the off-season to ask whether her child can take part.

"That's what it is all about - whakapapa, whanaungatanga and whenua."

For family growers wondering whether their children will one day return, the Potaka Whānau offers a powerful example. Succession is not a conversation saved for retirement. It begins while children are young, surrounded by role models and given real work, knowledge and responsibility.

Billie-Jean says collective advancement is not unusual in Māori life.

"We don't lift up one person; we lift up everyone in the whānau, and everyone moves forward."

For Heston, that explains both the orchard's history and its future. Kiwifruit created income and helped preserve an asset, but the crop was never the final objective.

"What our grandparents established wasn't about growing kiwifruit," he says. "It was about growing people." ●



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We received a great message from a Grow user the other day. After signing up his lifestyle block on the free Grow app, in a matter of minutes he had completed his map, loaded stock, added weights and drench records and entered an old fertiliser application.

"Very impressed with how easy it is to use. It will become my wee notebook for sure – especially when we rear 50 calves and do a bunch of other activities on the block," he said.

This is exactly why we created Grow: we recognised the need for a simple, no-fuss land management app that can replace – or sit alongside – a traditional paper notebook. Orchards, market gardens, lifestyle blocks, vineyards, dairy farms, sheep stations – Kiwis do a lot with the land, and Grow can support all these operations and more.

The core features of Grow are the interactive map, diary and task management, and together they let users know what happened, where it happened and when it happened. From planting bulbs to spreading fertiliser, from fixing fences to identifying hazards, Grow provides an ever-growing record of what's been done and what's still on the to-do list.

With the Grow app you can capture details before they are forgotten and replace weather-damaged notebooks with searchable records that keep the whole team informed. It's farm management at the speed you work.

“

This is exactly why we created Grow: we recognised the need for a simple, no-fuss land management app

One of Grow's hero features is the AI voice commands – when your hands are covered in dung, soil and oil, and you can't easily type on your phone, just talk to the Grow app instead.

Using some clever AI technology, Grow lets you record a voice note in the app which is transcribed, analysed and turned into a note or task.

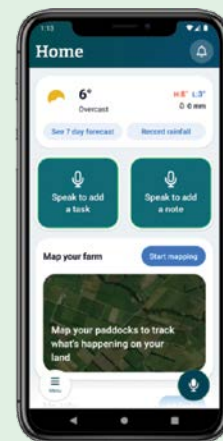
What is the best part of the Grow app? The base app is free. There are weekly or monthly limits to certain features which can be removed, plus additional feature packs you can purchase if you want more heavy-hitting capabilities.



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- Voice note and task creation
- Health and safety incident recording
- The ability to broadcast your location on the map and share it with the team
- Toolbox meeting recording
- Flexi-stock animal recording
- Animal movements on the map



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grow



Ron Beatson has been responsible for the release of 17 specialty hop cultivars

THE LONG GAME OF HOP BREEDING

Ron Beatson must have the patience of a saint. As a plant breeder for more than 50 years, he knows better than most that bringing new cultivars to fruition is a patience game.

Anne Hardie

The Motueka 77-year-old's career began with tobacco plant breeding before moving into other crops and ultimately hops, where he has been responsible for the release of 17 specialty cultivars.

In September he headed to Wellington to receive the insignia of an Officer of the New Zealand Order of Merit for his services to horticulture, as part of the King's Birthday Honours. The majority of New Zealand's hop industry uses hop cultivars developed by Ron and his colleagues, with their success driving significant expansion within the industry.

"I've loved my job and it's been very hard for me to stop," he admits. While he retired from Plant & Food Research (now Bioeconomy Science Institute) in Riwaka at the end of 2021, he has worked on as brand ambassador

for New Zealand Hops until now and will continue to be involved where he can, telling the hop story.

When he began working with hops, it was a cottage industry mainly supplying the domestic market, where the focus was on the alpha acids in hops, which give beer its bitterness. Now, it's all about flavour and aroma and that is where New Zealand has done well.

It helped, he says, that there were no major pests and diseases here, allowing breeders to concentrate on brewing properties and how the plant performed in the field.

Another factor behind the success of New Zealand hop cultivars was the decision of a predecessor, Dr Roborgh, to concentrate on seedless triploid hops back in the 1960s.





Boxed Nectar hop pellets are the result of Ron Beatson's plant breeding

"They have essentially no seeds which improves their brewing properties. It means more goodies going into the brewing side. That decision was made early on, and it's been the hallmark of our breeding."

It takes time to produce a new cultivar though.

"You have to be patient."

Nelson Sauvin, released in 2000, was the first of the aroma or specialty hops to catch the attention of overseas brewers, along with another called Riwaka. Both came from crosses made 15 years earlier, in 1985.

"People came here and saw there was something unique about them. The aromas of Nelson Sauvin, Riwaka and also Motueka, had some unique aroma properties and brewers wanted to know more about them."

The highlight of his career though is Nectar, a cross made in 2004 that was finally released in 2020 and found popularity with brewers for its versatility in the brewhouse.

"Nelson Sauvin and Nectar were once in a generation really. The ones that hit the jackpot. Along with Motueka and Riwaka, they make up a lot of our production in New Zealand."

He likens the breeding of hops to sire testing in animals, using progeny testing to identify parents that produce something different – a hop that stands out from the crowd.

Though plant breeding today is increasingly driven by DNA technology, Ron says it still comes back to weeding out the defects and honing in on the good attributes based on field and brewery trials.



Pelletised hops ensure quality is maintained to be shipped around the world

"As soon as you do a cross, you have a whole multitude of different seedlings coming through, both male and female, and every plant is genetically different. The process of elimination reduces the number of seedlings down to just a few and then the superior seedlings are clonally propagated to produce replicates for more advanced trials."

One of the key drivers of today's hop breeding programme is brewing trials, using a microbrewery to assess the aromas produced by cones (flowers) from each plant.

For decades, New Zealand Hops was involved with all the new cultivars being produced. Since the craft beer boom,

multiple marketers have stepped into the industry, and Ron says hop production has increased from about 500ha in 2015 to an estimated 2000ha.

The air was sucked out of the boom when the Covid-19 pandemic swept across the globe, with disruption to the hospitality industry reducing beer consumption just as hop production – and hence stock – was high. Only recently, as stock decreased, has the market begun to pick up again.

“People are more aware of the quality now. The brewers are a lot more discerning about what they want. They’re more interested in farm lots too. They’ll come out here and get the cores from the bales and choose what hops they want based on how they smell.”

“

It’s a fashion industry so certain hop types will be popular and then fade away

Once brewers have selected their hops, bales of hop cones are pelletised to ensure quality is maintained and shipped out.

“The key is to get those hops from the farm to the brewer as quickly as possible.”

Eighty percent of New Zealand hops are exported, with about half heading to the United States. Ron says Australia, the Pacific Rim and increasingly, the United Kingdom and Europe, also take a share of the crop.

In global terms, the local production is tiny – less than two percent of world production – which is why he says plant breeding is critical to produce something different to attract brewers.

“I think we have to keep on the front foot of the breeding programme for hops – keep innovating and keep the goals broad.”

New Zealand hops are high in a group of compounds called thiols, which drive intense flavours, and he suggests there will be more breeding work around those compounds in the future. There is also the effect of terroir on chemistry and performance, which may differ even within Tasman’s traditional hop-growing region and in other parts of New Zealand where the crop is now being grown.

“It’s a fashion industry so certain hop types will be popular and then fade away.”

Retired maybe, but hops will continue to be part of his life. Unsurprisingly, he will be at the two-day NZ Hops Harfest in March, talking with brewers from around the world who come to assess the harvest with plans for their next brews in mind. ●



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AS Wilcox agronomist James Blair won the coveted Young Grower of the Year national title



The Young Grower final's practical day took place at 45 South as a cold and wet front swooped through Central Otago

EXCEPTIONAL TALENT AT YOUNG GROWER FINAL

James Blair has won the coveted Young Grower of the Year national title. James, who is an agronomist for AS Wilcox, is also the Pukekohe regional champion.

The 29-year-old competed against six other regional winners in a series of challenges in late August.

Runner-up was Amber Davy, the Canterbury regional champion. Amber, a quality and field manager for seed potato supplier Eurogrow, also won the Innovation Award.

Third place went to Nelson regional champion Amelia Marsden. Amelia, a nursery manager at Thomas Brothers Orchard in Riwaka, also won the Leadership Award.

The seven finalists competed in a series of practical and theoretical horticulture modules, testing their vegetable and fruit-growing knowledge and skills needed to be successful growers. The practical day was held at 45 South in Cromwell.



James grew up on a dairy farm in the United Kingdom before gaining a degree in agricultural crop science.

After working for two years as an agronomist in the United Kingdom, he worked in Australia before heading for New Zealand where he joined AS Wilcox, as a technical crop supervisor for potatoes, and discovered a passion for horticulture.

He is now technical support for four regions, covering from the Far North to Ohakune, as well as overseeing the seed programme for the South Island.

"The Young Grower final was incredible," he says. "It was very tough competition, the calibre of the other contestants was unbelievable, but it was a lot of fun."

Funding grower-led initiatives that promote Education, R&D and Welfare

"Thank you to all the organisers and sponsors, you can see the huge amount that goes into organising the regional and national events.

"Initially, I wasn't sure when it was suggested I enter the regional competition because it's putting yourself out there and it seemed a bit daunting but I'm very glad I did. I'd say to other young growers, 'just back yourself and have a crack at it'.

"It's been great to meet many like-minded young people from across the industry, talk to people working with different crops and make some good friends."

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

Winners were announced at the annual awards gala dinner held at the Te Puna Mahara – Cromwell Memorial Events Centre on Friday 28 August.

Regional organisers host and run the regional competitions independently, with HortNZ hosting the final in a different part of the country each year.

Entry is open to commercial fruit and vegetable growers from across the regions, up to the age of 30.

"The regional and national competitions play an important role in raising awareness about the many career and personal development opportunities across the horticulture sector," says Kate Scott, chief executive of HortNZ.

"Across all growing regions, we have seen dedicated organisers working so hard and highly skilled young growers undertaking a lot of preparation and giving their all to make the competitions such fantastic events and highlight the opportunities offered by careers in the sector.

"The Young Grower competitions provide excellent examples of the range of different roles in the sector, the opportunities for career progression and the support provided to enable young people to gain skills and qualifications and step up into leadership roles.

"It was a fantastic final. We have exceptional talent among our young industry members. Thank you to all the sponsors, organisers and competitors." ●



YOUNG GROWER OF THE YEAR 2026 FINALISTS (FROM LEFT)

Maddi Sheridan, a quality and compliance manager – growing at T&G Global (Hawke's Bay regional winner)

James Torrie, a crop manager with Wi Pere Trust (Gisborne regional winner)

William Kenna, orchard and innovation lead at KWKIWI (Bay of Plenty regional winner)

Amber Davy, quality and field manager for seed potato supplier Eurogrow (Canterbury regional winner, runner-up national title, winner national Innovation Award)

James Blair, agronomist for AS Wilcox (Pukekohe regional winner and winner national title)

Luke St John, a trainee orchard manager for Fortune Fruit in Cromwell (Central Otago regional winner)

Amelia Marsden, nursery manager at Thomas Brothers Orchard in Riwaka (Nelson regional winner, third place national title, winner national Leadership Award)



The VegNET Tasmania Growing Regeneratively cohort at the kick-off session. From left: Tayla Field (VegNET Tas), Bree How, Yuri Wolfert, Coby Badcock, Archer Nugan, Jason Taylor, Matt Young, Dylan Bellchambers, Owen Woolley, Joseph Chaplin and Tom Killalea

ACROSS THE DITCH: TASMANIA'S REGENERATIVE GROWERS

Tasmanian vegetable and onion growers are increasingly looking at how regenerative agriculture principles and practices can fit within their commercial farming systems.

Prudence Rothwell : RMCG agricultural extension consultant

Interest in soil health, biology and plant nutrition management strategies are continuing to emerge across the key vegetable production regions in Tasmania. Reducing reliance on synthetic products and improving input use efficiency are key short-term drivers of this growing interest, coupled with long-term motivations of land stewardship to ensure healthy, resilient soils and ecosystems and support future generations.

The key vegetable production regions are in the north and northwest of the state, while crops such as potatoes, onions and peas extend south into the Upper Midlands region. Producing in a temperate cool climate, growers have a diverse rotation which includes vegetable crops such as carrots, onions, beans, broccoli, brussels sprouts, cauliflower and

often includes non-vegetable crops such as poppies and pyrethrum. It is not uncommon for growers to also have livestock in their production system. Tasmania is a large producer of processing vegetables with multiple processing plants for potatoes and vegetables, the majority servicing the domestic market.



In response to this interest, Tayla Field and Prudence Rothwell (myself) of the Tasmanian VegNET team (part of the national extension programme for vegetable and onion growers which is funded by grower levies and matched with contributions from the Australian Government) have developed 'Growing Regeneratively'; a 12-month interactive programme tailored for young growers in Tasmania. Growing Regeneratively has been funded through a VegNET



Testing soil pH and physical characteristics with David Hardwick of Soil Land Food as part of an interactive soil biology workshop for Growing Regeneratively

Innovation Fund, a fund within the project that enables each key vegetable production region in the VegNET project to put forward emerging regional opportunities as projects for additional funding to our core extension activities. There have been great examples of the fund being used to deliver regional projects for growers and industry including a National Fall Armyworm monitoring programme, a national spray optimisation roadshow and interstate and international study tours.

“

The study tour reinforced that regenerative agriculture is less about adopting a prescribed set of practices and more about improving how biological systems function within a farming enterprise

Since launching the programme in April, we have brought together 10 Tasmanian commercial vegetable growers and advisors to engage with a mix of on-farm learning, expert sessions, study tours and networking opportunities. This is designed to equip participants with the skills, knowledge and confidence to implement change in their farming operations and businesses to build healthy, resilient soils and crops, while growing a supportive network of like-minded growers.

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Prudence Rothwell, VegNET Tasmania, enjoying the Johnson Su compost-making workshop on-farm in northwest Tasmania

Alongside the Growing Regeneratively programme, in July this year VegNET Tasmania took a group of Tasmanian vegetable growers and agronomists to New Zealand's North Island to explore how regenerative agriculture principles are being applied in commercial horticulture. The trip was organised by VegNET Tasmania with invaluable contributions from Daniel Sutton (NZVeg), who helped design a trip that took us through the Pukekohe and Hawke's Bay growing regions, where we met growers, researchers and industry leaders working to improve soil health, increase resilience and maintain profitability in an increasingly challenging production environment.

“

The tour also reinforced the importance of farmer-led experimentation. Creating 'safe-to-fail' spaces allows growers to test new ideas without exposing the business to unnecessary risk

More similarities than differences

The challenges and goals of growers on both sides of the Tasman are similar; both are grappling with rising input costs, changing environmental expectations, difficult weather conditions, global markets and the need to build more resilient farming systems.

It became quickly evident during the tour that the practices commonly associated with regenerative agriculture are already becoming mainstream in commercial horticulture in New Zealand and Australia.

Multi-species cover crops, integrated pest management (IPM), reduced cultivation where practical, an increased focus on soil biology and the use of biological products were all evident throughout the New Zealand farms we visited. Most growers were carefully trialling integrated regenerative approaches into existing operations.

Opportunities for Tasmanian growers

The study tour reinforced that regenerative agriculture is less about adopting a prescribed set of practices and more about improving how biological systems function within a farming enterprise.

Cover crops continue to be one of the most used and cost-effective tools available. When managed well, they can help build organic matter, improve soil structure, reduce erosion risks and support beneficial microbial activity.

Another valuable lesson from New Zealand was the focus on profitability rather than purely on productivity; representing an important mindset shift. Several growers spoke openly about reducing inputs and/or increasing value, rather than chasing maximum yields. Their focus was on improving margins, reducing risk and increasing resilience. In some situations, maintaining similar production with lower costs and/or improved marketable, quality yields can be more valuable than pushing for incremental yield gains.

The tour also reinforced the importance of farmer-led experimentation. Creating 'safe-to-fail' spaces allows growers to test new ideas without exposing the business to unnecessary risk – the A Lighter Touch programme with the IPM sessions at Te Ahikawariki/Vegetable Industry Centre of Excellence (VICE) Plant & Food Research farm (now the Bioeconomy Science Institute) on the Balle Bros property in Pukekohe demonstrated the importance and effectiveness of this approach. The Tasmanian Institute of Agriculture is a vegetable research farm located in northwest Tasmania that operates with a similar model to the research farm where businesses can hire plots to research and trial new varieties or products. There is an opportunity for Tasmania to consider an extension-focused space such as the IPM sessions created through the A Lighter Touch programme.

Challenges in practice and perception

Despite growing interest, regenerative agriculture still faces challenges. One of the biggest is that the term itself means different things to different people. For some, it represents a philosophy. For others, it is a collection of practical farming tools. This can create confusion and, at times, unnecessary division that stems progress.

In my experience, commercial vegetable growers on both sides of the ditch are less interested in labels and philosophies and more interested in on-farm results.

The value of trans-Tasman collaboration

The study tour highlighted the enormous value of grower-to-grower sharing of experience and knowledge. We are often tackling the same challenges around nutrient management, soil health, biosecurity, workforce and market pressures and environmental stewardship.

Study tours, joint research projects, grower exchanges and shared demonstrations can accelerate learning, through both mistakes and successes. The most valuable conversations are often standing in a paddock discussing what worked, what didn't and why – and the generosity of host growers sharing their precious time is always gratefully acknowledged. These types of conversations and connections are not replicable through shared reports/factsheets or webinars alone.

We hope to reciprocate the generosity of our New Zealand counterparts with a Tasmanian-based regen study tour soon and continue to strengthen trans-Tasman ties in working towards more regenerative outcomes for the vegetable sector. ●



Daikon

Minowase: Long white root. 30–35cm long x 7–8cm dia. Year round in Franklin.

Troy: Long white slightly tapered root. 40cm long x 6cm dia. Slow bolting with excellent uniformity. Year round in Franklin.

Argos: Long white 30–45cm long x 4.5–5.5cm dia. Very uniform smooth slightly tapered root. For late spring until early winter harvest.

Cabbage

Nikko Green: Medium deep drumhead. Flexible harvest window of late spring to early winter. Exceptionally versatile variety. Head held well clear of ground.

Furatto: Flatter drumhead for warmer months, Dec to May. Flat well filled dense head, 3kg. Easy harvest. Good field tolerance to disease.

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Starting in 1956, ANL was first established as a government-owned entity and has since become a regional player, acquired by shipping giant CMA CGM in 1998. ANL remains the only containerised shipping company domiciled in Oceania.

As the Oceania division of The CMA CGM Group, ANL offers 23 services covering a large geographic scope including Northeast and Southeast Asia, Australia, New Zealand, the Pacific Islands, Indian Subcontinent and North America. Within their network they call on 61 ports, contributing to the Group's impressive coverage of 331 ports worldwide.

In the early 2000s they established their core New Zealand service – TransTas (TTZ), offering dedicated calls to key New Zealand ports – Auckland, Lyttelton, Nelson, Port Chalmers, Napier and Tauranga.

“

ANL have helped to export approximately 8.6k containers of kiwifruit and 10.5k apples and pears and over 39k dairy for New Zealand exporters

Impact on trade

Since joining the CMA CGM Group, ANL has grown from 72,000 to 1.3 million containers a year – a staggering increase of 1693%. Over the past three years their volume has increased by 27% – showcasing the strong momentum that will drive them forward for years to come.

Top commodities exported out of Oceania include dairy, meat, cereals, grains & flours and packaged food – providing essential pantry items for the Asia-Pacific.

With New Zealand known for its fresh produce, ANL have helped to export approximately 8.6k containers of kiwifruit and 10.5k apples and pears and over 39k dairy for New Zealand exporters.



ANL Waikato departing Port of Auckland



ANL helped export 10,500 containers of apples and pears from New Zealand in 2025

Sustainability focus

As a sustainability leader in the maritime industry, ANL has supported several sustainability projects across Oceania – in New Zealand most notably with their Papakura Stream Restoration Project and their work with Project Jonah (whale conservation).

ANL is committed to reaching net zero carbon emissions by 2050 through the active effort of decarbonising all their activities. This includes Oceania's first containerised biofuel trial in 2022 and the first LNG (liquefied natural gas) containerised vessel voyage in Oceania in 2025. ●



THE AUSSIE ICON OF SHIPPING

A photograph of the Sydney Opera House and the Sydney Harbour Bridge, taken from the water at sunset or sunrise. The image is used as a background for the word 'ICON' in the main title.

Starting in 1956, ANL has kept its deep roots in Australia while expanding to become a maritime leader with a broad scope. This shipping business is an integral part of the Oceania region's supply chain carrying 1.3 million containers (TEUs) of cargo each year. As a part of the CMA CGM Group, ANL connects to 24 countries via a global network ensuring all Australia's most iconic brands and home-grown produce can be enjoyed worldwide.

ANL: THE AUSSIE ICON OF SHIPPING





Many students return home during breaks, providing a potential workforce in many parts of the country

THE WORKFORCE OPPORTUNITY HIDING IN PLAIN SIGHT

More than 90,000 students and recent graduates used Student Job Search (SJS) to explore employment opportunities last financial year. For horticulture employers, that represents a significant workforce that can help meet immediate operational needs while also introducing the next generation to careers across the industry.

From harvest and packhouse work to administration, marketing, science, technology and internships, tertiary students and recent graduates can provide additional capacity across horticulture businesses, while gaining an introduction to an industry with a huge range of career pathways.

SJS chief executive Louise Saviker says there's a much bigger opportunity here than simply filling seasonal vacancies.

"Students can provide the extra capacity growers need during busy periods, but those jobs can also introduce people to an industry they may never have considered as a career," she says.

For many students, seasonal work is their first introduction to New Zealand's horticulture industry. Today's harvest worker or packhouse employee could become tomorrow's orchard manager, technical specialist, marketer or business

leader, helping build the skilled workforce the industry will rely on in the future.

That first opportunity matters.

Students studying everything from horticulture, agriculture and environmental science through to engineering, IT, commerce, marketing and HR have skills that can contribute to the sector, while practical employment gives them the chance to understand the breadth of careers horticulture can offer.

Many students return home during semester and summer breaks (think mid-November to late-February), including to major horticultural regions around New Zealand, creating an opportunity for businesses to connect with a workforce that may already have strong links to their local communities.



"Students bring energy, adaptability and a willingness to learn," Louise says.

"And for employers, there is real value in giving someone their first introduction to the industry. You may be filling a role today, while also helping someone see horticulture as part of their future."

The benefits flow both ways.

Research shows financial pressure is one of the primary reasons students leave tertiary study. Flexible employment can provide income that helps students manage living costs while continuing their education.

University of Otago student Oliver [last name omitted for privacy] says employment gave him both greater financial independence and a clearer sense of where his future might take him.

"Having a job also gave me a clearer idea of what I might want to do in the future. It showed me what kind of work environment I enjoy and what skills I want to keep developing," he says.

For employers, connecting with students is also becoming easier.

In July, SJS launched a new employer website, designed around the way employers now hire students and recent graduates.

The platform allows employers to list roles more quickly, advertise multiple vacancies and locations, manage candidates through a streamlined workspace, and use built-in tools designed to reduce recruitment administration.

It follows the launch of the SJS student mobile app earlier this year, creating a more modern experience on both sides of the recruitment process.

Louise says making those connections easier is particularly important in industries where workforce requirements can change quickly.

"Horticulture needs the right people at the right time, but there is also a longer-term workforce conversation happening across the industry," she says.

"Student employment can contribute to both. It can help businesses get work done when they need additional capacity, while giving students experience, skills and connections that may encourage them to build a career in the sector."

Whether the opportunity lasts a few weeks, a summer or becomes the beginning of a career, each job gives someone a chance to discover where horticulture could take them. ●

HOW TO HIRE

Most students looking for summer work are available mid-November to late-February. To find out more or list an opportunity for free (or pay for a 'boosted' listing), visit www.sjs.co.nz.

Students are ready to

fill the gap.

Hiring students just got easier.
The new SJS employer website makes it faster and simpler to post jobs, manage applications and start hiring now.

Student Job Search
Tairā
Rapu
Mahi



Water was scarce leading up to this year's apple harvest in Trentino

CLIMATE EXTREMES ROCK EUROPEAN APPLES

Europe's apple industry has taken a heavy hit this season, squeezed by climate extremes at both ends of the growing calendar. Record high temperatures across July and August grabbed global headlines, but the crop was already in trouble after late frosts landed right in the bud emergence and flowering window in key growing regions.

John Gauldie

The June to August period was the warmest summer on record for western Europe, 2.5°C above the 1991–2020 average, capping a year in which growers faced a shifting mix of hazards – from deep February frosts and late April cold snaps to prolonged heatwaves, drought, hailstorms and heavy rain.

The scale of the damage became clear in August at the Prognosfruit 2026 Conference in Constance, Germany, where the World Apple and Pear Association (WAPA) released its annual forecast for the 2026/2027 season.

Apple production across the EU is estimated to fall 15.6 percent on last year's final figure, to 9.5 million tonnes – 14.3 percent below the average of the previous three years.

Growers were forced to market with smaller fruit and quality downgrades from sunburn, hail damage and poor colouring from the lack of cool nights. The declines cut across all major varieties: Golden Delicious is expected to shrink 11.1 percent to about 1,800,000t, Gala (the second-largest variety) is down 8.9 percent to 1,400,000t, Red Delicious is down 5.3 percent to 500,000t, and Idared has fallen 19.7 percent to just over 400,000t.

"This year's figures are a strong reminder that production cannot be taken for granted," says Philippe Binard, WAPA general secretary. "We may be reaching the limits of what current tools and practices can absorb for the competitiveness of the sector, with production and yields impacted by climate events, rising costs and a shrinking toolbox to secure yields and quality."

Luc Vanoirbeek, chair of the COPA-COGECA Working Party on Fruit and Vegetables, added that political support "has not kept pace with the speed at which climate change is affecting our orchards," framing the losses as a question of competitiveness and food security as much as yield, and calling for stronger incentives and cooperation among growers to respond to an increasingly uncertain climate and market landscape.

Production of later flowering pears (mostly Conference) increased in most countries (except France and Belgium). The pear harvest is recovering from previous poor seasons, however markets are still facing falling consumer demand. ●

FRANCE: TARN-ET-GARONNE



France's top table apple-growing region saw frost losses in spring and heat stress in summer squeeze the region from both ends of the growing season. Overall production in France fell 24 percent.



A mild, wet winter pulled the vegetative cycle forward by several weeks, exposing early blossom to frost risk well ahead of a normal season.



France's apple trees are increasingly under attack from woolly aphid and rosy apple aphid following withdrawal of products including spirotetramate. France authorised the use of FLIPPER bio-insecticide and in August enacted its emergency agriculture legislation to reauthorise the banned flupyradifurone for aphid control in apples (for use in the 2027 season).



A serious cold snap on 26-27 March brought temperatures below -1°C to -2.2°C; frost damage was confirmed on apple and pear buds in the days that followed.



By June the pattern flipped to extreme heat, with orchard temperatures reaching 40°C and the season running nearly two weeks ahead of normal.

ITALY: ADIGE VALLEY



Italy, Europe's second-largest apple grower, fared better than other regions with just a 2 percent fall in production, although the Adige Valley final apple harvest came in around 10 percent below normal.



A sharp, localised frost hit on the night of 13 May, anti-frost irrigation systems largely protected blossom, and the valley floor swung to 22°C by that afternoon – a one-day example of the season's stress on trees.



July and August 2026 were Italy's hottest months on record since 1950; the national August average ran 5.2°C above the 1951-1980 baseline.



Heat and dryness were expected to cut Gala fruit size and volumes by 20-30 percent. Alto Adige/Trentino declared a drought emergency on 20 July.

POLAND: GRÓJEC-WARKA



Poland, Europe's apple largest producing region has forecast a drop of 30 percent – a better result than early forecasts following tough spring conditions in the Grójec-Warka apple-growing belt.



A multi-night frost hit on 26-30 April, with nights as cold as -7°C at tree canopy height.



Following an exceptionally dry March and widespread low river levels in April, hydrological drought was declared for western Poland on 4 May.



June was the region's hottest on record; then severe storms and hail struck Grójec in mid-August, damaging fruit just before harvest.

PREPARING FOR EL NIÑO?

The potential impacts of this year's record-breaking El Niño on New Zealand's horticulture sector remain unclear. For growers, HortNZ provides useful resources to help with planning and monitoring weather forecasts.

www.hortnz.co.nz/preparing-for-el-nino

THE HEAT BENEATH OUR FEET – BENEFITS OF GOING GEOHEAT

You don't have to be near Rotorua to benefit from geoheat. Replacing a south of Auckland greenhouse boiler with a geoheat solution might cost you more upfront, but the payback over a 25-year life span might well work in your favour.

Anya Seward and Celia Wells

Across New Zealand's approximately 320ha of greenhouse production, around 3.4 petajoules of energy is used each year to maintain growing conditions. Energy costs can contribute up to 40 percent of greenhouse operational costs. Around 80 percent of greenhouses in New Zealand currently use fossil fuels for low-temperature space heating, resulting in large carbon emissions (HortNZ, 2024).

Fuel costs, emissions pressures and uncertainty over energy supply are encouraging growers to look for alternatives. But replacing a boiler is not necessarily as simple as swapping one piece of equipment for another. The cost and availability of electricity, the capacity of the local network and the heating technology chosen can all have a major impact on the economics.

This is where geoheat could have an important role to play.

Geoheat is the natural heat stored in the ground and groundwater. Depending on the resource and location, the Earth's natural thermal temperatures can be used directly or combined with a ground source heat pump (GSHP) to provide reliable, renewable heating.

Not all geothermal is hot, and nor does it need to be

When people hear "geothermal," they often think of steam, boiling water, bubbling springs and high-temperature electricity generation. While these high-temperature resources are available in some locations like the central North Island, lower-temperature resources are widespread across the country. For greenhouse growers, some of these lower-temperature resources could provide an attractive source of renewable heat.

Modest groundwater temperatures can be extremely useful when combined with a GSHP. The heat pump



Growers don't need high-temperature resources such as in the central North Island (Gourmet Mokai pictured) to benefit from geoheat. Even modest groundwater temperatures in other locations can be extremely useful. Image courtesy of Earth Sciences New Zealand

efficiently upgrades low-grade heat into the higher temperatures needed by the greenhouse heating system. The important point is that a resource does not have to be steaming hot to be useful.

Using geoheat directly verses indirectly

Geoheat is a broad term used to refer to the use of natural geological thermal energy (heat) for heating and cooling applications. When the temperature requirement matches or is less than the available ground temperatures, these ground temperatures can be used directly. However, in many cases ground temperatures may be lower than the required temperature needed for heating process – in these cases a GSHP can be used to enhance the temperatures.

Heat pumps are already familiar technology in New Zealand, commonly used for space heating in commercial and residential buildings. But there is a major difference between taking heat from outdoor air and taking it from the ground.

An air source heat pump (ASHP) works well when outside air temperatures are moderate, but efficiency falls as the air gets colder. And unfortunately, the coldest weather is usually when a greenhouse needs the most heat.

Alternatively, a GSHP's source is the temperature underground, which remains constant, whereas air temperature fluctuates daily and seasonally. Groundwater provides a stable heat source throughout the year, usually resulting in a significant improvement in efficiency. The exact performance will depend on the resource, system design and temperatures required by the greenhouse, but the principle is important.

GEOHERMAL TEMPERATURE RANGE	CATEGORY	KEY POINTS
12-29°C	Ambient groundwater	Ambient groundwater combined with a ground source heat pump can convert low-grade heat into useable 50-70°C.
≥30°C	RMA-defined geothermal water <i>The 30°C threshold is important from a regulatory perspective because New Zealand's Resource Management Act defines geothermal water as naturally heated water at 30°C or above. Taking and using geothermal water may require resource consent, depending on the local rules and circumstances.</i>	
30-50°C	Geothermally enhanced ground water	Geothermally heated groundwater can potentially provide direct heat or feed a ground source heat pump to enhance circulation temperatures with higher efficiency.
50-150°C	Low-temperature geothermal (in NZ)	Low-temperature geothermal resources can provide significant direct-use heating opportunities.
>150°C	High-temperature geothermal	High-temperature resources are generally suited to electricity generation and higher-temperature industrial applications, with potential for cascaded heat use.

Categories of geoheat and how they can be used for greenhouses

Co-benefits of geoheat

1 Longer system life

Greenhouse growers spend considerable effort managing the effects of weather and climate. The whole purpose of a greenhouse is to create a more controlled environment for the crop.

The advantages of GSHP systems are not limited to energy efficiency. The heat pump equipment itself can generally be

housed indoors rather than relying on large (noisy) outdoor air-handling units.

Keeping the heat pump indoors also protects it from rain, wind, temperature extremes and other environmental exposure. This can contribute to longer equipment life (GSHPs average 10-15 years longer than an ASHP) and lower maintenance requirements over the life of the system. Similarly, if you can use subsurface temperature

The invisible thief:

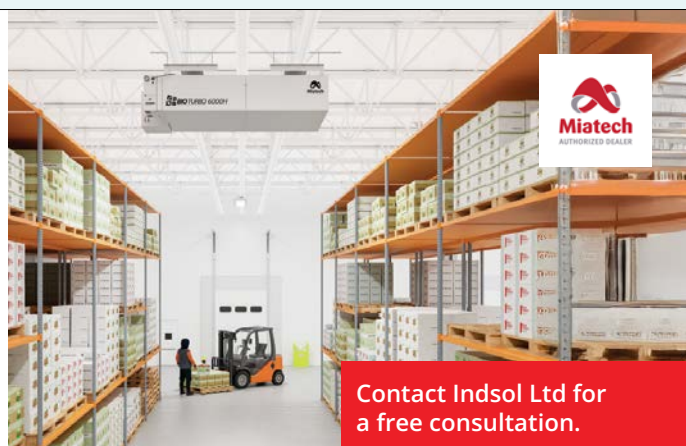
Stopping spoilage in the cool store

Ethylene from early ripening fruit can easily spoil your produce and your profits. The Bio Turbo unit removes ethylene along with 99.9% of airborne bacteria within the sealed chamber. It's safer for workers, eliminating residue and removing Ozone via a patented catalyst and returning safe, clean air to the room.

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directly, without requiring a heat pump, the system should require very little maintenance and require replacements very rarely. These are relatively small considerations compared with the energy savings, but they can make a difference when selecting a system for a working horticultural operation.

2 Reduced CO₂ emissions and Emissions Trading Scheme costs

Another benefit of using geoheat is the lack of CO₂ emissions and associated Emissions Trading Scheme costs. This is great in supporting national and international climate target ambitions, but what if you want use CO₂ for plant growth?

Although geoheat doesn't provide you with CO₂, there are other options available. These include keeping your gas boiler and use for CO₂ only (i.e. very little gas use), burning CO₂ pellets, such as those produced by Hot Lime Labs in Lower Hutt, or keeping a compressed gas tank or combustion generator to burn for a short period.

But with significantly lower operating costs, growers can afford to heat continuously through cooler months when they otherwise may have scaled down production. Therefore, with stable and affordable heat supply, yields can be higher without the need for CO₂ enrichment. A 7.5ha tomato growing facility in China recently switched their gas heating for a GSHP that boosted geothermal waters from 50°C to 80°C. The new system saved them the equivalent of USD\$425,000 a year, while also increasing their yield by 15 percent.

What's next for geoheat technology?

New heat pump technology is expanding the range of geothermal resources that can be used. The above example from China demonstrates the principle. The tomato greenhouse facility in Qingyun uses approximately 50°C geothermal water and heat pump technology to raise the water temperature to around 80°C for greenhouse heating.

For New Zealand, this technology is relevant because it means some geothermal resources that may previously have been considered 'too cool' for direct greenhouse heating and too warm for traditional GSHP, could potentially become useful. Boosting GSHPs from 'warm' geothermal water (between 30–50°C) significantly increases the operational coefficient of performance, which improves the economics even further.

Opportunities at higher temperatures

Perhaps the most exciting opportunity for growers in regions of higher temperature geothermal resources is the opportunity to develop geoheat infrastructure with others, reducing costs on an individual grower.

Geoheat in areas such as Rotorua and Taupō often contains too much energy and heat for an individual grower. For example, Gourmet Mokai (Taupō region) and Plenty Flora (Horo Horo) need to cool their resources before use in the greenhouses. This excess heat creates opportunities for shared infrastructure and cost-sharing models.

Imagine a cluster of greenhouses located in the same area. Rather than each grower drilling an individual well and installing a separate heating system, a shared geothermal system could potentially provide heat to several businesses.



COMPARING ENERGY SOURCE PERFORMANCE

As a simple example, a ground source heat pump (GSHP) using nominal 10°C groundwater could operate at a COP (coefficient of performance – useful heat out ÷ electrical input) of approximately 4.5 (4.5 units of energy out for every 1 unit of electricity in).

An air source heat pump (ASHP) may achieve an annual average COP of around 2.5–3, but under peak winter conditions its COP could fall to around 1.5.

For a greenhouse requiring 1MW of heat, the difference is significant:

- **GSHP at COP 4.5:** requires about 222kW of electricity
- **ASHP at COP 1.5:** requires about 667kW of electricity.

In other words, the GSHP could deliver the same amount of heat using roughly one-third of the electrical input at that peak condition.

When comparing these electrical options to gas, these COPs make a huge difference in an amount of energy needed to heat a greenhouse.

In a case study, a tomato grower near Tauranga requires ~1,340,000kWh annual energy consumption to circulate 70°C using gas. However, for the same greenhouse only 540,000kWh is needed using an ASHP, and ~345,000kWh for a GSHP (with a 20°C groundwater source). That translates to 40 percent and 25 percent of the total energy consumption required using ASHP or GSHP, respectively.

The same concept could apply where greenhouses are located near other heat users.

A geothermal resource could potentially supply an industrial process requiring a higher temperature, with lower-temperature heat subsequently used by greenhouses. This is known as cascaded heat use.

New Zealand already has examples of geothermal energy being used across multiple applications. For growers, this could change the investment equation considerably. Instead of having to fund the full capital cost of a geothermal system, they could potentially buy into a shared system and pay for heat as an operating cost.

How do you know if geoheat makes sense for you?

There is no one-size-fits-all answer. The opportunity will depend on the geology, groundwater, available temperature, greenhouse heating requirements, electricity connection, existing heating equipment and the economics of drilling.

Earth Sciences New Zealand, in collaboration with GeoExchange NZ and Covered Cropping NZ, has developed a free online tool for the Auckland, Waikato and Bay of Plenty regions. You select your location and the tool combines available information about the geology, known underground temperatures, groundwater flow and aquifer characteristics with information about your greenhouse. A calculator then estimates the heating requirement and provides an initial comparison of different heating options, including geothermal, GSHPs, ASHPs and gas boilers. It also estimates capital and operating costs and compares the different options over a 25-year period.

It won't replace a feasibility study, but it will help with the first step of the decision-making process to establish whether geoheat is worth investigating further.

Geoheat provides renewable, low-emission heat 24 hours a day. Yes, it involves higher upfront capital investment and a degree of risk in drilling success. We will examine the costs and risks in detail in subsequent articles. However for growers, the rewards of tapping into New Zealand's unique geothermal energy resource can mean lower energy consumption and potentially lower operating costs. For electricity networks, it can mean lower peak demand and reduced pressure for expensive infrastructure upgrades. And at a regional level, shared geothermal infrastructure could allow multiple growers and businesses to benefit from a resource that none could economically develop on their own. ●



Find out more in next month's Part 2 in our 3-part series. Access the mapping tool: www.gns.cri.nz/research-projects/decarbonising-covered-crops-with-low-temperature-geothermal/

Excellence In the Field



BATALLON

- Fresh Market / Telegraph
- 12 to 14 inch
- Early maturing plant
- Consistent high quality plant with high yield potential

CENTINELA

- Fresh Market / Telegraph
- 12 to 14 inch
- Medium internodes, early & high- yield variety
- Cylindrical uniform fruit, with well filled necks
- Best suited to warm (summer) harvest slot



REMBRANDT

- Fresh Market / Telegraph
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Scentian Bio founder Dr Andrew Králíček (left) and chief executive Jonathan Good. Photo courtesy of Scentian Bio

SCENTING OUT THE FUTURE

Unravelling the mystery of how insects smell is propelling a small Kiwi 'deep-tech' company to develop new solutions for our food industry, including a pilot through Zespri's Innovation Fund. Scentian Bio is a finalist for the PwC Breakthrough Project Award at the 2026 KiwiNet Research Commercialisation Awards.

Helena O'Neill

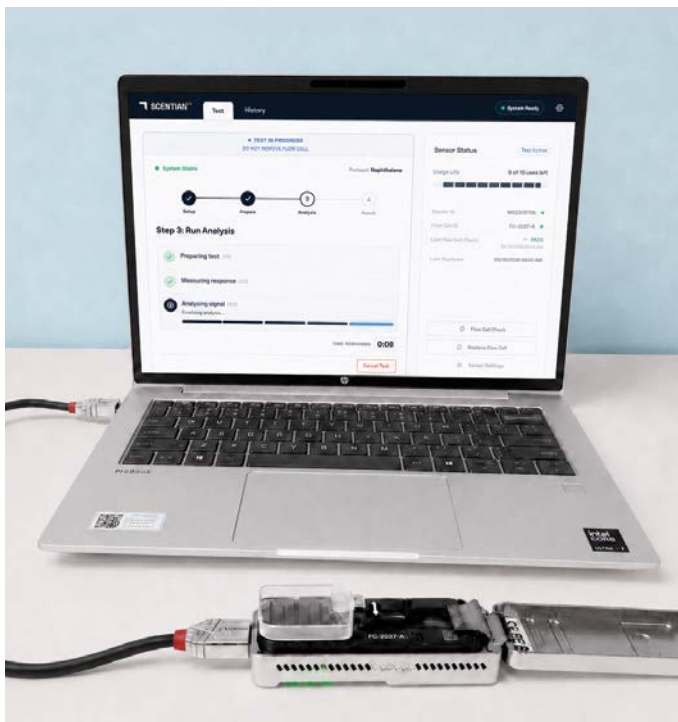
KIWINET

The Kiwi Innovation Network (KiwiNet) unites 14 universities and public research institutes – representing 80 percent of the country's publicly funded researchers – in an internationally recognised and unique collaborative model established to fast-track scientific breakthroughs to market. By helping to transform scientific discoveries into new products and services, KiwiNet and its shareholders are driving world-changing innovation and economic returns for New Zealand. The KiwiNet Awards winners for 2026 will be announced at an evening reception on 8 October.

Scentian Bio, established as a spin-out from Plant & Food Research (now Bioeconomy Science Institute), has assembled an amazing multidisciplinary team to unlock the power of a digital sense of smell and taste, says chief executive Jonathan Good.

"In general, we are making digital smell sensors. As humans, we use cameras for visual information and microphones for acoustic information. And we're making our little chips that smell the world and turn that into electrical signals. We can then turn that, through software, into answers for customers. Our first market is in food quality, and we're working with food manufacturers to spot taints, off notes and contaminants in their ingredients as they arrive at food manufacturing facilities."

Scentian Bio founder Dr Andrew Králíček spent 19 years at Plant & Food Research understanding how



Scentian Bio sensor testing in progress. Photo courtesy of Scentian Bio

odorant receptors work in insects. This led to two key breakthroughs: the ability to produce these proteins synthetically at scale and the ability to connect them to a transducer to create a biosensor.

The sensors use insect smell receptors to detect volatile organic compounds – tiny chemicals associated with everything from fruit ripeness to disease markers in human breath. The receptors are reportedly a thousand times more sensitive than a sniffer dog.

In 2022, the Bill & Melinda Gates Foundation (now the Gates Foundation) awarded Scentian Bio grant funding to develop its 'digital nose' biosensor platform for detecting human diseases like tuberculosis and malaria.

Zespri later cited the Gates Foundation investment as one reason for engaging with Scentian Bio, and the company is now running a pilot through Zespri's Innovation Fund. Underway for about 18 months, the project uses Scentian Bio's technology to help kiwifruit growers optimise harvest timing. The application could significantly improve quality and shelf-life while reducing waste. Instead of relying on visual inspections that can miss early signs of rot, growers could use handheld sensors to detect chemical changes in the fruit in real-time.

"I think the next horizon in farming productivity can come from using this information to further the control that farmers and growers can exercise over their crops and harvests."

Jonathan says Scentian Bio's platform has the potential to identify pest-related odours such as pheromones and other volatile markers rapidly, sensitively and in real time.

"Applications include border surveillance for invasive species, early detection of agricultural pests in the field, and continuous monitoring in high-risk environments. This could enable faster intervention, green chemistries, reduce reliance on manual inspection and trapping, and strengthen biosecurity systems by detecting threats before they become established.

"At the very practical end of what we're doing in food, the reason we're working in the food supply chain is that food's perishable. You've got to make fast decisions, and nature is variable. But people want more natural ingredients, and they're incredibly intolerant of variation. Food companies are crushed in the middle of this, where they're desperately trying to make fantastic products that people love the same every time from natural ingredients."

Jonathan says the current system sees millions of samples sent away to labs to get tested, and it takes days to get a result.

"And then when the results come back, if they're not what they wanted, then you end up with the dreaded rework, write-off and recalls that plague the industry today. Being able to deliver faster information that helps food companies take preventative actions is incredibly valuable. That's why we've had such good traction, and why we've got pilots with seven leading global food companies." ●

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HIT POWDERY MILDEW HARD. AND HIT IT EARLY.

Property® fungicide's novel chemistry provides confidence

Ryan Pierce, UPL NZ Ltd regional manager lower North Island, says a "take no prisoners approach" to powdery mildew is best. "Hit it hard and hit it early."

"Apple orchardists have had a rough time of it the last two seasons and unfortunately, the El Niño weather conditions this year look no better."

Powdery mildew, caused by the fungus *Podosphaera leucotricha*, can overwinter as mycelium (dormant threads) and become active when spring arrives. Ryan says prevention is better than cure. "Powdery mildew can impact yield, quality and general tree health and growth. Heavily infected trees can also be an easy target for secondary pathogens."

His recommendation is Property powdery mildew protectant fungicide. The first of its class FRAC Group 50, to be approved in apples, it has as its active pyriofenone. Property works by preventing spore formation and inhibiting the pathogen's ability to penetrate the trees' tissue. Another of Property's strengths is its vapour activity, which is combined with translaminar movement. Ryan says this ensures the active reaches all areas that could be infected by powdery mildew and where the tree most needs protection. "All surfaces get covered."

“

Apple orchardists have had a rough time of it the last two seasons and unfortunately, the El Niño weather conditions this year look no better

There is no known resistance to Property, and it has excellent crop safety, with little to no impact on beneficials including ladybirds. (Ladybirds feed on the fungus that causes powdery mildew.) "Feedback from orchardists has been good."

UPL recommends applying Property as part of a protectant programme at 10 to 14-day intervals when conditions favour disease development. The shorter interval should be used when conditions are conducive to powdery mildew infection and/or there is rapid plant growth. Property applications per season should not exceed two.



Property helps stop powdery mildew before it gets out of control

Ryan says orchardists know what to look for. "Vigilance over winter and at the beginning of the growing season helps."

Property has excellent rain fastness and is compatible with the insecticides and fungicides used most often in orchard spray programmes. It has a withholding period of 65 days.

Thorough coverage is important. The addition of the adjuvant Du-Wett® Super-Spreader is advised in low to medium water volumes to ensure optimal foliage deposition.

Ryan says one spray droplet containing Du-Wett can provide up to 25 times the spread compared to spray applied without an adjuvant. And at least 10 to 15 times compared to a conventional, non-ionic adjuvant.

He says pruning for light penetration and air circulation will also help manage powdery mildew, along with good orchard hygiene. "Infected plant materials should not be composted or left in piles. It needs to be disposed of." ●

For more advice on how to combat powdery mildew with Property, ask your local technical specialist or contact Ryan Pierce, UPL NZ regional manager lower North Island, on **027 286 5685**.



Du-Wett: Exempt from ACVM. Property: Registered pursuant to the ACVM Act 1997, No. P009953. See www.foodsafety.govt.nz for registration conditions. Approved pursuant to the HSNO Act 1996. Approval Code Du-Wett: HSR002503, Property: HSR101410. See www.epa.govt.nz for approval controls. Du-Wett and Property are registered trademarks.

WHY IS YOUR FERTILISER PROGRAMME NOT WORKING?

Leaf analysis is a valuable tool to diagnose crop nutrition as a complementary 'report card' on your soil performance and the efficacy of fertiliser recommendations. In an ideal world you would expect to see soil nutrients reflected in the leaf analysis, but more often than not we see a discrepancy. What is happening?

Jan Pieter de Jong : Soil Craft NZ agronomy consultant

Nutritional diagnosis is a technique to maximise the economic return from fertilisation and minimise losses to the environment. Foundationally we believe that knowledge and information will take the guesswork out of farming.

In the field of regenerative agriculture we test, measure, compare and analyse. We provide recommendations based on a vast body of research, scientific data, knowledge and experience.

The soil analysis provides us with mineral data, along with a suite of other data, that indicate the quantity of minerals present (and form the basis for fertiliser recommendations).

Leaf analysis provides an integrative measure of nutrient acquisition. We can define the leaf analysis as the 'report card' of what the plant actually has been able to uptake. It can identify nutrient deficiencies causing visual symptoms or can highlight deficiencies before visual symptoms appear on and in the leaf.

Growers look at their soil test and think that they have everything right, but it is not uncommon for growers to observe an inexplicable lack of fertiliser performance. Crop development is not tracking as they would like it to – and leaf analysis indicates the plant lacks certain minerals. Often we think to put more fertiliser on – with perplexingly less and less response.

In the process we omit to go back to the root cause, which is literally soil function. Omitting to include the soil in any analysis of crop development is like looking at fish without the ocean. The soil is not a warehouse to store a few minerals. The soil is a Super Organism, a living and a breathing system – a biological oxygen chain.

Redox is a likely scenario

Oxygen is the number one essential nutrient in our world. It occurs in our atmosphere at 21 percent as O₂. Without it, we, and everything else, die.

In the May issue of *NZGrower & Orchardist* we discussed the critical importance of the Cal-Mag ratio where we learned that calcium (Ca) has the ability to open up the soil, called flocculation, and magnesium has the ability to tighten the soil, which is called dispersion. When the Cal-Mag ratio is unbalanced (reflected in the Base Saturations), a soil will struggle to 'breathe'.

Oxygen is the great electron, the donor, the driver behind the electrical life of soils, plants, microbes, animals and humans – and it involves the movements of electrons. The energy and information sources of all life depend on electron flow.

The chemical process behind the transfer of electrons between atoms and molecules in the soil is known as reduction-oxidation, or 'redox'. Reduction is a gain of electrons. Oxidation is a loss of electrons.



NZ Feijoa Growers Association's AGM & Grower Tour

The 2026 AGM and Growers Tour is being held in Hawke's Bay on Thursday 19th and Friday 20th of November 2026.

The Speaker Sessions and AGM will commence at 3pm on Thursday at the Napier Conference Centre. The Grower Tour is on Friday.

For more details and to RSVP please see our website (www.feijoa.org.nz/news-and-events/news) or contact Brent Fuller on 021 103 3041, info@feijoa.org.nz.

We look forward to seeing you there!

www.feijoa.org.nz

LEAF SAMPLING TIPS

Test three times each season (depending on the crop or kiwifruit variety).



Test each season very close to the date of the previous year as this will help to discern a trend.



Use fresh and mature leaves without damage or discoloration.



Take samples Monday and Tuesday, at the latest on Wednesday. Samples taken on Thursday or Friday can stay in the laboratory over the weekend and be processed the following week affecting freshness.



Put the leaves in a paper bag to limit perspiration and then in a laboratory identification bag. Chill and deliver to the nearest post office mid-afternoon for dispatch by overnight courier.



Avoid samples with any kind of contamination such as pesticides, fertiliser or soil. Note on the submission form if washing is required or if leaves received foliar nutrition recently.



Take around 15-20 kiwifruit leaves per sample and hectare, preferably from predetermined vines or GPS location. Other crops require different quantities.



Write 'handle with care' on the bag and ask the post office clerk to keep the bag(s) on top to avoid being crushed.



Collect between 8-10am, avoiding the hot spring or summer days.



A poor fertiliser response, a patchy crop, a lack of productivity and a leaf test that doesn't match the soil test, or some other major difference, is a major red flag for which we should consider poor redox as a likely scenario.

Side effects of redox collapse

The first side effect of poor or low oxygen presence and subsequent redox collapse is that microbes, in order to function, take one oxygen atom from nitrate nitrogen (NO_3), which then becomes nitrogen dioxide (NO_2), which off gasses as a toxic gas. The effect, for example as a result of winter waterlogging and compaction, often shows up in spring in diminished budbreak – as was observed in season 2022-23.

The second side effect is on iron (Fe) and manganese (Mn). We just learned that microbes in the absence of O_2 go to the most abundant mineral Fe or Fe_3 and they take one atom of oxygen, turning Fe_3 into Fe_2 , which then makes Fe too available, even showing up as Fe toxicity, by flooding the plant.

This phenomenon is closely followed by Mn, influencing the leaf analysis as high Mn and antagonises Ca – the trucker of all minerals and responsible for functions such as cell strength and storability.

A soil unable to breathe can show Fe and Mn toxicity in the leaf, despite the soil test not indicating high or toxic levels.

Thirdly, the ability of roots to be able to access and respire O_2 and deliver Ca is hugely linked to fungi that with their hyphae create and build these larger aggregates with increased breathing capacity.

“

A soil unable to breathe can show Fe and Mn toxicity in the leaf, despite the soil test not indicating high or toxic levels

Fungal life

Another potential reason for soil and leaf analysis discrepancies is that the soil microbiome cannot thrive due to herbicide applications that have caused minerals to lock up through both chelation and outright destruction of fungal life.

Assessing the presence and activity of fungi can be measured by obtaining a Soil Food Web analysis. Additionally, we can take a Micro-Biometer test to ascertain the Fungal to Bacterial ratio. These larger aggregates

can breathe in O_2 and will breathe out CO_2 , which then emerges from the soil, will hover upwards according to its unique properties, where the stomates suck it up to photosynthesise; the most important process on the planet.

Other potential reasons for soil and leaf analysis discrepancies include:

- the Organic Matter (OM) percentage is below the ideal of 10 percent and seems to decrease each year
- the soil has a low Cation Exchange Capacity (CEC) such as pumice and sandy soils, and is unable to hold onto sufficient minerals
- minerals might be unavailable through the antagonistic action of other minerals as explained with Mulder's Chart in the May issue of *NZGrower & Orchardist*.

Table 1 on the next page provides a real world example of test results, diagnosis and management across two seasons on a Hayward green kiwifruit block.

In this case the orchard has a high CEC and a high OM percentage of 10.5-12.1 percent. Nevertheless, the test results indicate the lingering effects of herbicide applications (which ceased three years ago), low availability of certain minerals, antagonistic action of other minerals

and an imbalanced Cal-Mag ratio. The soil microbiome is inactive and sluggish.

Note that, considering the health status of this orchard, only discretionary girdling is applied.

Costs and benefits

In summary the biological oxygen chain goes as follows: The correct Cal-Mag ratio improves soil structure; roots feed biology/microbes; microbes unlock nutrients; redox becomes better balanced; nutrition becomes plant available; better nutrient supply improves yield.

“

Leaf analysis provides an integrative measure of nutrient acquisition

Accurate diagnosis of the plant's nutritional status is a key element to assist decision makers in crop management - whether looking at fertiliser management (or mismanagement), the use of '-cides', soil structure or whether or not you are working with a functioning microbiome.

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The cost of analysis is minimal when you compare the benefits. Effective nutrition management allows the rational utilisation of inputs, adjusting foliar applications based on ideal levels (not on medium levels) throughout the season and enhancing farm profitability – as well as mitigating risk to the environment.

Balanced nutrition not only determines productivity, but also affects fruit quality, appearance, colour, taste, size,

aroma, post-harvest storage and a tolerance and immunity to pests and diseases.

In a world of increased nutrition management requirements and where consumers are becoming more discerning about the quality of their food, this represents a step all growers should not overlook. ●

TABLE 1: TEST RESULTS ON A HAYWARD GREEN KIWIFRUIT BLOCK

ELEMENT	PERIODIC TABLE	UNIT	SEASON 24-25			SEASON 25-26		
			22-11-24	20-01-25	13-04-25	04-11-25	13-01-26	11-03-26
Nitrogen	N	%	2.50	1.93	2.04	2.99	1.63	2.19
Phosphorous	P		0.30	0.15	0.15	0.43	0.17	0.16
Potassium	K		1.88	2.36	1.84	2.70	2.56	1.58
Sulphur	S		0.33	0.31	0.36	0.33	0.30	0.35
Calcium	Ca		2.08	1.81	3.09	1.54	1.65	2.87
Magnesium	Mg		0.21	0.21	0.28	0.25	0.18	0.28
Sodium	Na		<0.01	<0.01	<0.01	0.02	<0.01	<0.01
Copper	Cu	ppm	22	8	8	8	7	8
Zinc	Zn		28	11	11	177	11	20
Manganese	Mn		56	58	90	167	47	84
Iron	Fe		50	30	33	139	29	38
Boron	B		34	107	43	62	47	46
Molybdenum	Mo		-	-	-	0.15	0.15	0.52
Silicon	Si		-	-	-	101	-	228
Nickel	Ni		-	-	-	0.8	0.8	1.2

Soil Craft NZ key to colours

Low	Slightly low	Ideal	Luxury	Slightly elevated	Elevated	Extremely high
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SOIL CRAFT NZ DIAGNOSIS OF TABLE 1 TEST RESULTS AND MANAGEMENT STEPS

N	Each season starts well with season 25-26 slightly higher likely due to better N-cycling. Season 25-26 started with high destructive winds damaging the canopy. It is clear that foliar nutrition is required at least up to April to maintain N presence, especially with the June harvest window.
P	P is part of the 'big four' (Ca, Mg, P, B) that should be present at luxury levels. Despite P being adequately present in the soil analysis, we see low P availability due to P-lock-up bonding to Ca, and inadequate fungal strength or legumes being present. Since the bond of calcium phosphate can only be broken by fungal activity, we have introduced specific nutrition to promote fungal life.
K	K as the 'money mineral' is adequately present.
Ca	Ca becomes more present at the later end of the season when girdling has ceased and mineralisation is increasing.
Mg	Due to an imbalanced Cal-Mag ratio, we struggled with bringing Mg up with only a slight lift at the end of the season with buffered magnesium sulphate and kieserite. (Please revisit the May issue of <i>NZGrower & Orchardist</i> on the Cal-Mag ratio topic.)
Na	Fine, no Na issues.
Cu	The soil analysis showed excess Cu due to copper fungicide residue. Once we shifted to chelated amino copper the value dropped. Ideally we're aiming for 12-15ppm through copper nutrition using CopperMaxx™.
Zn	Zn shows an excess as we temporarily overdid the glycine chelated BioMin Zinc. It is clear that the draw on Zn during flowering, fruitset and particularly canopy development is massive and needs to be maintained until at least March in this orchard.
Mn	The soil analysis shows sufficient Mn but most will be locked up due to glyphosate use until further mitigated. Herbicide applications ceased three years ago. We have used fulvic acid to remediate the residue, included in soil drenches, four to six times a year. Here too it is clear that the draw on Mn during flowering and fruitset is massive and needs to be maintained until at least March in this orchard.
Fe	The soil analysis shows sufficient Fe. Mn and Fe both play a role in Redox that will influence plant availability.
B	The soil analysis shows sufficient B stored in a high OM percentage. Each season a modest Organibor input secures long-term B availability. The 20 January 2025 reading appeared to have been an anomaly.
Mo Si Ni	Mo, Si and Ni analyses were included in season 25-26 for research purposes into N-fixation, cell strength, mineral uptake, salinity tolerance and drought resistance.



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A vetch root pulled from the Regenerative plots in early May, showing the nodulation that may explain why nitrate levels in these plots pulled ahead over winter



Drilling the cover crop into dry, rubbly ground on 26 March. We irrigated straight after sowing to get germination going in both the ryegrass and the triticale-vetch plots

CARBON POSITIVE HEADS INTO A MAIZE SEASON

Winter is normally the quiet season in the Carbon Positive trial at the LandWISE MicroFarm. With cover crops established and monitoring ticking over, there's time to review data and prepare for spring and summer.

Dan Bloomer and Olivia Webster : LandWISE Inc

The Carbon Positive trial is a six-year study that asks, 'Can soil health and quality be improved by adopting methods used to sequester carbon through sustainable and regenerative practices, while maintaining crop quality and profitability?'

The 2026-2027 summer crop is a change from the usual. Food-grade maize for corn chips will be grown for Nicolle Grain, rather than the sweetcorn we'd originally planned before McCain Foods' factory closure. We're grateful to Patrick and Tom Nicolle for stepping in. It's largely an adaptation of the sweetcorn plan that was our first Carbon Positive crop, run across the same three treatments - Conventional, Hybrid and Regenerative - although none of the plots were grazed over winter.

Don't judge a cover crop by its cover

On 26 March after butternut harvest, we sowed annual ryegrass into the Conventional and Hybrid plots, and

a triticale-vetch mix into the Regenerative plots. With dry, rubbly soil, we irrigated straight after sowing to get germination going. Triticale was first up, with good numbers by 1 April; ryegrass and vetch followed a week or so later.

Vetch has disappointed us in recent years, so this time Olivia ran a simple check by planting 100 seeds in a tray of plot soil and leaving it outside. Eighty-eight percent germinated. We saw good germination across the plots too, and by early May, vetch roots were reaching down alongside the triticale's, with good nodulation already visible.

Canopy cover, tracked through the season with the Canopeo phone app, told an uneven story. Ryegrass lagged early, then grew steadily while the triticale-vetch mix jumped ahead. Both dipped through damage when we ran an aerator through the plots in early June. The triticale-vetch never quite recovered its earlier density. By mid-July,



Same date, same trial, two different stories. The uniform Conventional ryegrass (left) looked healthier than the rust-affected Regenerative triticale-vetch (right) on 17 August – but the Regenerative plots had roughly double the dry matter on a per-hectare basis

leaf rust had taken hold in the triticale. Our canopy photos make it obvious: the Regenerative plots look thinner and rustier than the uniform green of the ryegrass.

But when we sampled above-ground dry matter on 8 August, the Regenerative plots at 2800kg DM/ha had put on roughly double the biomass of either ryegrass treatment with 1300–1500kg DM/ha for Conventional and Hybrid. Whatever the rust and the patchy canopy were costing in appearance, the triticale-vetch mix was still out-producing on a weight basis. It's a useful reminder that cover crop performance (they're building organic matter, catching stray nutrients, and feeding the following crop) isn't always what it looks like from the gate.

A nitrate story with a possible vetch connection

Free nitrate in the soil was very low everywhere over winter, often below the 5ppm detection limit of our Nitrate Quick Test. No fertiliser was applied, so the small rise recorded in April across all treatments is most likely mineralisation of the disced in butternut crop. There was a spell of rain in that period, so some nitrate may have been lost.

Through April and May, the Regenerative plots had the lowest nitrate levels. Then in June, something shifted: the Regenerative plots pulled ahead of Conventional and Hybrid and stayed there, even as absolute levels stayed low across the board. Perhaps the jump is from the damaged triticale and vetch mineralising and releasing nitrates. After that, our hypothesis is that the vetch nodules have been fixing nitrogen, some of which is being released into the system – circumstantial support for having a legume in the mix.

What the pre-plant soil test told us

Preparing for maize, we sent soil samples to Hill Labs for basic fertility, a sulphur profile, and potentially available nitrogen (PAN) testing. Combined with our own nitrate monitoring, the results inform the crop nutrition programme for each treatment. There is clear evidence that the trial's cumulative lime applications are changing the Regenerative plots' soils.



Cover crop performance isn't always what it looks like from the gate

Soil pH in the Regenerative plots now averages 6.65, significantly higher than the 6.38–6.43 running across Conventional and Hybrid ($p = 0.02$). Exchangeable calcium and calcium base saturation are also significantly elevated in the Regenerative plots. This is a measurable shift in soil chemistry, just what you'd expect from several seasons of extra lime.

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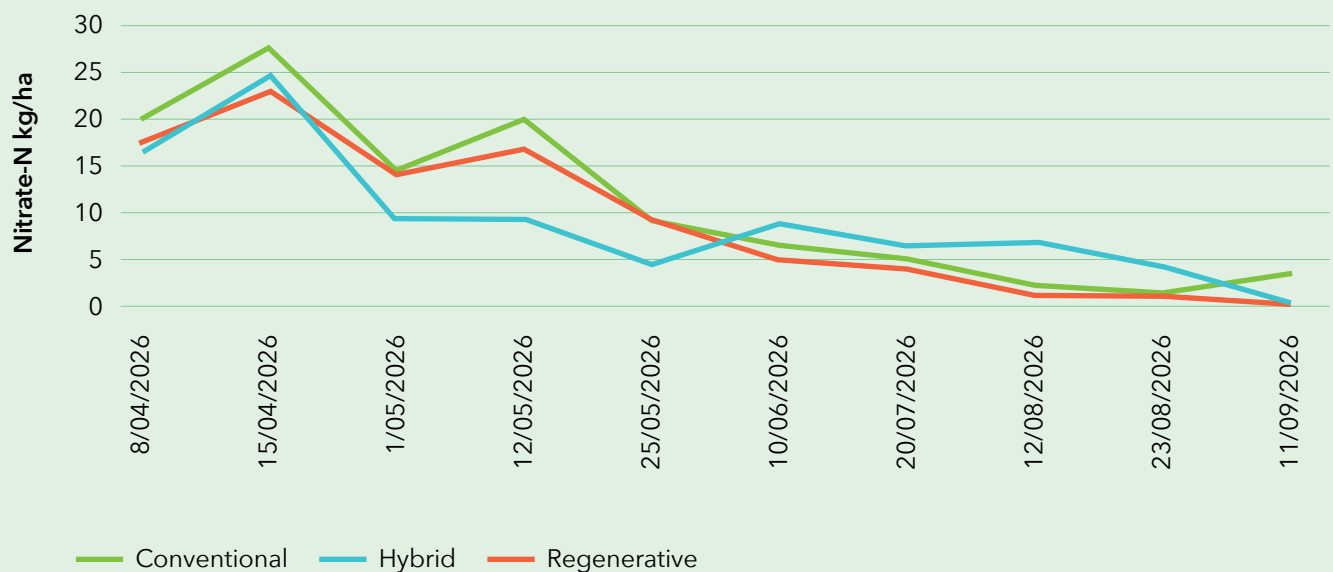
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AVERAGE OF KG NITRATE NITROGEN HECTARE 0-300



Nitrate-N in the top 30cm of soil (twice normal sampling depth) through the cover crop period. All treatments stayed low, but Regenerative pulled ahead from June and Conventional saw an uptick after spraying out ryegrass

Sulphate sulphur came back low across every treatment – averaging 3.25mg/kg in both the Conventional and Hybrid plots and significantly higher but still low at 5.5mg/kg in the Regenerative plots. Olsen phosphorus, by contrast, is comfortably high across the board, averaging 50-54mg/L in all three treatments against a typical maize optimum of roughly 20-30mg/L so no plot needs more P this year, which is as much an economic and environmental note as an agronomic one.

Getting the ground ready

We wanted a six-week gap between spray-out and cultivation, but rain in mid-August meant we missed our target spray date. This is not a major concern for maize where harvest timing is more flexible than for process crops, but we don't want to squeeze next year's cover crop establishment. We sprayed out all three treatments a week later than planned, broadcast spraying glyphosate and Sharpen on the Conventional plots, and strip-spraying glufosinate and Torus on the Hybrid and Regenerative plots. Ground preparation for the maize will be disc-rip and rotary hoe in the Conventional plots, and strip-tilling in the Hybrid and Regenerative plots.

Looking further ahead, we're keen to push the strip-till approach further. Trying to understand our mid-project soil carbon results we modelled carbon capture

and partitioning within the plants (above and below-ground) and the soil pool itself. A significant amount of photosynthate goes straight through the plant and into the soil to trade with soil microbes and increasing evidence shows that photosynthesising plant cover, not just reduced tillage, is the real driver of net carbon gain. To increase carbon, we need to minimise the bare-fallow periods typical of intensive vegetable production. In our case, we tried to keep two-thirds of the cover growing by strip-spraying only the third we want to cultivate for a seedbed. After planting, we will terminate the rest and retain the resulting mulch, which will also aid weed management. Our Group also wants to try establishing a legume within the standing maize itself, sown as late as we dare to avoid it competing with the cash crop. The goal is something already photosynthesising the moment the maize comes off.

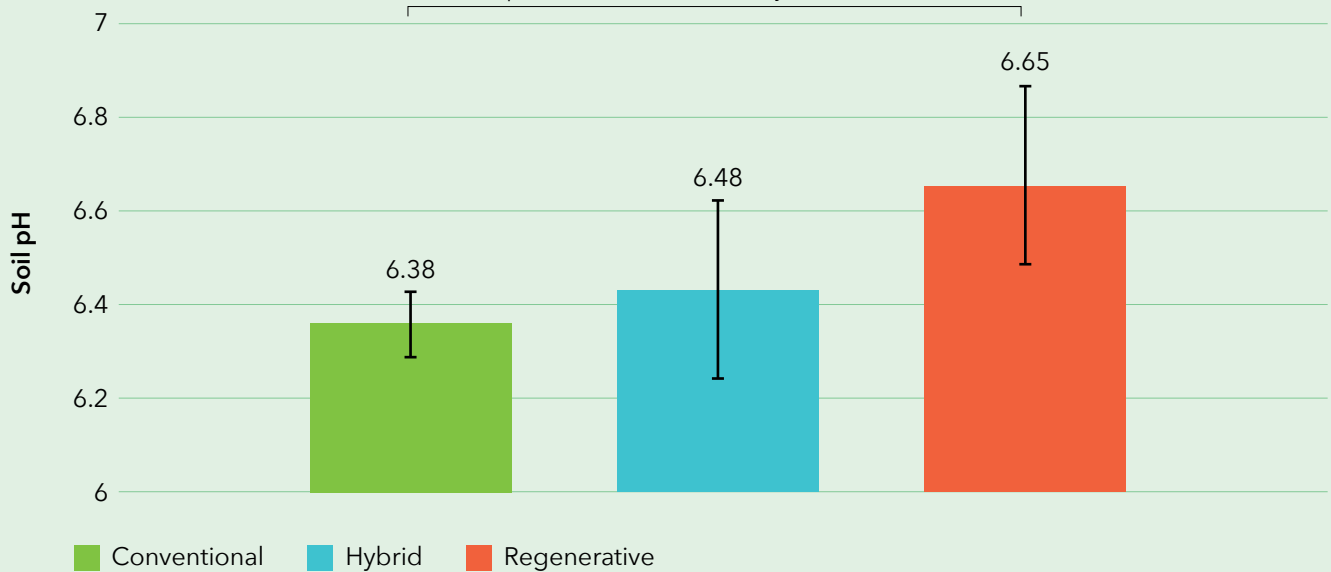
Come and see it yourself

Carbon Positive is made possible with support from the Ministry for Primary Industries, McCain Foods, Heinz-Wattie's and Process Vegetables NZ. We run regular field walks so anyone interested can see the trial firsthand. If you'd like to see the plots, the cover crops, and hear more about what the soil tests mean for this season's maize, make sure you're signed up for notifications at landwise.org.nz. ●

SOIL PH BY TREATMENT - AUGUST 2026

n=4 per treatment, ±SD

*p=0.02 vs Conventional + Hybrid combined



Soil pH by treatment, August 2026 baseline. The Regenerative plots are now significantly more alkaline than the other two treatments – a clear sign of extra lime taking effect

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Large poultry operations with tens of thousands of birds produce significant volumes of organic by-products including end-of-lay hens as well as manure

LOCALLY PRODUCED FERTILISER FROM POULTRY WASTE

Could growers soon be applying high-value compost and fertiliser products produced in New Zealand from poultry waste streams that include end-of-lay hens as well as manure?

New Zealand growers remain heavily reliant on imported fertiliser products including urea sourced from the Middle East. Rising prices for imported fertilisers have increased demand for locally produced alternatives.

At the same time, growers are interested in improving soil health, increasing organic matter and reducing the environmental footprint associated with food production.

Locally produced fertiliser products derived from organic waste streams such as poultry waste could help address several of those challenges simultaneously.

Transforming poultry by-products

New Zealand's largest egg producer, Zeagold generates significant volumes of organic by-products through its operations, including poultry manure and end-of-lay hens. Managing those materials safely, responsibly and cost-effectively is an ongoing challenge for the poultry sector.



But rather than viewing those by-products as a disposal problem, Zeagold saw an opportunity to investigate whether they could become part of a more circular system.

Zeagold partnered with Lincoln Agritech, a research and development company with expertise in converting biological waste streams into commercially valuable products.

"We started with testing the base nutritional value of our by-products, what we found was a competitive blend of essential elements, micronutrients and organic matter. This drove us towards converting the by-products into stable, fit for purpose formats that meet growers' needs," says Andy Becker, head of ventures and export at Zeagold Nutrition.

"Zeagold has commenced production and sales of a flagship manure-based pelleted natural fertiliser product, with the view to extend the range to include pelleted variations of fertiliser made from composted end-of-lay birds and other sought-after blends," says Andy.

Incorporating end-of-lay hens alongside poultry manure and carbon-rich feedstocks is expected to increase phosphorus and calcium levels through the inclusion of bone material, while also providing additional nutrients that support the composting process itself.

Developing a safe and stable product

For Zeagold, the starting point was understanding whether poultry waste including end-of-lay hens could be safely processed into a stable product suitable for agricultural use.

The team established a series of composting trials in Central Otago. Five large windrows were constructed using different combinations of poultry manure, end-of-lay hens and carbon-rich materials including wood chips and pea straw.



The trials comprised five large windrows using different combinations of poultry manure, end-of-lay hens and carbon-rich materials including wood chips and pea straw

For large commercial layer operations, where flocks can number tens of thousands of birds, windrow composting provides a practical pathway for managing volumes that would be difficult to process through smaller-scale alternatives such as mechanical solutions.

Lincoln Agritech's biotechnology team leader and senior scientist Simon Kelly says the trials were designed to test how different feedstocks performed during composting and to determine the conditions required to produce a consistent, high-quality end product.

"The work provided valuable insights into how the composting process performed under different conditions and how effectively the organic materials broke down over time.

"The results highlighted that the sizing of feedstock materials, carbon to nitrogen ratios, and windrow management (e.g. periodic turning) are all critical factors to maximise the composting process efficiency," says Simon.

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To produce a safe and stable compost, Lincoln Agritech developed a solar powered remote station to report back internal windrow temperatures at multiple points every five minutes

Pathogen inactivation

Throughout the trials, Lincoln Agritech closely monitored key indicators including temperature, moisture content, gas emissions and nutrient composition.

Temperature monitoring played a particularly important role. Not only is it a crucial aspect of assessing progression of the composting process, it also helps researchers assess pathogen inactivation.

Draft Ministry for Primary Industries guidance relating to highly pathogenic avian influenza (HPAI) indicates temperatures above 55°C should be maintained for at least 72 consecutive hours. Throughout the trial, temperatures remained above 55°C for more than a week, meeting those thresholds.

Assessing soil and crop performance

At the conclusion of the trials, the team analysed the resulting compost for nutrient content, physical structure and microbiological safety.

The results gave both organisations confidence to continue exploring the opportunity.

The composting process successfully stabilised the organic material and produced a nutrient-rich compost suitable for agricultural use.

The team plan to conduct further trials comparing the performance of the organic fertiliser against existing fertiliser and compost products across a range of crop systems.

“Future trials will assess not only impacts on crop health, growth and yield, but also effects on soil microbial communities and other indicators of soil health,” says Simon.

Just as importantly, it demonstrated a practical pathway for converting a challenging waste stream into a useful product.

“We were very pleased with the outcomes of the composting trial. The results demonstrate the potential of the process for effective pathogen inactivation while producing a nutrient-rich compost. Importantly, the process is readily adaptable to large-scale operations, providing a promising approach for the sustainable management of poultry wastes,” says Simon.

Concentrated fertiliser products

The project has now progressed beyond the research phase and is moving towards commercial-scale production.

Lincoln Agritech continues to support Zeagold as the company works to refine the product and evaluate market opportunities.

The resulting compost also opens the door to additional processing opportunities.

Rather than stopping at compost production, the material could potentially be refined into concentrated fertiliser products, creating a higher-value offering for farmers and growers to support a wide range of agricultural and horticultural crops. ●



Mike Callaghan from the NZ Blackcurrant Co-operative with Jeni Pearce from High Performance Sport NZ at the Japan Sports Nutrition Association conference

RENEWED PUSH TO **EXTRACT** BLACKCURRANT VALUE

A value-add nutraceutical project hopes to increase value for New Zealand's blackcurrant growers by raising demand and making better use of fruit with onshore manufacturing.

John Gauldie

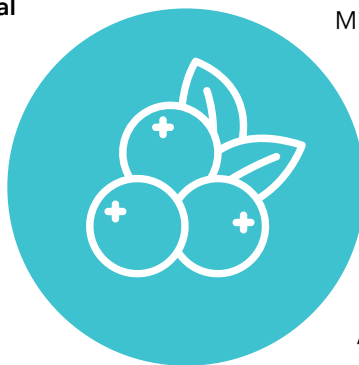
The NZ Blackcurrant Co-operative is investing \$450,000 in industry funding for a three-year Blackcurrant Value Extraction Project, supported by an additional \$300,000 from the Government's Primary Sector Growth Fund (PSGF).

Announced in August by Agriculture Minister Todd McClay, the opportunity for New Zealand growers is creating higher value rather than building more volume, says Kevin Parish, NZ Blackcurrant Co-operative chief executive.

Two products from the same fruit

Today New Zealand exports up to 2000t - close to half of the annual blackcurrant harvest - to China

and Japan each year, as a raw material to extract anins from the whole fruit.



Mike Callaghan, who heads the project for the NZ Blackcurrant Co-operative, says basically the juice is discarded - the fruit sugars are a waste product.

Whereas back in New Zealand, the bulk of the remaining harvest is processed into juice concentrate where the opposite happens - the skins are a low value waste with at best, stock feed value, says Mike.

"For growers, getting two products from the same fruit makes the whole cost return model pretty promising."



Currently about half the annual blackcurrant harvest is exported to Asia as a raw material to extract anthocyanins



Jeni Pearce from High Performance Sport NZ talked about blackcurrants and their benefits with professional team nutritionists

Kevin says better integration into the dietary supplement market offers higher margin and more growth potential compared to the commodity juice market.

Global blackcurrant production for juice has in the past surpassed 150,000t fresh fruit equivalent, mostly in Europe, but this year's heatwave has resulted in a terrible season for growers. Demand has lifted in New Zealand's favour; however, New Zealand is a tiny player and does not have the scale to react.

"We've seen strong demand out of Europe, particularly over the last few months just due to that shortage that they're experiencing, which is not ideal for anyone. We're trying to help out as much as we can. We're converting a bit more product into concentrate that will be going north shortly."

Conversely, New Zealand growers know very well what it is like to be on the receiving end of downward market forces.

"When the juice market is full of product and you're caught in that, then it's very difficult for New Zealand companies to survive and flourish," says Kevin. "This project is really a key initiative to protect ourselves from commodity swings."

Demand for authentic New Zealand extraction

New Zealand blackcurrants have exceptionally high levels of anthocyanins, making them ideal for nutraceutical production.

Initially, Palmerston North-based New Zealand Pharmaceuticals Ltd produced extract from the skins left over from juice production. However, in the last decade,

that company's ownership changed and unfortunately a resulting shift in strategy occurred just at the time that the price for juice collapsed.

New Zealand blackcurrants have exceptionally high levels of anthocyanins, making them ideal for nutraceutical production

Growers pivoted to shipping more blackcurrants to China and Japan for extraction, which has helped shore up New Zealand's production base during that difficult period.

However, much of the extraction overseas is done by large manufacturers for whom blackcurrant extract is just one in a long line of products. The extract can be traded multiple times before it reaches the nutraceutical company.

The long channel length to market has meant that, although New Zealand has invested heavily in health claims behind anthocyanins, the unique value and key messages behind New Zealand blackcurrants doesn't always reach the consumer.

"Even though all the science has been produced here and we are the ones supplying the right quality fruit, we've lost control of that market," Mike says. "I'd go to trade shows and see that the manufacturers certainly weren't selling the science that we had backing up blackcurrant."

As a result, markets for blackcurrant-derived dietary supplements have stagnated over the last four to five years.

"We need to get our hands back around this and that not only in terms of production, but also in selling to the market."

Bringing extraction home

Kevin says the Blackcurrant Value Extraction Project has also been driven by demand from overseas customers who see value in a fully New Zealand grown, extracted and processed high anthocyanin powder.

"We've had customers coming through to us looking for extract product that is authentically New Zealand and can be traced right back - something that is absolutely bona fide made in New Zealand. They want that assurance for their customers."

Kevin believes that despite the smaller scale of facilities in New Zealand, extraction can be cost-competitive.

"I believe we can go to the market with a similar price and that should make us competitive with what's coming out of China - and Japan for sure. A few costs need to be defined as yet, but input costs in Japan for example are similar. And we can certainly be competitive because of that provenance aspect."

Nevertheless, a key hurdle is a resilient manufacturing partner in New Zealand - which is a key project focus for the NZ Blackcurrant Co-operative.

"We're not going to own pots and pans," Mike says. "It's all going to be contract processing for which we're in active discussions."

Current manufacturing options in New Zealand are limited and blackcurrants must compete with high demand on those limited resources from other product lines.

At the same time, the juicing technology used by the Co-op's contract juicing partner, JPNZ, has also required changes in processing to ensure the skins remain viable for anthocyanin extraction.

"We've accelerated the processing side of it quite quickly in the last 6-8 months," Mike says. "Things have gone well but there's still a bit of work to do to validate it before we can really go to markets."

Asian sports markets

Along with extraction, the project also supports research and market development, including gaining recognition for the health benefits of blackcurrants, promoting their New Zealand origin, improving traceability and building demand in export markets such as Japan.

Mike says Japan is a focus because anthocyanins are a well-established product, primarily for the eye health market. Building on that, NZ Blackcurrant Co-operative's strategy is to move into Japan's sports nutrition market - the key focus of recent blackcurrant scientific output and market development (for example in the United Kingdom).

In late August, the co-operative presented at the Japan Sports Nutrition Association conference at Teikyo University, supported by Jeni Pearce from High Performance Sport NZ with the support of the PSGF.

"People might not necessarily see Japan as a sporty kind of country, but actually it is," Mike says. "So we see an opportunity to get them appreciating blackcurrants not just for eye health but for all these other benefits as well."

"We had a stand [at the conference] and talked to lots of professional team nutritionists and dietitians, as well as academics who came by wanting to learn more. Jeni gave a talk specifically on blackcurrants and their benefits and also had a session with the strength and conditioning coach from the Japan men's rugby team."

Kevin says he has been watching closely the shift toward sports nutrition in Asia. "In China, Taiwan and Southeast Asia, they're all getting into their sports. Running has become extremely popular in Asia." ●

INTERNATIONAL BLACKCURRANT CONFERENCE 2026 IN CHRISTCHURCH



This year Blackcurrants NZ Inc. is hosting the International Blackcurrant Association's conference from 30 November to 4 December. The last time New Zealand hosted the event was in 2008. The programme includes a day of presentations at the Christchurch Convention Centre Te Pae, followed by visits to growers, Lincoln University and the Bioeconomy Science Institute.



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AGM & Grower Field Day

Saturday 21 November 2026, from 9:30am
AGM start time: 11:00am | In-person & online
Classic Flyers, 9 Jean Batten Drive,
Mount Maunganui

All commercial growers of passionfruit are invited to attend the meeting. Membership to the NZPGA is not required to attend but is required to vote.

For an AGM pack, please email:
Heidi Hitchman, secretary@passionfruit.org.nz

love the goodness taste the goodness

OPPORTUNITY, OPTIMISM AND A DOSE OF REALITY

Spring is an exciting time in our industry.

Danielle Adsett : NZ Apples and Pears Inc (NZAPI) chief executive



Across the country, orchards are bursting to life, with trees moving from green tips to full bloom and growers once again turning their focus to the season ahead.

For growers across New Zealand, getting the start right is not just good practice, it is essential.

After a relatively mild start to winter, cooler temperatures through July and early August have delivered the chilling conditions needed across the main growing regions. Hawke's Bay experienced a welcome period of frosts, while Tasman tracked close to historical averages and both Gisborne and Central Otago recorded typical winter chilling. The result should be a strong and relatively compressed flowering period, providing a positive platform for the season ahead.

Right now, our growers are busy with pollination, with hives spread throughout orchards, and spraying for black spot prevention. Frost protection systems will remain on standby and, with forecasts continuing to point towards El Niño conditions, growers are ensuring irrigation infrastructure is ready for the months ahead.

The return of El Niño brings both opportunities and challenges for our sector. Historically, El Niño seasons have produced some of the highest-quality fruit from the East

Coast growing regions, with warm, dry conditions reducing pest and disease pressure and supporting excellent colour development.

However, those benefits rely heavily on secure access to water. As we continue to discuss New Zealand's long-term water infrastructure needs, an El Niño season serves as a timely reminder of just how critical water security is to the future productivity and resilience of horticulture.

There is genuine excitement across the industry about the recently concluded India-NZ Free Trade Agreement (FTA) and the associated cooperation project - the Apple Action Plan. The agreement represents a major milestone for the apple and pear industry, delivering significantly improved access into one of the world's fastest growing markets.

Meanwhile, the Apple Action Plan recognises the importance of India's domestic apple industry and sits alongside the FTA. The plan's focus on cooperation, knowledge sharing and productivity improvements for Indian growers reflects the long-standing relationship between our two sectors.

The emergence of blossom is a reminder of both the potential and uncertainty that defines horticulture. Photo by Tom Allan



From a macro perspective, there is much to be positive about. Export returns remain strong by historical standards, demand for premium New Zealand fruit continues to grow in key markets, and the industry is making progress toward its long-term ambition of doubling export value.

Yet alongside these headline achievements, there is a reality that every grower understands all too well.

While industry performance indicators may look positive, margins on-orchard continue to face intense pressure.

A recent project conducted by NZAPI determined it takes a minimum of seven years for a new orchard development to reach breakeven (and that's with everything going right... yeah right!) By year 20, a good profit can be made but again, that's with everything going exactly to plan and no fluctuation in expenditure or income.

Reality is never going to follow a line on a graph.

In the last few years, the cost of labour, compliance, freight, agrichemicals, energy, insurance and finance have all risen significantly. For many businesses, maintaining profitability



Orchards are bursting to life up and down the country





Despite challenges and the constant uncertainty of growing, this new season brings cause for optimism

is now as much about managing cost escalation as it is about increasing production, packouts and price.

This is of distinct importance. An industry can be 'performing well' by overall metrics while individual businesses continue to face significant financial pressures. It is why NZAPI remains focused on ensuring government, regulators and stakeholders understand this reality.

“

Right now, our growers are busy with pollination, with hives spread throughout orchards, and spraying for black spot prevention



Of course, strong export figures are something we should celebrate, but profitability and sustainability at the orchard gate must always remain the ultimate measure of success.

Access to agrichemicals continues to challenge the sector, and shipping lines and port infrastructure also require ongoing navigation.

One area where we have seen encouraging progress is within the Recognised Seasonal Employer (RSE) scheme. Recently announced changes will ensure growers have access to a reliable workforce while continuing to deliver strong outcomes for employees, employers, Pacific communities and Aotearoa.

Achieving these outcomes took significant work, a fully united pan-sector approach and a long time to achieve, but we are pleased with the result. The RSE scheme is a cornerstone of New Zealand horticulture and remains critical to the success of the apple and pear sector.

We are also grateful that our opportunities and challenges are well understood across the board at the Ministry for Primary Industries and Ministry of Foreign Affairs and Trade; their support helps pave the way for the sector.

Ultimately, this new season brings a cause for optimism. With favourable winter conditions behind us, new international opportunities ahead and an industry that continues to demonstrate resilience and innovation, New Zealand's apple and pear industry is ready to grow.

And just as the emergence of blossom is a reminder of both the potential and uncertainty that defines horticulture, we begin the season with confidence but an understanding that success is never guaranteed. ●

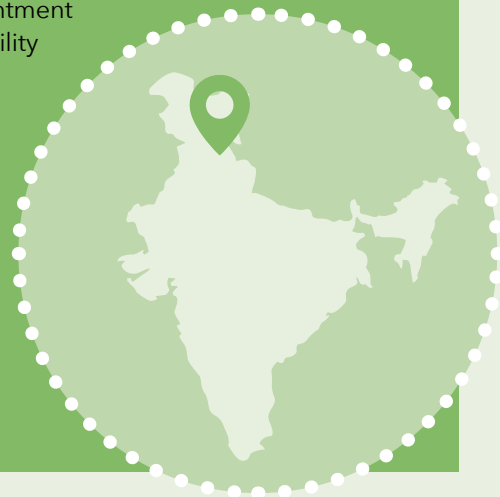
APPLE ACTION PLAN DELEGATION HEADS TO HIMACHAL PRADESH

In early October Lachlan McKay, recently appointed to lead the Apple Action Plan, joined NZAPI chief executive Danielle Adsett and Special Agricultural Trade Envoy (SATE) Nathan Guy on a visit to one of India's key apple-growing regions.

The delegation visited a proposed site for the Apple Action Plan's Centre of Excellence. The plan focuses on bolstering long-term productivity for Indian apple growers, part of New Zealand industry's commitment within the India-NZ Free Trade Agreement.

Delivery of the plan will be supported by New Zealand growers, technical experts and scientists. Over the next five years, Lachlan is expected to spend significant time in-market to coordinate activities, support strategic relationships and oversee projects.

Lachlan brings extensive horticultural experience, particularly in apples, and strong commercial acumen. His appointment provides the capability and focus needed to deliver tangible outcomes for Indian growers.



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NEW ZEALAND-GROWN COFFEE – AN EMERGING SPECIALTY CROP

A small group of pioneering growers are testing whether New Zealand can establish a commercially viable specialty coffee industry, with Northland currently at the centre of the emerging sector. The opportunity is not to compete with the world's coffee giants on volume, but to develop a rare, premium product built around quality, provenance, innovation and New Zealand's distinctive growing environment.

Justine Stuart : NZ Coffee Producers Association

Coffee may seem an unlikely crop for New Zealand, but a small number of growers are demonstrating that it can be grown successfully in the country's frost-free northern microclimates.

Recognising that coffee is a new commercial proposition for New Zealand, the NZ Coffee Producers Association (NZCPA) was established in 2024 to bring growers, researchers and industry partners together and help establish the foundations for a viable specialty coffee industry.

Traditionally coffee is grown in tropical regions like Brazil, Colombia, Viet Nam and Ethiopia, supplying a global market estimated in 2026 to be worth US\$265 billion. However, these regions are facing increasing pressure from rising temperatures, changing rainfall patterns and coffee pests and diseases.

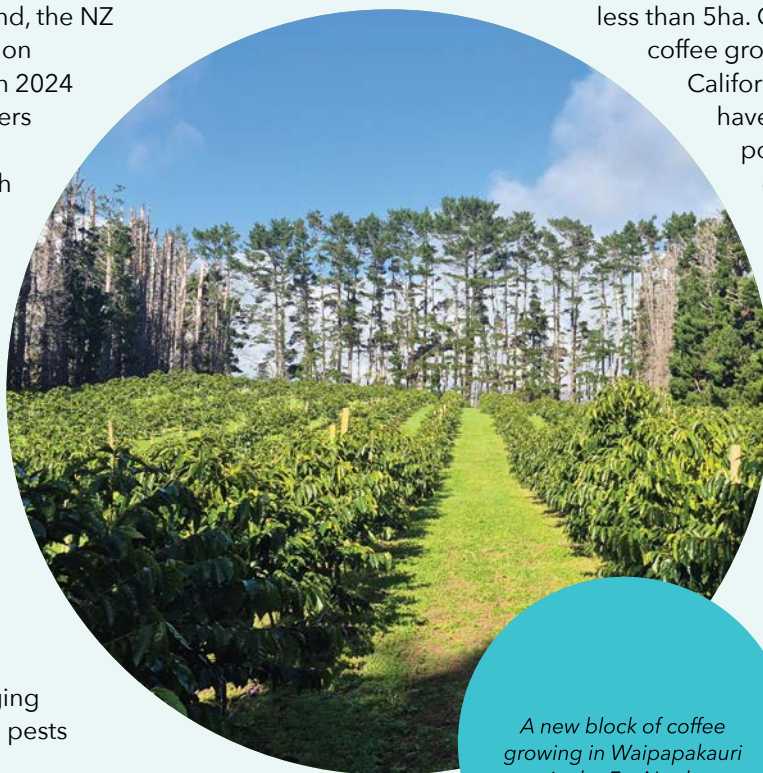
As a relatively high-cost economy, New Zealand could never compete with these origins on cost or volume. Instead, the opportunity is in specialty coffee, which can command significantly higher returns when it combines exceptional quality with traceability, rarity and a compelling story of origin. Specialty coffee is the

fastest-growing segment representing an estimated 45 percent of the total market in 2026, with an annual value of approximately US\$120 billion.

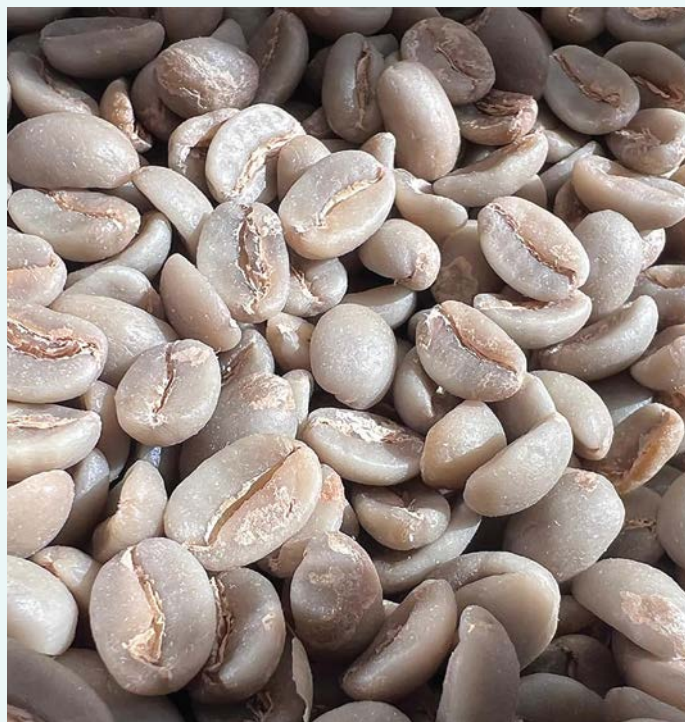
While the market is enormous, coffee production is dominated by smallholders, with most farms less than 5ha. Other non-traditional coffee growing locations, including California and New South Wales, have demonstrated the potential of cooler subtropical environments. A longer fruit-development period in these climates (coffee cherries can take 10-11 months to mature rather than the more typical 8-9 months) can result in greater sugar development contributing to distinctive flavour profiles.

Currently, New Zealand also has an important advantage, with no known coffee pests or diseases. Maintaining that status will be critical as the industry develops.

The fundamentals of growing coffee are relatively straightforward, but producing specialty coffee requires attention to detail



A new block of coffee growing in Waipapakauri in the Far North



Coffee beans fresh from cherries (left) and green beans ready for roasting. Premium niche coffee commands prices of up to \$600 per kg (and New Zealand growers are already selling at between \$300-\$400 per kg)

throughout production. Coffee prefers frost-free, sheltered sites, well-drained soils and moderate temperatures. First harvest can generally be expected within about three years, with plants reaching full production at around five years. Coffee also grows successfully alongside other crops such as avocados, bananas and citrus.

The harvest itself is labour intensive. Specialty coffee cherries are selectively handpicked at optimum ripeness, and what happens after picking is equally important. Processing removes the fruit surrounding the coffee bean and can involve different combinations of washing, drying and fermentation, all of which influence the final flavour and quality.

The specialty coffee market has been developing since the 1980s. There is a sophisticated evaluation system managed by the Specialty Coffee Association and used by experts and buyers worldwide to identify the distinctive attributes of each batch. When specialty coffee is grown and handpicked with care, processed to bring out its flavour, and presented with a defined story of origin, it can command premium pricing (typically NZ \$100-\$600+ per kg).

Developing local processing knowledge and infrastructure will be just as important as getting the agronomy right, from horticultural innovation and processing expertise to fermentation and flavour development.

Growers can choose how much of the value chain they want to own, from growing and processing green beans through to roasting, direct-to-consumer sales, agritourism, hospitality and by-product processing.



**SPECIALTY COFFEE IS THE
FASTEST-GROWING SEGMENT
REPRESENTING AN ESTIMATED**

45% OF THE TOTAL
MARKET IN 2026



NZ Feijoa Growers Association Inc

**2027 Commodity
Levy Referendum**

Thank you for voting on the NZ Feijoa Commodity Levy 2027. The referendum closed on 7 August 2026, with 91.3% grower votes in favour and a production value weighted support of 96.6% in favour. We really appreciate everyone who took the time to have their say. The information has now been collated and sent to the Minister, Hon. Todd McClay for his consideration.

Roger Matthews
President, NZ Feijoa Growers Association Inc

www.feijoa.org.nz



Coffee plant germination – accessing new plant genetics is a challenge for growers

New Zealand already has a sophisticated coffee culture and strong network of specialty roasters, providing an important connection to markets. These specialists understand discerning domestic consumers and are also connected to premium green-bean buyers, specialty competitions and auctions globally.

On-farm experiences and coffee tourism are also increasingly attractive, particularly because cool-climate coffee is unusual. For some producers, agritourism can generate valuable additional revenue while developing a premium product and building customer loyalty.

“

Coffee grows successfully alongside other crops such as avocados, bananas and citrus

NZCPA has started mapping where coffee is growing in New Zealand. Although only a small number of growers are producing commercial harvests and achieving specialty quality, more than 10,000 plants are now growing from the Far North to as far south as the Bay of Plenty. The NZCPA approach is deliberately collaborative, with growers encouraged to share knowledge, test ideas and develop capability collectively while retaining ownership of their own businesses and brands.

In spring 2026, the association is planting crop trials on five Māori-owned land plots in Northland, funded through the Ministry for Primary Industries (MPI) Māori Agribusiness Extension Fund. The aim is to better understand where coffee grows well and to create a comprehensive handbook for New Zealand growers.

Interest is increasing, but plant material remains a challenge. A limited range of coffee varieties is currently available in New Zealand, and new material must be carefully managed to protect New Zealand's biosecurity status. NZCPA is working to safely access varieties that could offer good yield, quality and resilience in New Zealand conditions, while also working with MPI to review current plant import health requirements.

The association is working with growers and stakeholders on the issues that will determine how pioneering farms can develop into a sustainable commercial industry, with labour, processing capability and market development all in focus.

The NZCPA vision is for New Zealand-grown coffee to enter the global market as a premium product and establish a reputation as an exciting new origin. Unlike mainstream horticultural crops, where volume can be central to financial viability, specialty coffee could suit an artisanal approach, adding another distinctive product to New Zealand's premium food and beverage story. ●

ONION UPDATE

Thank you to everyone who attended our grower tours across the country in late August. The topics of conversation were market access, research and product group direction, as we look ahead to the coming season.



Kazi Talaska : Onions NZ and Outdoor Cropping business manager

Market intelligence

One of main markets for New Zealand onions is the bloc of countries in the European Union (EU). The EU is one of the first markets to kick off the export season. This season, the market volume and demand from Europe was lower than usual.

Intelligence reports indicate the recent rainfall in Germany has improved soil conditions, which has supported the onion harvest. Prices are largely stable, although higher prices are being achieved for larger sizes.

In the Netherlands, the harvest is also benefiting from improved soil conditions. Prices have risen over a wide range, depending on size and packing station.

Dutch exports are increasing week on week. They are currently significantly higher than the previous season's level.

The summer harvest in Austria is in full swing. Yields are described as moderate even in irrigated areas. Export volumes are moderate while prices have increased slightly.

The United Kingdom's onion crop has been severely affected by extreme heat and the drought across East Anglia, where most British onions are grown. Growers are also reporting concerns around quality and storage performance, due to increased disease pressure.

To support understanding of the coming export season, we will provide growers and exporters with increased intelligence. In October 2025, we commissioned an intelligence report from New Zealand Trade and Enterprise to understand crop and harvest conditions more accurately. This year, we will repeat this approach and look forward to engaging with growers and exporters at our market coffee club forum.

Humble to Hero programme extension

The Humble to Hero partnership between Onions NZ and the Ministry for Primary Industries has successfully seen the industry through five years of market access, export assurance and value add projects. The programme has now seen \$2.8 million invested collectively.

The focus of the sixth year of Humble to Hero (1 July 2026 – 30 June 2027) will be on:

- enabling export assurances (upgrading export systems, food safety reporting and other pest reporting requirements)
- supporting new and improved market access for New Zealand onion growers. ●



ONIONS NZ ANNUAL GENERAL MEETING (AGM)

The Onions NZ Board invites members to the 2026 AGM. They are also calling for new Director nominations for the Board. Directorships are a three-year term and open to grower and marketing exporter members of Onions NZ. Please get in touch with info@onionsnz.com for further details.

AGM date: 21 October 2026

Time: 4 pm

Location: Pukekohe



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WHAT'S THE FUTURE FOR PROCESS POTATOES?



Despite the tough news for the processing sector coming out of Canterbury and Hawke's Bay this year, the outlook for process growers of potatoes offers some silver linings.

Kate Truffitt : Potatoes New Zealand chief executive

We caught up with Kyle Gray recently, a process potato grower near Rakaia. He is one of many growers looking at the processing markets and wondering what the future will bring. Particularly for smaller growers, decisions today about investments in technology and capability will depend greatly on our confidence in demand.

Export market performs well

The cost-of-living crisis rumbles on, mixed with headlines about processors closing, fuel and fertiliser price spikes, and warnings about an unusual El Niño. It's not surprising that the fortunes of process growers seem fickle.

The good news is that in the year to July, processed potato exports (frozen and crisps) were up in value and volume, contributing more than \$135 million in export receipts (FOB) for the first time. Exports to Australia, notably, have rebounded from 2024's low and Southeast Asian markets continue to perform well.

Nevertheless, margins are tight as the cost of growing increases and global prices remain under pressure from strong overseas competition.

We also recognise that process potatoes have been an exception. Talking with Process Vegetables NZ chair David Hadfield, it's clear that many of our growers – most of whom are growing a variety of process crops on rotation – are feeling the strain. We've lost growers around the country who have made the difficult decision to stop or switch their focus.

What's happening overseas?

While there is a lot of justifiable concern about the closure of processing plants, we should be careful about how we interpret the impact on the future of processing in

New Zealand, particularly for potatoes. These decisions can be driven by investment decisions in board rooms on the other side of the world, or by local regulatory constraints, or energy pricing – they do not necessarily indicate a declining demand for our produce.

McCain has clearly reaffirmed the company's commitment to New Zealand. It stated: "Our potato operations at Timaru and other ANZ facilities are not impacted by the closure of our vegetable processing plant at Hastings. We will continue to invest in areas that strengthen our long-term presence in the region."

And the fact is that our process vegetable and potato industries are driven by export demand, not domestic food consumption. New Zealand is a tiny player in a vast global process potato industry that is undergoing profound changes amid geopolitical turmoil, production upheavals and shifting consumer behaviour.

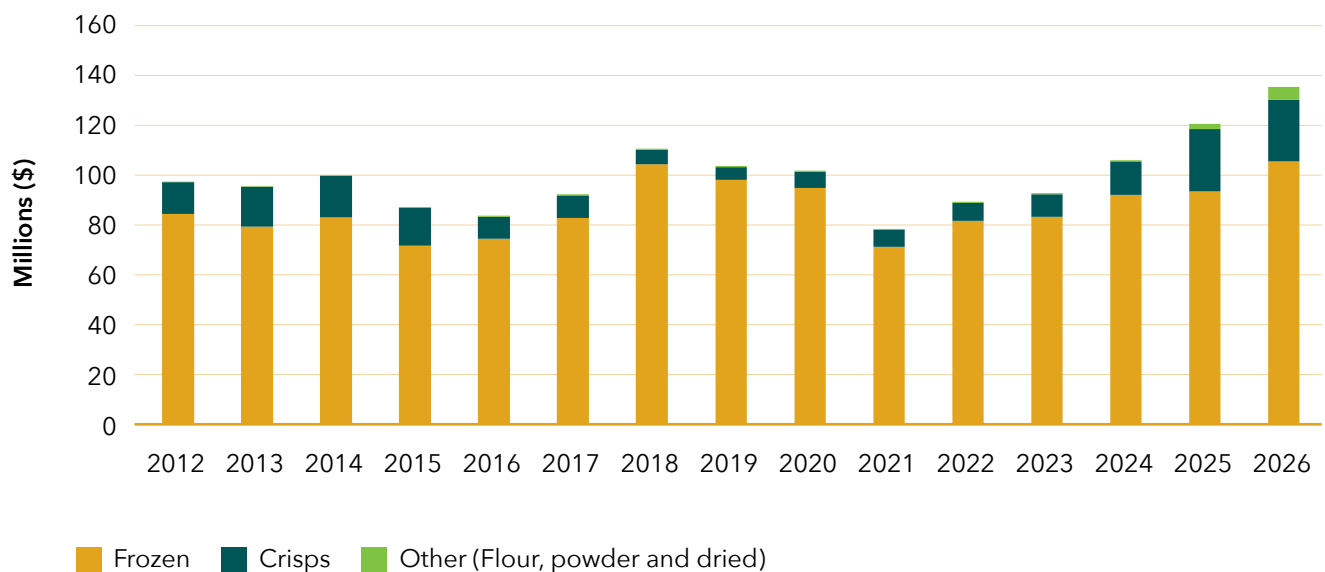
The real reset is happening in Europe and North America, after severe oversupply from strong yields, good growing conditions and increases in hectares planted. Meanwhile, surging production in India and China has seen capacity increasing faster than demand.

The question now is whether reduced production in those regions is rebalancing global supply – driven not least by a hot, dry summer in much of the heartland of European potato production and a reduction of North American acreage. That will have an impact on global pricing and trade.



Market factors overseas are driving potato processing pricing and trade

PROCESSED POTATO EXPORTS



In the year to July, processed potatoes topped \$135 million in export receipts (FOB). Source: StatsNZ

Different crops, common goal

Nevertheless, the strong performance of New Zealand's process potatoes this past year indicates solid demand for our quality product in our key neighbouring markets in Australia, Southeast Asia and the Pacific.

Of course, across the growing community, we need to keep having those conversations with local processors. We must share a common goal and have confidence to invest in New Zealand's process sector.

David says that we are unlikely to get back the processing capacity we have lost, particularly for peas. So we will need to adjust and adapt, as many growers are doing.

It's important to keep processing capacity across multiple crops. It's part of the complex growing system that underpins cropping in New Zealand. As David notes, the way we farm on rotation is very different from some of the Northern Hemisphere monoculture practices.

In Canterbury in particular, many of our grower operations are made up of mixed cropping, arable and livestock operations. That operational diversity is a key strength we should hold on to. We are hopeful that changes to the Resource Management Act will help.

Our growing system is also better for environmental outcomes. Talking to Kyle, it's clear that the sustainable use of inputs and resources is important to him. I know many of our growers share his pride in how we grow. We're focusing on integrated pest management, biodiversity and reducing chemical inputs. The world notices that.

Opportunities remain

So for New Zealand's process potato growers, there is good reason to believe the opportunities are real. Yes, much of our processing success is determined by offshore factors, but we are playing with a strong hand. We grow the world's best chipping spuds. ●

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THRIPS: A GLOBAL CHALLENGE WITH A NEW ZEALAND PERSPECTIVE



As I've been learning more about the crops that now sit within my portfolio, including capsicums, cucumbers, eggplants and chillies, one issue consistently comes up in conversations with growers: thrips.

Dinah Cohen: Covered Cropping NZ manager

These tiny insects have become one of the most challenging pests facing protected crop producers globally. Reports from Europe, Australia and New Zealand suggest that some species are becoming more problematic as temperatures increase and some thrips species are now able to overwinter. Their ability to reproduce rapidly, hide within crops and develop resistance to pesticides means that successful management requires far more than simply selecting the right spray.

With the concerns of New Zealand cucumber and capsicum growers in mind, I recently attended a webinar presented by Juliane Braun of Delphy Academy in the Netherlands, hosted by Berryworld and Strawberry Growers NZ. Although focused on strawberries, many of the lessons directly relate to protected vegetable crops as well.

Why are thrips so difficult to control?

Thrips reproduce rapidly under warm conditions and can build populations quickly. Eggs are laid within the flowers, protecting them from insecticides. Larvae feed within flowers and fruit, while pupae are often hidden in substrate, soil or sheltered plant material. Adult thrips can be weak flyers but disperse effectively on air currents and move readily through crops.

These characteristics mean that no single control is likely to work on its own. Effective management requires multiple tools targeting different life stages.

Not all thrips are the same

While there are thousands of thrips species worldwide, only a small proportion are significant crop pests. Understanding which species are present can help growers better understand seasonal behaviour and likely sources of infestation, even though management strategies remain broadly similar.

Western Flower Thrips (*Frankliniella occidentalis*)

Western Flower Thrips remains one of the most persistent species. It causes damage that creates economic losses for growers. It is increasingly difficult to control as it is highly adaptable, resistant to many insecticides and no longer being killed off by colder winters.

Larvae are a key target for biological control because they remain on the plant and cannot fly. Eggs are hidden within plant tissue, while pupae are often found in substrate or protected areas of the crop (see nematodes and fungi further down).

Onion Thrips (*Thrips tabaci*)

Onion Thrips is commonly associated with foliage feeding in a variety of crops and is often found on leaves rather than flowers. Increases in populations are common in spring, following winter dormancy, and it can be more difficult for some beneficial predators to suppress.

Flower Thrips (*Frankliniella intonsa*)

This species often migrates into crops from flowering weeds during spring. Unlike Western Flower Thrips, populations may decline during periods of high summer temperatures before resurging in autumn.

Chilli Thrips (*Scirtothrips dorsalis*)

One species that growers should be aware of is Chilli Thrips. Although not currently known to be established in New Zealand, it has spread widely through many production regions worldwide and has been present in parts of Australia since 2010. It reproduces rapidly, can complete a generation in as little as 15 to 20 days and favours young leaves and growing points. Any suspected detections should be reported promptly.



Western Flower Thrips is increasingly difficult to control as it is highly adaptable, resistant to many insecticides and no longer killed off by colder winters

What controls should growers be using?

There is no silver bullet but you must start with a clean greenhouse, weed-free and with all pests removed from all surfaces. If you plan to use an Integrated Pest Management approach, please tell your nursery so that the plants can arrive free of chemicals that might hinder an establishment of predator insects.

Check the plants when they arrive for signs of thrips and keep these separate when planting out.

Monitoring remains essential

Determining an economic threshold for thrips is notoriously difficult. Crop type, variety, season, crop stage and grower tolerance all influence decision-making.

Routine monitoring is therefore critical to know if the thrips population is increasing, especially during the nymph stage. A hand lens will be crucial.

The webinar highlighted the value of using both yellow and blue sticky traps. Yellow traps are often effective for detecting early arrivals but can capture large numbers of non-target insects like beneficial insects/Biological Control Agents (BCAs). Blue traps are typically preferred once crops are established because they attract thrips while reducing by-catch. Regular crop inspections, particularly of flowers and growing points, remain essential.

Biological control works best when started early

One of the strongest messages from the webinar was that biological control programmes should begin early, ideally at planting or within the first two weeks after planting. Waiting until thrips populations are noticeable will mean that BCAs will struggle to catch up.

Neoseiulus cucumeris is widely used but can be difficult to establish and usually requires repeated introductions throughout the season. *Amblydromalus limonicus* generally establishes more readily and can provide stronger control under suitable conditions. Both species target eggs and young larvae before populations expand. Both of these BCAs can be introduced as you plant your crop.

Where available, Orius can complement mite programmes by attacking larger larvae and adult thrips. Beneficial nematodes and entomopathogenic fungi can also play a valuable role by targeting pupal stages in substrate or soil. However, these biological tools require appropriate moisture levels and environmental conditions to perform well. They can also be difficult to get into substrate if it's covered in plastic.

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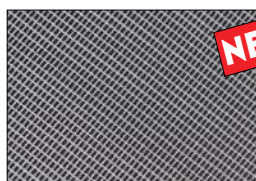
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Although not currently established in New Zealand, Chilli Thrips has been present in parts of Australia since 2010. Photo by Lance Osborne, University of Florida

Feed your beneficials

BCAs need to have food to survive, so if you're introducing them before your plants are flowering, you will need to supply a supplementary food source. This could be from having flowering banker plants or having biodiversity plant strips outside your greenhouse.

Other key considerations:

- ⚠ Remove flowering weeds, particularly dandelions
- ⚠ Maintain clean production areas and crop surrounds
- ⚠ Repair tears and holes in greenhouse structures
- ⚠ Netting should be considered for vents
- ⚠ Keep doors closed and minimise entry points
- ⚠ Manage banker plants carefully to avoid creating reservoirs for other pests.

Many European growers now view hygiene, monitoring, biological controls and physical barriers as equally important components of their thrips management programmes.

Using insecticides strategically

Chemical control remains an important tool, but resistance management is critical. Greenhouse growers also have the drawback of having off-label Maximum Residue Limits (MRLs) to comply with (default MRL is 0.1mg/kg, restricting many agrichems for use only in the very early stages of crop planting).

To decrease resistance, growers should rotate IRAC groups, avoid unnecessary applications and focus on achieving excellent spray coverage. Using appropriate nozzle selection, sufficient water volumes and suitable adjuvants can significantly improve results.

The webinar highlighted the importance of targeting complete generations rather than making isolated applications. In practice, this often means maintaining a control programme for two to four weeks to target overlapping life stages. Sprays should ideally be applied when thrips are less active, such as during cooler morning or evening periods.

Products containing spinosad continue to provide useful activity against thrips, although resistance concerns mean their use should be carefully managed. Neem-based products, microbial insecticides and other registered options may also have a place within broader integrated pest management (IPM) programmes, particularly where compatibility with beneficial insects is important.

The key takeaway

The biggest lesson from the webinar was that successful thrips management is a systems approach, not a product-based solution. Growers who start clean, monitor regularly, introduce beneficials early, support those beneficial populations, maintain good crop hygiene and use insecticides strategically are far more likely to achieve sustainable control than those relying on sprays alone.

As thrips continue to challenge protected cropping systems around the world, IPM is likely to become even more important for New Zealand cucumber, capsicum and other greenhouse vegetable growers.

Please contact your beneficial insect supplier before using agrichemicals if you have a population of BCAs in your greenhouse.

Our thanks to Berryworld and Strawberry Growers NZ! ●

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RMA REPLACEMENT BILLS



The passage of the Planning Bill and the Natural Environment Bill was a welcome milestone toward a more practical resource management system. The final legislation includes important gains for growers, including explicit recognition of food and fibre production, the reinstatement of controlled activity status, and the removal of proposed market-based allocation mechanisms.

HortNZ says the focus now is on ensuring these gains translate into workable, on-the-ground results. There are still important matters to get right through secondary legislation. These include managing reverse sensitivity so new development does not restrict existing growing operations, protecting access to enough water to keep permanent crops alive during severe shortages, and ensuring spatial plans recognise the role of food production and rural environments.

PROGRESS ON CROP PROTECTION REFORM



The passage of the Agricultural Compounds and Veterinary Medicines (ACVM) Amendment Bill is a practical step towards reducing unnecessary duplication and delays while ensuring decisions continue to protect people, the environment and trade.

The legislation provides a stronger signal that New Zealand should make effective use of trusted international regulatory assessments. However, the provisions relating to international pathways in the HSNO Amendment Bill do not go as far as the ACVM Bill. HortNZ is concerned that, although the HSNO Act already provides for the recognition of international regulatory assessments, this pathway is not being used to assess new active ingredients, and the proposed amendments will not change this.

HortNZ stated that a genuinely streamlined and coordinated HSNO-ACVM system will only be achieved if both Acts enable greater use of trusted international assessments for new agrichemicals.

NZGAP-EMS V2 CONSULTATION



NZGAP is seeking feedback on NZGAP-EMS (Environment Management System), updated in preparedness for Freshwater Farm Plan regulations. EMS v2 adopts the latest in environmental best practice reflected in the recently updated HortNZ environmental codes of practice.

The draft EMS programme documents and the process for submitting feedback are available on the NZGAP website. Consultation will be open until Monday, 12 October.

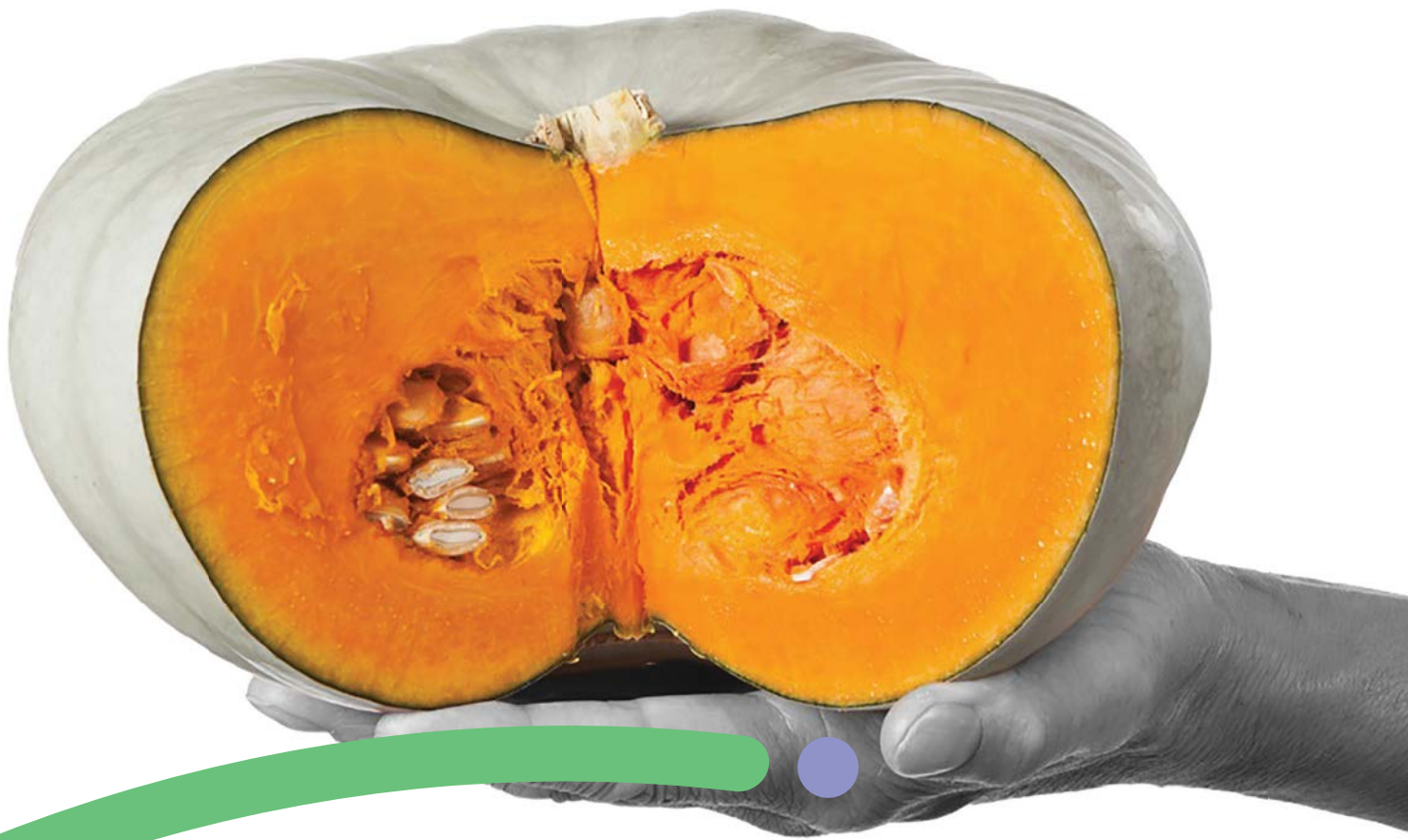


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Pumpkin & Butternut

GREY PUMPKIN

Nelson, very early, bush type, medium large size

Sampson, main season, yield with long storage, larger size

Iron Lady, main season, great storage, new intro

Minaray, main season, medium size, longest storage

BUTTERNUT

Tiana, smaller, earlier, and bountiful, Waltham type

Havana, larger fruiting, high yield, Waltham type

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