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HORTICULTURE NEW ZEALAND

NEXT GENERATION BUSINESS

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On the cover:

Aditya Saklani runs his own cucumber and tomato growing operation in West Auckland.
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NZGROWER & ORCHARDIST

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CHANGES RESHAPING **HORTICULTURE**

It is an honour to step into the role of chair of Horticulture New Zealand at such an important time for our sector.

Bernadine Guilleux : HortNZ chair

Horticulture is embedded in my DNA. A fourth-generation grower from the Balle family, I grew up immersed in the sector, learning first-hand the hard work, resilience and innovation it takes to grow fruit and vegetables through the seasons amid the variability of the climate, the changing economic fortunes and political environment.

Combining this solid foundation with my experience in fresh produce marketing, FMCG and governance, I have an acute awareness of the challenges and opportunities growers face today.

I've worked across Europe and New Zealand in consumer insights, environmental policy advocacy, strategic marketing and communication. I've seen how global trends – shifting consumer expectations, regulatory demands, and workforce challenges – reshape industries and we are seeing these shifts here in New Zealand and in horticulture at large.

HortNZ's advocacy is focused on ensuring growers can run sustainable, profitable businesses while remaining competitive both locally and in our global markets. As HortNZ chair, my focus is that all growers – whether large-scale operators or small family businesses – have the support and advocacy they need to navigate the changes around us.

At the same time, I believe we need to continue building greater public understanding of horticulture's vital role in New Zealand's economy, the environment and food security.

I look forward to working in collaboration with the other industry groups to secure a strong, sustainable future for our sector.

WE NEED TO CONTINUE BUILDING GREATER PUBLIC UNDERSTANDING OF HORTICULTURE'S VITAL ROLE IN

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GROWERS AT THE HEART OF **EVERYTHING WE DO**

Six months into my role as chief executive of Horticulture New Zealand, I have gained a deeper understanding and appreciation of the opportunities and challenges facing our industry.

Kate Scott : HortNZ chief executive

In my trips across the country, I've met growers who are passionate about producing high-quality food while navigating an increasingly complex operating environment.

What's clear is that New Zealand's horticulture sector is at a critical point.

The need for clear, practical policy settings has never been greater.

As an industry, we must ensure our voice is heard where it matters most – at the decision-making table.

A key focus for HortNZ this year is advocating for policy changes that enable growers to succeed and thrive.

We are pushing for vegetable growing to be recognised as a permitted activity, provided growers operate under a freshwater farm plan that demonstrates how they are managing environmental risks. We are also advocating for the national significance of fresh fruit and vegetables to be recognised in the Resource Management Act (RMA) changes.

> **"The ongoing review of New Zealand's science sector must ensure that horticulture is given the attention it deserves**

This has been central to our submission on the proposed RMA amendments, and we will continue to press for reforms that provide greater certainty for growers.

Water is another major area we continue to focus on. Without reliable access to water, horticulture cannot grow.

It was encouraging to see Hawke's Bay Regional Council take a proactive approach with its plans for a new water storage facility on the Heretaunga Plains. More of this thinking is needed.

A national water strategy that balances environmental sustainability with the needs of food producers is long overdue.

Our advocacy priorities for 2025 reflect the pressing issues facing horticulture. One of our primary focuses is biosecurity.

The detection of a second oriental fruit fly in Birkdale, Auckland, is a stark reminder of how vulnerable our industry is to biosecurity threats.

While we are hoping the risk has been contained, the incident reinforces the need for strong biosecurity systems.

We also recognise the critical importance of science and innovation. The ongoing review of New Zealand's science sector must ensure that horticulture is given the attention it deserves.

Investment in new technologies, breeding programmes, and sustainable growing practices will be crucial for the industry's long-term success.

Workforce and immigration policy are also top priorities. The government's decision to increase the Recognised Seasonal Employer (RSE) cap was a welcome development.

We continue to advocate for a fit-for-purpose RSE scheme that is suitable for both the Pacific and growers that employ RSE workers and that ensures certainty for the scheme.

Trade and market access remain central to our ambitions for growth. With export revenue projected to reach a record $8 billion by 30 June 2025, New Zealand's growers need stable and competitive trade policy settings to maintain access to key markets.

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NEW ZEALAND'S GROWERS NEED **STABLE AND COMPETITIVE TRADE POLICY** SETTINGS TO **MAINTAIN ACCESS TO KEY MARKETS**

We continue to focus on food safety and regulation, supporting the Agricultural and Horticultural Products Regulatory Review. We're pleased the government has committed to streamlining access to essential plant protection products and ensuring growers have the right tools to manage pests and diseases while meeting food safety standards.

> **A national water strategy that balances environmental sustainability with the needs of food producers is long overdue**

Finally, we are closely following the progress of the Gene Technology Bill. While we support the intent of the bill, we have recommended changes to ensure that growers can benefit from innovation without undermining consumer confidence.

Despite these challenges, there is plenty to celebrate.

Horticulture continues to be a major contributor to New Zealand's economy, and demand for our high-quality produce remains strong.

This year's New Zealand Horticulture Conferences in Wellington will be an opportunity to reflect on our achievements and discuss the path ahead.

Growers are at the heart of everything we do at HortNZ. As we continue to advocate for policies that support a successful and sustainable industry, we remain focused on ensuring that New Zealand growers have the tools, resources and policy settings they need to thrive.

Aditya Saklani runs his own cucumber and tomato growing operation at Massey, West Auckland

OPPORTUNITY KNOCKS FOR **YOUNG GROWER**

On an unassuming road in West Auckland is a new horticulture operation run by a young second-generation grower. HELENA O'NEILL talks with Aditya Saklani about his passion for growing cucumbers and tomatoes.

About five months ago, a quiet Chamberlain Road site in Massey, West Auckland, became a hive of activity as Aditya started setting up his horticulture operation.

"The site used to be a flower growing operation, when we took over the lease we had to put a lot of work in for vegetable conversion, growing cucumbers and tomatoes."

Converting the site from flower growing to a hydroponic vegetable operation offered a few challenges around water and energy sources in particular.

"Previously the water need for this property wasn't that much. There were times, depending on how strong the sunlight was, there were weeks when I could actively see my [bore] water tanks go low. We were using about three to four times more water, and that infrastructure wasn't set up for us."

To help combat further water issues, Aditya is looking into adding some rainwater tanks to store some buffer water to "give some breathing space".

Likewise, both cucumbers and tomatoes require more heat for growing than flowers, so Aditya is looking into energy solutions such as a boiler.

Aditya is the son of Mayank (Mike) Saklani, who is the managing director of WingShing Farms at Karaka, south of Auckland.

"The Massey property is under my company, Green Goods Ltd. Completely different labelling, different profit centre and that kind of thing," Aditya says.

"The only thing that is combined is our ordering of fertilisers and clips, things like that are ordered in bulk and then we split it and the payments accordingly.

Green Goods has invested in a new cucumber wrapping machine to help speed along production

"My father has done a very good job at using anything he has on that [Karaka] property, he has great attention to detail and puts in a huge amount of effort.

> **"I wanted to see exactly where plants were coming from, how they were treated, and what varieties other growers were using**

"There are a lot of things I have learned from him when it comes to certain types of sprays, drenching patterns, ways to grow, certain advice. But 70 percent of what's done here is done solely under me, and the rest of it I just report to him."

The 20-year-old finds his father to be a wealth of information and experience but also tempers that advice with a drive to try new things and find the way of growing that best suits him.

"If something messes up, I can know that I did everything at my end. My father will come here, we'll have some meetings and he might point out some things. If I find them beneficial then I will take that on board."

After finishing school Aditya worked at Bioforce at Karaka for around 12–18 months before securing a position at Zealandia in Clevedon, which offered him the chance to grow his knowledge of the industry.

Wrapping cucumbers in plastic significantly prolongs the product's shelf life

"I wanted to see exactly where plants were coming from, how they were treated, and what varieties other growers were using. After about a year there, this opportunity at the Massey site opened up and I decided to jump ship."

Growing up in a horticultural family offered plenty of opportunities for practical learning from a young age, he says.

"I was writing dockets for my dad when I was 15. I've had a lot of practical experience."

Securing good staff can be a challenge, Aditya says, but he has a great core team.

Cucumber wrapped and ready for market

When *NZ Grower & Orchardist* visited the Massey site, both crops were in full production, with cucumbers picked every second day, producing three pallets. Tomatoes were producing four pallets every two to three days.

This is really the first crop we've had on this site, but I haven't seen a single whitefly since November.

There aren't many growers out west so I don't think there are many crop pests around. Relatively speaking we haven't seen many insects – no aphids and so on."

Aditya grows Verdon cucumbers and the Alfred variety of tomatoes.

"It's something we've stuck with, that [Verdon] variety seems to give us a good quality fruit.

"I used to work at Zealandia, there I was introduced to more varieties than most growers would. My father used to grow a lot of those older varieties like Ice or Polaris for the cost savings.

"But then working in the nursery for Zealandia, I saw some of these bigger growers, even medium growers, who were using Verdon, Proloog, or even Lausanna. Through them, I was introduced to these newer varieties."

The greenhouse site in Massey was converted from a flower growing operation

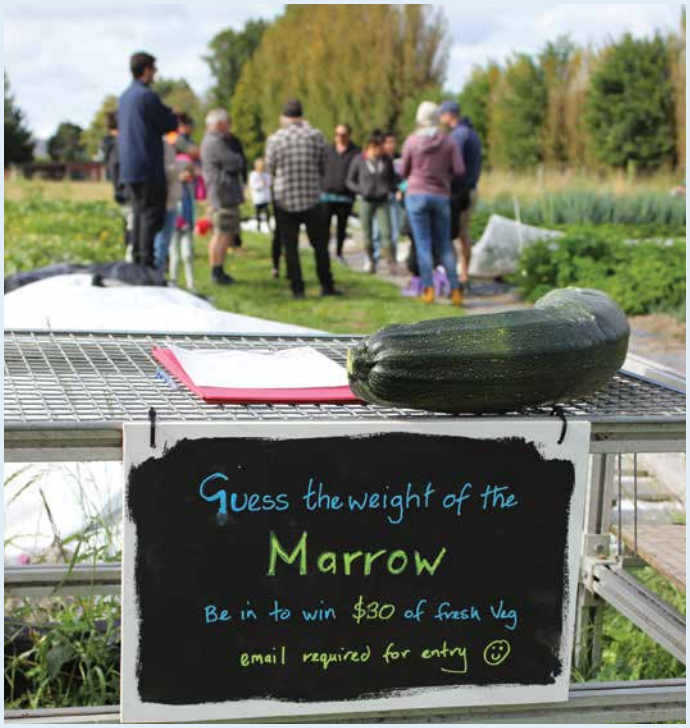
Aditya figured that if these larger growers were finding these varieties worthwhile, then it was worth giving them a go at his father's business, WingShing Farms. One of the growing sites is at Aka Aka.

> **Securing good staff can be a challenge, but he has a great core team**

"We first tested them out there, because that site has relatively good access to sunlight. We tested Verdon and we cracked probably the best sales we had made per square metre ever."

Part of the attraction of Verdon is the uniformity of length and shape throughout the season, he says.

Following on from the success of Verdon at his father's operation, Aditya was quick to use the same variety in Massey but may swap to the older Ice variety over the cooler months to save on heating costs.



One way of using a zucchini turned into marrow during the national Open Farms day on 9 March

Neil Robinson of Garden to Market talks to locals – more than a hundred came to see his operation

CAREER SWITCH TO **MICRO MARKET GARDENER**

Neil Robinson's Garden to Market is making him a living off two vege plots of 200sqm each and another of 1000sqm in Dunedin City.

Karen Trebilcock

A design engineer at Fisher & Paykel, he gave up his job at Easter last year and since October has had a stall at the Otago Farmers Market as well as selling directly to city restaurants.

He opened the larger plot, on the edge of Outram by Dunedin airport, to the public as part of the national Open Farms day on 9 March. More than a hundred people came to look at what he's growing and ask questions about everything from composting to white butterflies.

"I've always been interested in self-sufficiency and when we had a family I liked to have hobbies that helped so I'm a hunter, a fisherman and a vege gardener."

In his home garden at Ocean View, he started experimenting. After he sold his first bag of mixed salad greens to a Dunedin restaurant, he came home, ploughed up the back lawn and registered as a food business with the Dunedin City Council.

An Italian restaurant wanted zucchini flowers, which proved profitable. After watching several YouTube videos by Canadian Curtis Stone of The Urban Farmer and reading books by American Eliot Coleman, he was hooked.

"The idea of urban farming, that you don't need a lot of land, or to even own the land, that it was about efficiency, that really appealed. And with my engineering background I was really interested in the tools that can make gardening efficient."

The business grew to include a central city back garden. No lease is paid but the retired couple who live there instead help themselves to whatever is grown.

In February last year he took on the Outram lease of former horse paddocks.

"We tested the soil because it was a new site for me, and I knew there had been an orchard across the road. The soil tests came back very clean. And the pH was 6.5 which Outram is known for.

"That's why I'm here. The crumbly soils are perfect for roots to get into."

He uses no dig and minimal tillage techniques and keeps weeds, bugs and diseases at bay by outwitting them as much as possible.

Being a sustainable operation also means being financially sustainable.

"The 'I can't be green if I'm in the red' mantra is important for small scale horticulture."

He's not certified organic, and does not aim to be, instead wanting to supply the freshest and cleanest produce he can.

Also important is that he has sold everything, apart from what goes to the farmers market, before he grows it.

Kale grows in Neil Robinson's Outram garden

"That's how I structure my business. I do all my own deliveries to restaurants so I'm talking to the chefs and I'm looking in their fridges twice a week to see what they're using of mine and what else they've got. And asking whether I can supply that too."

He said the farmers market was a big jump especially because of the amount of time it took. One of the reasons he left full-time work was so he could have more control of his daily life.

"I've got to be physically present there on a Saturday morning and there is a lot of work before the market with preparation."

He sows all his own seeds and knowing the days to maturity (DTM) and how they changed in the southern environment was essential – as was the dollar per metre per day of everything he grows.

"I'm very, very fortunate that people are keen to share this information. It's like open an open-source technology collective."

OPEN FARMS – BECOME A HOST IN 2026

The national Open Farms day usually runs on the second Sunday in March. Founder Daniel Eb says visitor demand is increasing every year, offering a great way to reconnect Kiwis with their land, food and growers big and small. Find out about becoming an Open Farms host in 2026: **www.openfarms.co.nz**

Growing in Outram is continuing the more than a century-old tradition of market gardening in the area which locals feared was going to be lost.

In the 1800s, the vegetables grown, mainly by Chinese, supplied the gold fields as well as the city and the sailing ships bound for Europe from Port Chalmers.

"It's a privilege for me to continue the history of market gardening. My long-term goal is to get other people interested in doing it here too."

"Everyone has got to eat and if people want the freshest product then eating locally grown vegetables has got to be better than what is at the supermarket.

"But it's a two-way thing. There has to be the growers to grow it and the people who want to buy it going to find it."

He can match the supermarket pricing because he doesn't pay anyone else. He does however have a few people he can call on, including his teenage children, when he needs a hand.

"The next crunch is what the next phase will be. I'll be 55 this year and you have to be physically fit to do this work so maybe the answer is a young apprentice.

"This work should be seen as a skilled profession, a respectable career for people. You don't need a lot of land, you don't even need to own land.

"If you are passionate enough, and work hard enough, you can make it happen."

Barry Wratten says the quality of the apples this year is right where it should be

GREEN SHOOTS APPEARING ON TASMAN ORCHARD

As long as the weather gods play ball, it's shaping up to be a very good year on Wratten Orchards in Tasman, and it has been a long time coming.

Anne Hardie

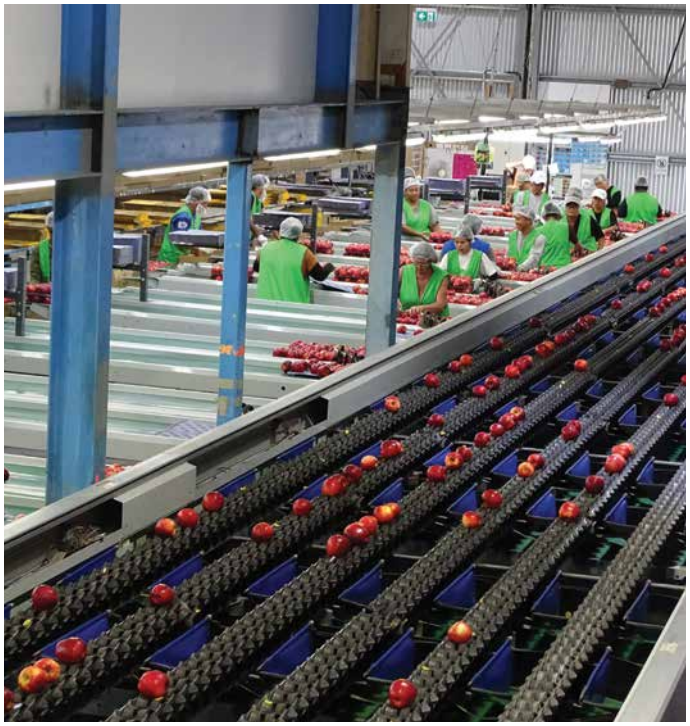
Barry Wratten is a second-generation orchardist in Lower Moutere where the business has grown from 2ha in 1948 to 220ha, split between seven blocks that grow mostly apples, but also 33ha of boysenberries. They also run a few beef cattle. Barry's two daughters, Jo and Christina work alongside him, becoming the third generation to carry on the family-run operation.

Apples cover 120ha and in the past five years the business has been through hail, Covid-19, shipping problems when ships often skipped Nelson, drought, high interest rates and even a fire in the refrigeration shed. It all makes this year look pretty good so far and the fruit has everything it needs to sell well. The count size is up, with Royal Gala sitting around 110 which is a good size to pack. The quality is right where it should be for taste, brix, pressure and colour and Barry is hoping to pack between 230,000 and 250,000 TCE (Tray Carton Equivalents) of fruit.

He needs a good year. When the orchard was hit by the Boxing Day hailstorm in 2020, he watched $8 million disappear in 40 minutes as 100 percent of the crop was destroyed. It wasn't just the lost production in that figure, but the ongoing costs of harvesting the damaged crop and keeping the orchard running. It was a block of forestry due to be harvested that got the business through the hail, but it has taken the orchard a while to get back on track.

"It takes four to five years to recover," he says. Trees sulked and many became biennial and had to be managed back into normal production. Without income, the pressure continued into the following year.

Today, 30 percent of the apples are under hail netting which is either drape or fixed permanent netting, and next season 50 percent of the crop will be protected. His goal is to cover 100 percent with netting.



The packhouse operates for four months of the year

It's one thing to grow a good crop, but Barry wants to control costs as well and when small packhouses disappeared from the region, he invested in his own facilities. The packhouse now operates for four months of the year, packing, repacking and reconditioning the fruit before getting it on a ship.

> **When the orchard was hit by the Boxing Day hailstorm in 2020, he watched $8 million disappear in 40 minutes as 100 percent of the crop was destroyed**

At the peak of the season, 120 staff work in the orchard or packhouse, including 75 Recognised Seasonal Employer (RSE) scheme staff, mostly from Samoa and a few from Vanuatu, who work mainly in the orchard. Jo has the role of RSE manager and is their pastoral carer, overseeing their wellbeing and the programme, while Christina is in charge of accommodation facilities as well as the day-to-day running of the business, from logistics to fleet management.

Emma and Marc Wilgar have key roles on the orchard after Marc walked down the drive a decade ago looking for work

Leah Dennis from Vanuatu checking over Stormy Fruit in her third season at Wratten Orchards

Inside the packhouse, it's mostly Kiwis and travellers, with high school students taking on the job of cleaning after school and in weekends.

Emma Wilgar is the orchard's compliance officer and in charge of human resources, organising a roster for the students to ensure they are getting a good balance between work, schoolwork and just being a kid.

"They have a degree of responsibility and they can earn good money."

The students range from 14 to 18 years and work during the boysenberry season as well, sometimes starting at 3am to harvest in the cooler part of the day. Barry says they always turn up and they are a good part of the team.

"They're good kids. You see them grow up and if they get good work habits, they become successful. They soon learn good work habits if they work for us!"

Emma and her husband, Marc, had no plans of working in horticulture when they moved to Nelson a decade ago. The couple had run their own printing business in Auckland and were seeking a change of lifestyle but couldn't find work in Nelson because they were considered overqualified. Then Marc walked into the orchard one day during harvest and got a job in the packhouse.

Today, he is the operation manager of the orchard and packhouse, while Emma has the ever-increasing compliance tasks to handle.

The seventh compliance standard to be met is the LEAF Marque environmental certification to sell apples to Tesco in the United Kingdom. That is an annual cost of $5,000 plus another $2,000 on the orchard for increased aspects such as native plantings and soil testing to meet sustainability targets.

At least in the packhouse the apple varieties are relatively simple and at this stage the Spectrum grading machine is sufficient to scan the outside of the fruit. Barry says they simply avoid varieties that need internal checking.

> **"If the Europe and UK market is strong, it's good for us because it's more choices**

In the orchard, the main variety is Royal Gala and there's Dazzle™, Pink Lady®, Red Braeburn and Sassy™ alongside Braeburn and the timeless Granny Smith.

Barry reckons you need to grow the three types of apples that make the fruit bowl appealing because that's how so many customers buy apples, hence the mix of bright red apples, stripey red and the Granny Smith for its vibrant green. Granny Smith also has the appeal of being a good, reliable apple that is good to have in the mix. Plus, people are becoming more interested in sustainability and home cooking, so the tart cooking apple is a good fit, he says.

"Granny was the second-biggest payer last year. Sales were up. We have about 10,000 TCE and use them as pollinators as well."

PEAK SEASON

120
STAFF IN THE ORCHARD OR PACKHOUSE

75
RECOGNISED SEASONAL EMPLOYER (RSE) SCHEME STAFF

Dazzle on the other hand is a higher maintenance variety because it needs more trimming, but customers like them, especially the large-size apples. Last year, Dazzle with a count size of 70 were worth $72 per TCE for growers.

Golden Bay Fruit markets the crop and last year about 70 percent went to Asia, whereas this year Barry says it will be pretty much a 50:50 split between Asia and Europe/United Kingdom.

"If the Europe and UK market is strong, it's good for us because it's more choices."

Fruit goes straight into containers at the orchard and to the wharf, including Stormy Fruit which is the brand created by Golden Bay Fruit for blemished fruit destined for export markets.

"Stormy Royal Gala goes to India even with 50 percent tariff."

In the past, that fruit with some hail, wind or rain damage would have been destined for juice or stock, but now Barry says it's worth picking. Any fruit that doesn't make the grade for Stormy Fruit heads to Cedenco Foods New Zealand in Hawke's Bay, since Nelson lost its fruit processing plant in 2020.

The Dazzle crop was hit by hail this season around Christmas, but though Barry says it "took the shine off things", it "won't kill us".

All in all, he's pretty positive about this season and hoping it will continue.

"After Covid, hail, drought, inflation, shipping, there are some green shoots starting to appear."

Head grower and site manager of Gourmet Waiuku, Peter Schreuder with some of the quality capsicums heading to Japan

QUALITY CAPSICUMS FOR JAPAN

Growing top quality capsicums is the sole focus for Gourmet Waiuku's operations southwest of Auckland. We spoke with head grower and site manager Peter Schreuder about exporting to Japan, the challenges facing growers, and why he has entered this year's Young Grower of the Year competition.

Helena O'Neill

Peter Schreuder (29) is head grower/site manager for Gourmet Waiuku and says their main focus is growing capsicums for the Japanese market.

"Of the tag one fruit, we have about 70 percent of our crop exported to Japan in the peak season."

Japan has been a key market for many years, Peter says. A small percentage is exported to Australia, the Pacific Islands, and "a few other" small countries as well.

"All the compliance and those requirements are becoming harder and harder, more time consuming to get sorted. The biggest challenge by far is the whole energy issue. We find the most efficient way of heating is with gas. The byproduct, CO_2, goes directly into the glasshouse which improves shelf life and production. To optimise CO_2 and heat we have a large buffer tank where heat is stored when it is produced during the day so CO_2 can be used in the greenhouse. Coming out of the chimney there are very little byproducts left.

"In terms of other options, we haven't really found one that's suitable in the long term."

Energy prices soared last winter amid record-low hydro lake levels, a lack of wind and sun, and what the government described as an inadequate supply of natural gas.

"It's an incredibly challenging industry to be in. But in the way we're managing our site, we're happy with what we're doing. That's the thing about Gourmet, we always focus on

quality. It's a priority. That's the quality of the work being done, the site aspects – keeping it as efficient and clean as possible. Then that will result in the highest-quality production. We're about 90 percent of fruit being tag one.

"Once you've got that quality in place, production will naturally follow."

High sunlight hours this summer have been beneficial for the capsicum crop.

"It's been a pretty good season for us. We did have a bit of an energy crisis in the winter which limited our heating capabilities of the crops. They suffered a bit during that time. But since spring and summer we've really thrived, and the crop is looking fantastic."

In terms of production, Gourmet Waiuku had been quite far behind last season, he says.

"We've now managed to catch up and are on target to beat last year's production levels."

"Company-wide we grow about 60 percent red capsicum, 30 percent yellow, and 5 percent each of green and orange. On this site we only grow red and yellow."

During the off season about 20 staff work in the glasshouse, with 10 in the packhouse. This jumps to between 25 to 30 in the glasshouse and 15 to 20 in the packhouse.

"Our peak season is December to end of February, in March we're preparing for crop change and doing our final picks."

"No day is the same working at Gourmet Waiuku

Gourmet Waiuku was established in 2013, with the company stating the glasshouse and warehouse are equipped with the latest technology and to be very efficient with energy. This aims to help employees work efficiently and ensures that the produce is grown and graded to a high quality.

No day is the same working at Gourmet Waiuku, he says.

"It's the diversity you've got every day. You can jump out with the picking crew, or twisting and pruning, do a bit of office work, forecasting, production, planning work schedules, liaising with sales teams, sorting fertiliser, and of course overall growing."

Peter has been full-time with Gourmet Waiuku since 2014, having previously worked for Gourmet Mokai along with a three-month work experience at Enza Zaden in North Holland.

Capsicums being graded at Gourmet Waiuku

Peter Schreuder competing at last year's Pukekohe regional Young Grower of the Year

He was one of seven contestants in the Pukekohe Young Grower competition last year – and has signed up to compete again this year.

> **Young Grower competitions are a great opportunity to challenge yourself**

"I've already entered – as soon as I heard about it, maybe even back in December. I want to do a bit better than last year."

Young Grower of the Year is an annual competition run by regional organisers and Horticulture New Zealand to select the finest young grower in the country.

Speaking to *NZGrower* last year, Peter said the most challenging modules involved soil and fertilisers as he is more familiar with hydroponic growing in cocopeat and rockwool. His best was the marketing module as he was able to take his time to ensure all the details were covered.

"I also thoroughly enjoyed the panel even though I thought this would be the hardest."

Peter says the Young Grower competitions are a great opportunity to challenge yourself.

"It may seem daunting at first but the organisers and module runners were incredible to make you feel as comfortable as possible."

YOUNG GROWER DATES ANNOUNCED

Young Grower™ of the year

This year's Young Grower of the Year regional events	
Central Otago	16 May
Pukekohe	23 May
Hawke's Bay	5–6 June
Nelson	19 June
Bay of Plenty	27 June
Canterbury	10 July
Gisborne	17 July
National Final	
Canterbury	10–11 September

Save the date to come out and support the industry!

Young growers can enter this year's competitions at **www.younggrower.co.nz.**

Taranaki grower Jodi Roebuck speaking on a panel called "Growing vegetables and community resilience"

OPINION

THOUGHT LEADERS

REGEN MOMENTUM BUILDS AT FESTIVAL

Last month I had the pleasure of attending the first Underground Festival – a two-day event for farmers and growers who are interested in soil, food and farming.

Stephen Newman : Orchardist, farmer and facilitator

Some 300 attendees from different sectors – dairy, wine, horticulture, sheep & beef, deer, arable – travelled from around the country to hear from 42 speakers (mostly farmers) at Greystone Wines, a regenerative, organic vineyard in North Canterbury.

I had been invited to speak on a panel about the value of farmer discussion groups being led by the regenerative farming network Quorum Sense. I have to admit, I hadn't done much research before turning up and had expected to be walking into a food and wine festival.

Kiwifruit grower Stephen Newman

But I didn't realise how good and how powerful it was going to be. It really cemented two things for me; one, being the importance of events like this in getting farmers and growers connecting and sharing ideas; and two, the vast amount of knowledge we hold here in New Zealand when it comes to regenerating our soils.

This wasn't your typical field day or conference. There were bell tents and campervans, an impressive BBQ tent serving regenerative beef and locally grown vegetables, a demo paddock planted out in multi-species summer mixes, exhibitor stalls, and two large tents for seminars.

The two-day programme had three sessions happening at once so you could pick and choose what to do and see. International soil educator, Nicole Masters, talked about soil observations and adaptive management from a large hole in the pasture demo field. The esteemed vegetable grower and Taranaki-based farmer

Farmers and growers at an outdoor session at Underground Festival at Greystone Wines in North Canterbury

Jodi Roebuck presented a keynote talk on how lean and keyline design principles can help us farm and move forwards. Another tent hosted a fascinating discussion between three farmers at different stages of their agroforestry journey.

It almost didn't matter whether you were a dairy farmer, a vegetable grower, or a viticulturalist, most of the sessions were relatable. At the end of the day, we're talking about soil. Whether it's soil biology, diversity, ecology, nutrients or water, all those things apply to whatever you're growing, whether grass, kiwifruit or avocados. I really enjoyed the biochar workshop and realised I didn't know as much as I thought.

I was speaking on a panel called *The Value of Farmer Networks and Groups*, with Sue Cumberworth of Quorum Sense, and experimental cropping farmer Simon Osborne, who was forming groups in the very early days of regenerative agriculture and a founder of Quorum Sense.

Both as a farmer and kiwifruit grower, as well as a facilitator of three regional discussion groups, I see a real mix of people getting curious about improving their soils and giving regenerative practices a go.

To me, discussion groups are all about getting connected. Connecting with others shortens your learning curve significantly. Nine times out of 10, you'll find someone who's already done something you're thinking of trying.

Events like Underground and regional discussion groups are invaluable for people thinking about taking the first step and making small changes toward regenerative management.

Five years ago, the first thing we stopped doing in the kiwifruit orchard was spraying the row with glyphosate. Then we started to look at our fertiliser programme (moving away from synthetics), and at our soil biology tinkering with biological sprays. This really helped us on this journey of looking after the soil.

> **Nine times out of 10, you'll find someone who's already done something you're thinking of trying**

Making these changes doesn't need to be expensive. If the experiment failed, my crop wasn't going to fail. I was comfortable taking little steps each year, trying different things and knowing that it wasn't going to have a detrimental effect on my crop if it didn't work out.

There's a real momentum happening out there. I was blown away at our first kiwifruit field day – we had 75 people turn up eager to learn.

It's not just in kiwifruit. There are a lot of farmers and growers asking how do I improve my soil biology and create a more resilient ecosystem on my farm or in my orchard? So if a frost comes in, or a drought happens, your plants are protected and able to recover more quickly because they've got that resilience from the biology and the soil in the ecosystem.

Learning how to turn farm waste into vermicast

There are pockets of change happening up and down the country. The ripples start when we get together with other people in our regions, start small groups, and discuss our ideas.

The more we learn, the more we move forward. The more people on board, the more our knowledge grows. I know it works.

The number of people getting involved in regenerative agriculture and interested in soil biology, both companies and individuals, is hugely exciting. It has come along here in leaps and bounds. This is the innovation curve we need to continue on, in order to remain a leading food producing nation.

Join the community near you

Interested in regenerative growing? Get in contact with the folks at Quorum Sense for upcoming events and regional community groups: **www.quorumsense.org.nz**

THE MORE **PEOPLE** ON BOARD
THE MORE **OUR KNOWLEDGE GROWS**

Changes are coming to plant health product regulation, but what impacts will they have for growers? Photo courtesy of Croplands

CUTTING RED TAPE ON **NEW CHEMISTRY**

New regulatory changes aim to address lengthy approval processes for plant health products, potentially generating hundreds of millions in economic benefits for the primary sector.

NZGrower & Orchardist staff

KEY POINTS

- **New Zealand is streamlining plant health product approvals to tackle lengthy regulatory processes and the backlogs of applications.**
- **The sector welcomes 16 recommendations aimed at improving the proportionality, efficiency, transparency and certainty of the approval path.**

New Zealand's horticulture industry has welcomed the government's commitment to streamline access to plant health products, following the Agricultural and Horticultural Products Regulatory Review conducted last year. The government released the review's findings at the end of February.

HortNZ chief executive Kate Scott emphasises the importance of these changes: "Horticulture relies on innovation to maintain productivity and sustainability. However, unnecessary delays in product approvals have made this increasingly difficult for growers."

The review was triggered by industry concerns about regulatory burden impacting New Zealand's international competitiveness, with some reporting waiting periods exceeding five years for new product approvals.

"New Zealand's growers are grappling with pests such as tomato-potato psyllid, aphids and whiteflies, so timely access to the latest tools is essential to protect crops from these threats and ensure the ongoing success of the sector," Kate adds. "We also need to be ready for the risk of new pests arriving from overseas such as brown marmorated stink bugs."

The Ministry for Regulation identified several issues with the current approval process, particularly the lack of a common strategic approach across the Agricultural Compounds and Veterinary Medicines Act (ACVM) and the Hazardous Substances and New Organisms Act (HSNO).

To address these challenges, Cabinet accepted 16 recommendations, including establishing a Sector Leaders Forum and setting targets to accelerate assessments and reduce queues.

Other recommendations include making regulatory systems easier to navigate, increasing use of HSNO rapid pathways, amending HSNO emergency provisions to better enable products to be approved for biosecurity responses, greater reliance on international regulators' assessments, and exploring a strategic pathway for priority products.

The review estimated the size of potential increased trade costs that New Zealand fruit and vegetable exporters could face due to market access barriers, for example potential new regulations in the European Union (EU). The present value cost of not being able to respond to EU regulatory changes for horticultural products was estimated at $250 million over 20 years.

Dr Liz Shackleton, chief executive of Animal and Plant Health NZ, welcomes the findings: "New Zealand's primary sector needs to get these vital products out of the approval queue and into the hands of farmers and growers. If the regulatory agencies can deliver on the direction set by Ministers, then this will help the primary sector economy to grow."

Liz notes that the report reinforces industry concerns about "eyewatering timeframes to introduce a new product and the high cost to New Zealand's primary sector."

Dr Allan Freeth, Enivronmental Protection Authority (EPA) chief executive says: "The EPA recognises the importance that timely assessments and decisions on agrichemicals have for industry. We welcome the opportunity for further improvements to the legislation, and how we operate."

> **"The focus must be on turning these policy changes into tangible benefits for the industry**

Industry representatives stress the need for swift implementation. However, until there are clear details about the proposed amendments, the industry will continue advocating for the outcomes that growers need.

"It is now crucial that these recommendations are implemented quickly, so growers see meaningful improvements on the ground. The focus must be on turning these policy changes into tangible benefits for the industry," Kate says.

Gavin Kerr, Animal and Plant Health NZ Board chair, echoes this sentiment: "Our members will remain cautious until we see a steady stream of decisions on applications, rather than the current slow trickle."

The Ministry for Regulation's report acknowledged that New Zealand faces ongoing competitive disadvantages due to its small market size, reliance on crops that are minor internationally, and remoteness from manufacturing bases. However, the changes should help alleviate identified issues while continuing to effectively manage risks.

The Ministers for Regulation, Environment, and Food Safety will jointly oversee implementation, with the Ministry for Regulation providing ongoing advice throughout the process.

Surfing For Farmers operates at 25 beaches around the country

KEEP YOUR HEAD **ABOVE WATER**

The tougher the day, the better the water feels, says Surfing For Farmers national co-ordinator Sarah Shanks.

Kristine Walsh

Oftentimes, farmers just want to get out in the water, catch a few waves and wash the week out of their hair, she says.

In the eight years since Stephen Thomson founded it in Gisborne, Surfing For Farmers now operates at 25 beaches around the country and gets around 8000 participants off the land and into the water.

"You see people come along after a hard day, pull on a wetsuit and come out a lighter, brighter version of themselves," Sarah says. "Our hope is that, when they get home, their pile of things to do looks more manageable than it did when they left.

"Our entire aim is to provide a space where farmers, including growers, can get off the land and focus on their own needs, if only for a short while," she says. "So those connections with like-minded people are really, really important."

And, if they choose, there's lots to talk about.

Since the Covid-19 pandemic followed by sometimes persistent (sometimes catastrophic) weather events, orchardists and vegetable growers have been driving forward to address issues from transport to crop and property damage.

"Now they are just starting to raise their heads and find themselves facing rising costs, low prices for their produce and, in some cases, some serious conversations being held with their banks," says Rural Support Trust's Gisborne/Tairāwhiti area co-ordinator Vicki Crosswell.

"It's been tough but there's not been any let-up and that's exhausting, which is why we support initiatives like Surfing For Farmers, both locally and nationally.

"We see anything that helps someone get off the farm and concentrate on something other than the day-to-day as being critical to their wellbeing."

The word "wellbeing" is one Vicki uses a lot.

"It might be about how someone feels in themselves, and how we can support them," she says. "But it might also be more practical things, like dealing with the council or insurers, and if it's appropriate we'll walk alongside them in that, too."

In the course of their work Vicki and Rural Support Trust facilitator Erin Green have traversed across the Poverty Bay Flats, inland, way up the East Coast to Te Kaha, and everywhere in between.

Rural Support Trust Gisborne/Tairāwhiti area co-ordinator Vicki Crosswell (pictured) and facilitator Erin Green have traversed the length and breadth of the region to offer growers the support they need, when they need it

She started with Rural Support Trust just a couple of weeks after Cyclone Gabrielle – during which her own property on the outskirts of Te Karaka was hugely affected – so, she says, "I don't really know what 'normal' looks like in this role".

"While many weren't badly impacted, many were, and what we're seeing now is a whole lot of mental fatigue.

"After a couple of years of running on adrenalin some are now looking at their businesses and seeing things aren't getting any better. The squeeze is on prices and some people's finances are stretched, so there's a bit of a shift going on."

For many that requires hard decisions like whether to pull out plants stressed by root rot and, if so, whether to replace them, she says.

"For some who were near retirement it's been a particular blow. They've worked the land for decades and have had to decide if they have it in them to rebuild.

"In saying that, many are in a pretty good place. They've done the hard grind, come out the other side and are able to look back at what they've achieved and think 'shit, we actually did it!'."

Frequently, it's the little things that make a difference, Vicki Crosswell says.

"We recently funded a leatherwork course (delivered by Wai Connection) and seeing people so immersed in something other than what was happening back home was incredible.

"Then in March we sent another group to Outward Bound's Anakiwa site where they can really focus on their own wellbeing. If they don't have that, they don't have anything."

Together with the Tairāwhiti Growers Association committee, chair Tim Tietjen and secretary Tessa Rodden are working to get growers energised, engaged, and working together on the health of the industry

While Surfing For Farmers and the Rural Support Trust are built around farmer wellbeing, Tairāwhiti Growers Association (TGA) was recently refreshed with the view that in addition to offering comradery and connections for growers, it can also help build a healthy industry to support their endeavours.

TGA was borne out of the former Gisborne Produce Growers Association when, in 2023, some passionate and engaged multi-crop fruit growers looked to establish a group that represented all Tairāwhiti growers.

And with that combined strength behind it TGA has just about burned through its action plan for 2025 – holding a breakfast event for growers; working to help ensure water security; launching a quarterly newsletter; getting involved with the regional Young Grower of the Year competition; and planning learning and networking events for young growers for later in the year.

"There is a lot to do and probably the biggest hint as to how much this work is needed came at our breakfast event, in February, which was hosted by the fantastic team at Horticentre," says chair Tim Tietjen.

"It's always tricky to get growers off the land and we thought we'd be lucky if we got around 30 to turn up on the day.

"In the end we got more than twice that and some came at the 6am start time and stayed until the end three hours later.

"So it was a great opportunity to get growers together in a space where they felt supported and could use each other as sounding boards."

> "Frequently, it's the little things that make a difference

The main feedback was that growers wanted to be involved in the new TGA structure, and were keen on its hyper-local focus, Tim says.

"Gisborne is a big growing region but it's not the biggest, and many felt our voice was not getting heard where and when it needed to.

"We don't want people to feel stuck on-farm and out of the loop. We want them to be energised, be engaged, and work together on the health of our industry."

Making connections

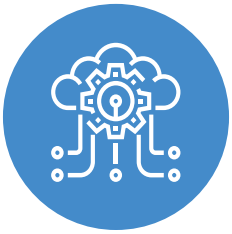
- Rural Support Trust – **rural-support.org.nz**
- Surfing For Farmers – **surfingforfarmers.com**
- Tairāwhiti Growers Association – **nztga.co.nz**

LIFTING THE FOG ON **AI WEATHER**

To see how Artificial Intelligence (AI) is changing horticulture in New Zealand, the first place you might look is fine-resolution weather forecasting. We talk with the team at the DeepWeather project to find out how the technology could help growers.

NZGrower & Orchardist staff

If you are growing in complex terrain like Earnscleugh or up in Maungatapere, you've probably learned to take regional forecasts with a grain of salt. The grid of 4km 'squares' typically resolved in weather models often fails to capture the weather in New Zealand's micro-climates.



It's not because traditional forecasting generated by NIWA/MetService or IBM (The Weather Company) doesn't work. It's just that the cost of running supercomputers to solve the physics equations down to the higher spatial resolution – say 400m x 400m – of your growing operation is prohibitively expensive.

In contrast, forecasts based on data-based AI weather models – developed by training 'machines' on historical data to forecast the weather a week or so into the future – are much cheaper.

If an AI model could forecast weather in high-resolution 400m x 400m grids, and the forecast is applied in combination with horticulture decision support tools, growers could benefit from more precise irrigation, workforce, harvest and spray planning – not to mention advance frost and severe weather events warnings.

But the business case only stacks up if the forecasts are accurate. By now most of us have heard that AI still has its weaknesses. Those largely come down to the quality of the AI model that is used to make forecasts.

Developing and training a high-quality AI model is itself a huge undertaking. Over the past 5 years, massive advances have been made internationally in giving an AI-based machine enough observation data so that the machine can *learn* to create the forecast.

Google's WeatherNext and Huawei Cloud's Pangu-Weather are two big global data-driven weather models. While these models are often nearly as good as traditional models (and cheaper), many researchers see more promise in AI models that combine traditional models with machine learning.

There are probably several hundred such research initiatives underway around the world. However, it's unlikely that AI models developed overseas will be able to generate much more accurate results for New Zealand conditions.

Our weather is notoriously difficult to forecast. We sit in a vast region of the Southern Ocean that is very data sparse. New Zealand's highly complex terrain means localised micro-climates on slopes, or in depressions where cold air pools, are quite different from the general weather over a larger area.

Fortunately, there are initiatives underway in New Zealand to develop high resolution AI models trained on our unique weather situations, including two funded by the Ministry of Business, Innovation & Employment's Endeavour Smart Ideas programme.

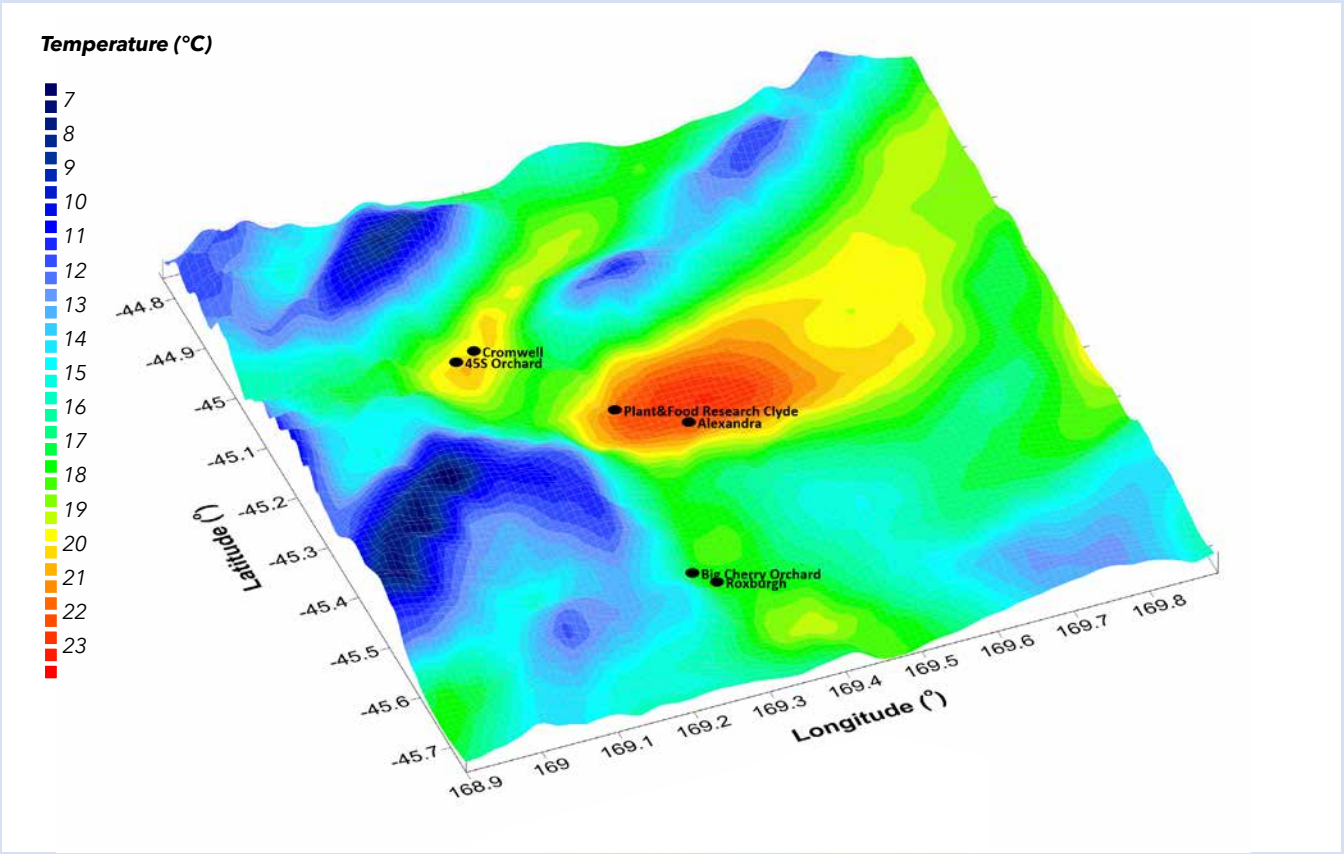
The first, at NIWA, is developing higher resolution climate projections to better anticipate climate change well into the future. This could help in long-term policy planning.

deepweather
forecasting your weather better

The DeepWeather project applies artificial intelligence methods to develop a new way of generating weather forecasts, producing high-resolution forecasts at a fraction of current costs. The DeepWeather project is funded by the Ministry of Business, Innovation & Employment's Endeavour Smart Ideas programme.

Visit **www.deepweather.org.nz**

FIGURE 1: TYPICAL WEATHER FORECAST



The second project is DeepWeather, which is developing a model for short-term weather forecasts (times-scales of hours to days) of six variables at high spatial resolution over all of New Zealand. Greg Bodeker (Bodeker Scientific), Emily O'Riordan (Victoria University of Wellington) and Greg Pearson (MetService) are part of the research team at the DeepWeather project.

The project is attracting interest from around the world. To understand why, first we need to consider how AI machine learning works.

The machine is created in the form of an artificial neural network with perhaps several tens of millions of tuneable parameters. It starts by guessing the forecast. Of course it gets it wrong and it is told how much it got it wrong by. It tweaks its parameters and tries again. Maybe it is now a little better so it keeps those tweaked parameters.

By repeating this trial-and-error process many millions of times, the machine learns how to generate a forecast just from prior data. This is referred to as 'training' the AI model.

But that AI model knows nothing of the physics of the atmosphere in the way that a traditional physics-based model does. It could be generating weather forecasts that violate the law of physics, and nobody would know unless the effects were obvious.

"In the DeepWeather project we have said, 'Not so fast with dispensing with two centuries of physics!'," says Greg. "We have taken a different approach where we have augmented the capabilities of a traditional weather forecast model with AI."

The project team has taken pairs of high-resolution (imagine 1km x 1km) and low resolution (imagine 4km x 4km) representations of the same atmospheric state, and then trained an AI model to predict the high-resolution state from the low-resolution state. This means that the traditional model used by MetService can continue running at 4km resolution and DeepWeather converts, on the fly, the 4km resolution forecasts to 1km resolution forecasts.

"As far as we are aware, nobody else has attempted this approach to enhancing a traditional model."

There is one more twist to the tale. A reason why weather forecasts diverge from reality is because the traditional model cannot resolve weather features smaller than the

FIGURE 2: DEEPWEATHER FORECAST WITH MACHINE LEARNING

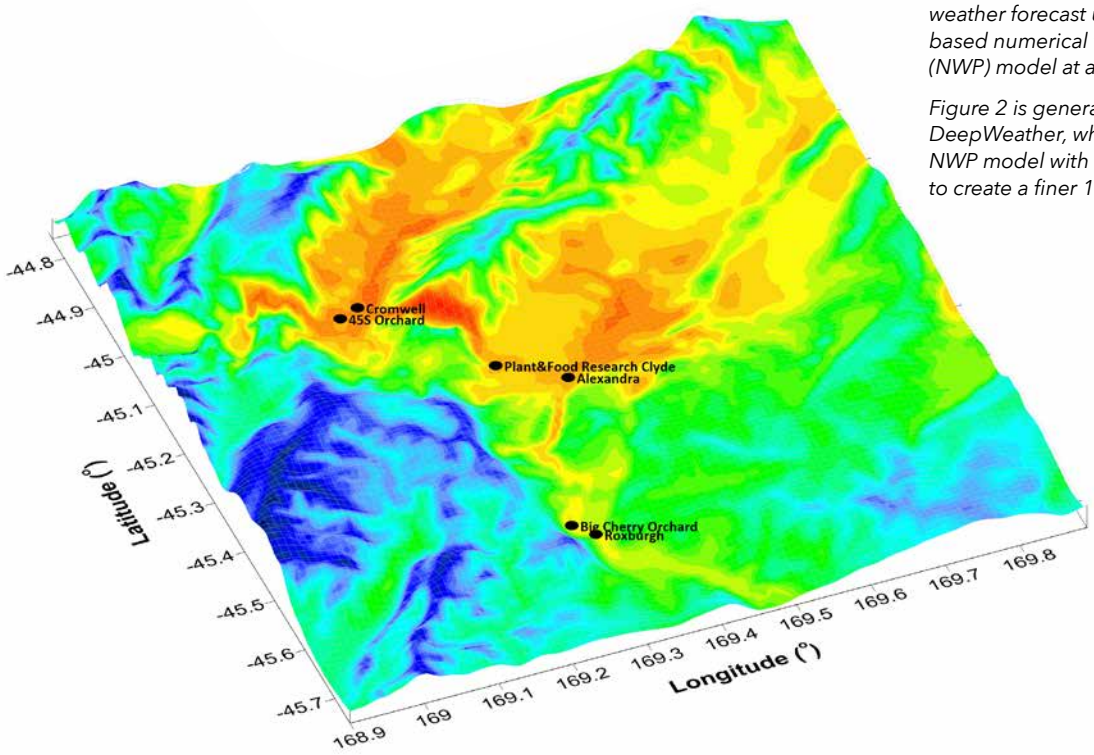


Figure 1 opposite shows a typical weather forecast using a physics-based numerical weather prediction (NWP) model at a 4km grid resolution

Figure 2 is generated by DeepWeather, which augments the NWP model with machine learning to create a finer 1km grid resolution

resolution at which the model runs, e.g. 4km. But those smaller features can in turn change the state of the weather over a far larger area. A low-resolution model doesn't capture that effect.

"We therefore take data from the AI model's high-resolution rendition of the atmosphere and 'push' it back into the model used by MetService as if they were observations. Our hope is that this also improves the accuracy (and not just the resolution) of the weather forecast – something that we are still testing."

While the DeepWeather project team has made a lot of progress in developing this AI-enhanced weather forecast model, it is not yet finished.

"We are running tests on a supercomputer provided by New Zealand eScience Infrastructure (NeSI) and would like to acknowledge NeSI for their fantastic support."

Once this capability is taken up into MetService's operational forecasting chain, it should result in higher resolution, and hopefully higher quality forecasts, in orchards and farms around the country.

CONTINUED IN THE MAY ISSUE

Next month we will look at data availability. Growers won't benefit from more accurate forecasts from an AI-based model if the volume of meteorological observations decreases. What data are required to train a New Zealand specific AI model and what data do New Zealand producers need for a competitive edge?

DRIVERS OF CHANGE WITHIN THE PIPFRUIT INDUSTRY 1985–2025 PART 1

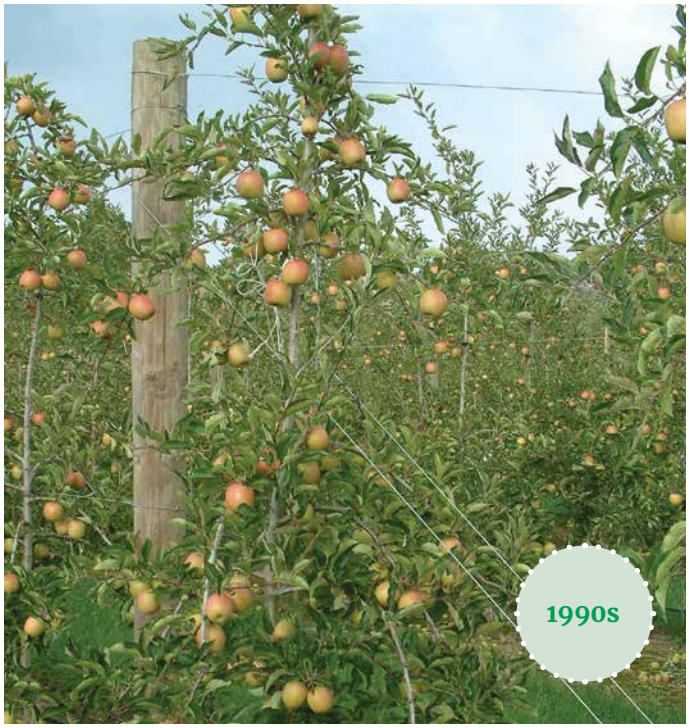
Jonathan Brookes and Sarah McArley (née de Bruin) : AgFirst Consultants Hawke's Bay

The pipfruit industry is at a pivotal moment. The 2025 season is showing great improvements to quality, yield and size compared to the previous few years, with returns looking promising.

But alongside this, costs of production continue to rise. Grower decision making is characterised by potential productivity gains, labour efficiencies and ability to maximise returns.

In theory, being an orchardist is easy. Growers just need to provide fruit to the market that returns enough for businesses to be financially sustainable. However, ongoing success takes specific attention, and requires growers to juggle several key factors:

- Growing the fruit that maximises market returns.
  - Variety, growing method, quality, size, packaging, timing
- Reaching markets that will achieve the best returns for our fruit.
  - Market access, customer relationships, sales programmes, consumer perception
- Growing fruit at a price point that allows financial sustainability.
  - Orchard costs, post-harvest costs, shipping costs, debt
- Growing maximum marketable yields throughout the life of the trees to increase returns and reduce the impact of fixed costs.
  - Early production, cumulative yield, maximum yield, Class 1 recovery, optimum size, maximum high-grade fruit
- Managing other potential risks to the business.
  - Climatic (flood, drought, sun, frost, hail, wind)
  - Labour (supply, cost, skills and training)
  - Pest and Disease
  - Nutrition
  - Right to farm (compliance, community perception, regulations)



Tentation, a variety derived from Golden Delicious. This was a common "new variety" in the 1990s

The balance of these factors is key to success, and if this balance is out, any of the above factors can destroy the business sustainability of growers.

During the 1985–2025 period, growers faced numerous challenges but also celebrated numerous successes. In this two-part series, we are casting our minds back over these last four decades of the pipfruit industry to consider the drivers of change within each decade, what the greatest limiting factors were and their potential as catalysts for exit from the industry, as well as how growers responded and what actions were taken by those who survived or thrived.

1985–1994

In the mid-1980s, pipfruit orchards were commonly planted as formal four-tier centre leader trees on MM106 rootstock at 5 – 5.5 metres between trees. Tree support was relatively low, with short posts and a few wires used to hold the trees for the first couple of years. At that time, commercial crops were not expected until five years after planting.

Red Delicious and Granny Smith were mainstay varieties, with Royal Gala and Braeburn coming on stream. However, throughout the decade there was steady supply of newly planted varieties ranging in success, including Fiesta®, Jonagold, Fuji and the Pacific series.

Early adopters trialled 3.5 to 4m row spacings around 1990 on M26 and Mark rootstock, focussed on pedestrian orchards to reduce ladder work and therefore labour costs. However, poor tree support and smaller trees meant the yield reduction outweighed any potential cost saving gains. Ebro-Espallier and Lincoln canopy systems were also trialled by some. Although these new systems had improvements with production efficiency, flaws were identified such as the use of non-dwarfing rootstock and older varieties choice, increased input costs, or lack of management understanding. Either way, in this decade growers identified that big wide plantings needed to be phased out.

> **“ The orchard labour force changed significantly in this decade with the ‘housewife’ labour force being replaced with foreign labour, including backpackers**

The New Zealand Apple and Pear Board was mostly focussed on the United Kingdom and European markets, and minimal volumes of fruit were exported outside these regions. Then in 1994 the New Zealand Apple and Pear Board rebranded to ENZA.

Off-orchard, global economic forces had resulted in high inflation, eye-wateringly high lending rates and volatile currency exchange. The subsequent ‘Rogernomics’ market reforms and the float of the New Zealand dollar in March 1985 had a huge impact on the primary sector. Additionally, the global Black Monday stock market crash in 1987 and New Zealand’s monetary policy led to a long recession and high unemployment that lasted well into the 1990s.

The orchard labour force changed significantly in this decade with the ‘housewife’ labour force being replaced with foreign labour, including backpackers. Orchards had highly skilled permanent staff, trained through work experience or cadetships.

The major climatic disaster in this decade was the hailstorm in Hawke’s Bay on 2 March 1994, resulting in the loss of three million cartons of fruit which affected over half of the growers in the region.

1995–2004

In 1995 there was a rise in pipfruit planted area across New Zealand. Planting densities increased with spacings commonly at 4m x 2m on more dwarfing rootstocks (MM106, M26, M9), although tree structures were still insufficient in providing full tree support.

In 1996, the United Kingdom and European markets put market access pressure on pesticide residues on food products. Accordingly, ENZA introduced the integrated fruit production (IFP) programme that dramatically changed the way growers sprayed their orchards.

Hawke’s Bay experienced hail in 1996 and 1997, before a market collapse resulting in huge removal of Fiesta, Regal and Red Delicious blocks. Additionally, the New Zealand dollar followed major cyclical swings, and in the late 1990s, exchange rate hedging resulted in major losses. This caused a massive shock through the industry, with growers exiting and a reduction in planted area. The packing industry also experienced decline, especially in Hawke’s Bay. Expensive packhouse infrastructure upgrades were required, with a focus on other packs apart from standard 18kg Z-packs.

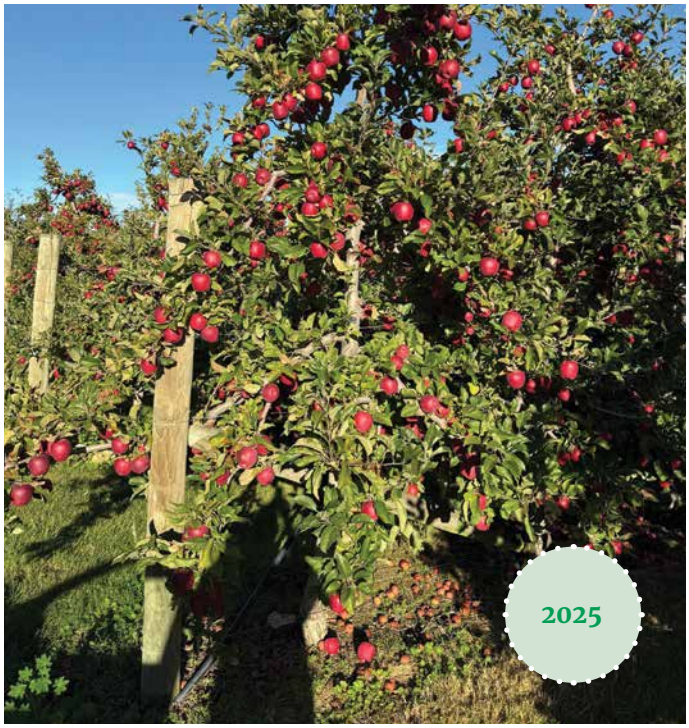
In response to this downturn and ongoing poor returns, the bankability of the industry was under question.

In 2001, the New Zealand apple industry deregulated, removing ENZA’s control of costs and market supply. Returns in the first few years following deregulation were positive, as growers were able to hunt out different market opportunities. An excellent growing season was welcomed in Hawke’s Bay in 2002, but this was followed in the 2003 season by climatic challenges with hail in Nelson, and frost in Hawke’s Bay.

Towards the end of this decade, the industry made a significant move towards intensive spindle plantings on M9 rootstock, although tree support continued to be suboptimal.

The Northern Hemisphere post-harvest operators started to use significant volumes of 1-MCP (Methylcyclopropene) applications (a synthetic plant growth regulator) in 2004. This signalled the start of the decline of the Northern Hemisphere markets for New Zealand apples.

Flooding in Hawke's Bay during Cyclone Gabrielle, February 2023



A fantastic looking 2025 Pacific Queen crop, that has recovered well from the previous few years of poor crop outcomes

2005–2014

Four years after deregulation, buyers were playing New Zealand exporters off against each other in historically strong markets, such as Braeburn in the United Kingdom and Europe. Consequently, returns dropped below the cost of production and this, coupled with unfavourable exchange rates, resulted in another large exit of growers.

After the reductions in planted area over the previous decade, orchard staff levels declined. Older growers and permanent staff started to retire, creating shortages of skilled people in supervisory and management roles. During the late 2000s labour was identified as a significant industry challenge. In response, the Recognised Seasonal Employer (RSE) scheme was introduced in 2007, bringing in a labour force at key seasonal timings. This scheme was a game changer across the horticultural industry.

Market focus on environmental management increased, with programmes such as EurepGAP (now GLOBALG.A.P) and Tesco's Natures Choice standard being introduced. The Apple Futures programme, a partnership between the New Zealand pipfruit industry and the government economic development agency NZ Trade & Enterprise, was created to meet this market demand, with a focus on optimising spray use on orchard.

Growers became concerned with the lack of coordination in the European marketplace and reliance on commodity varieties. Marketing companies started to broaden horizons and Asia slowly became the new target. This meant that there was a faster move away from commodity varieties particularly with grower suppliers, looking instead to a five percent per year orchard renewal through removal of older unprofitable blocks and replanting new varieties.

> **During the late 2000s labour was identified as a significant industry challenge**

Growers were continuing to plant intensive spindle canopies on dwarf rootstocks. Varieties included Jazz™ and high colour strains of Braeburn, Fuji, Gala, and Pink Lady®. Other novel varieties were also hitting the market including Sunrise, Morning Mist™, SweeTango™ and Kanzi®. Growers started to see differences in the level of success between varieties depending on whether they were Asia focussed. A planting push for Envy™, Rockit™ and Ambrosia™ began towards the end of this decade.

Climatic events to note within this decade were a significant frost event in Hawke's Bay in 2008 and hailstorms that hit Hawke's Bay in 2011 and Nelson in 2012.

2015–2024

Adoption of new growing systems increased with slender canopies of increased density for improved light capture, labour efficiencies and a future focus on robotic harvesting. Formal systems such as 2D and FOPS (Future Orchard Planting Systems) were being planted commercially, and growers were actively upskilling in the management these systems required.

The introduction of apple licence fees alongside increased planting densities meant that orchard establishment cost ballooned significantly, and land price increases followed.

A major shift in variety mix continued in response to market demand and returns available. Over the ten years, Royal Gala remained the largest single variety making up a quarter of the area, but European-centric varieties saw a steady decline, making way for new IP (intellectual property) variety planting such as Dazzle™, Posy™, Rockit™, Ambrosia™ and Envy™. Costs were creeping up, but until 2020 it did not seem to matter to those with high paying apples for the Asian market. The world was happily trading, and we were happily supplying. Good times!

On 26 March 2020, New Zealand went into a two-month lockdown due to the Covid-19 global pandemic, and pipfruit growers undertook significant measures to enable harvest to continue safely. The pandemic brought significant challenges to the industry. There was major disruption to the global shipping network, resulting in increased costs and decreased reliability in getting fruit to market. Shipping disruptions also caused inflationary pressure on goods. Lockdowns and border restrictions meant the backpacking labour force disappeared and RSE labour was restricted, with a cost to growers for managed isolation and quarantine facilities. Border closures continued to restrict labour supply into 2021 and 2022, resulting in a significant volume of fruit bypassed at harvest.

Climatic disasters also characterised this decade. Nelson suffered a significant hailstorm in December 2020, which resulted in a 30 percent loss in potential crop from this region. In the 2022 season, the La Niña weather pattern and a very wet growing season in the North Island resulted in poor crop outcomes. Ongoing wet conditions continued into the next season, then in January to February 2023, Cyclone Hale, followed by Cyclone Gabrielle resulted in a significant loss of around ten percent of planted area and 37 percent of export crop (3.6 million TCE) across Hawke's Bay and Tairāwhiti. The cyclone was a catalyst for grower decision making whether to salvage blocks or remove them instead.

> **“There was major disruption to the global shipping network, resulting in increased costs and decreased reliability in getting fruit to market**

Returns were poor across the variety mix and production costs greatly inflated. Ongoing minimum wage increases meant that New Zealand became one of the most expensive apple growing regions in the world.

2025–2034

And now we have reached 2025 and our current decade. Following several difficult seasons, growing conditions and fruit quality this season are much improved and the returns realised in 2024 ended up as some of the highest achieved. However, production costs continue to be very high, and input cost cutting, particularly through labour efficiency, is a major ongoing focus of the industry.

In next month's article, now that the scene has been set, we will explore the different responses from growers across the four decades, and what learnings can then be taken forward into the future. ●

The bean trial in Canterbury, part of a project involving A Lighter Touch, Process Vegetables NZ, processing companies Heinz-Wattie's (Kraft-Heinz) and McCain Foods, and research partner Plant & Food Research

BENEFITS EMERGING FROM BIOLOGICALS

A project evaluating biological controls in two process vegetable crops has the potential to put New Zealand process growers ahead of the curve internationally in biological crop protection use.

Gina Jewell : A Lighter Touch programme

That's the view of Canterbury grower and Process Vegetables NZ chair David Hadfield. He's talking about a project involving A Lighter Touch, Process Vegetables NZ, processing companies Heinz-Wattie's (Kraft-Heinz) and McCain Foods, and research partner Plant & Food Research. It aims to identify biofungicides and biostimulants which are effective against two of the key diseases, fusarium and sclerotinia, in peas and dwarf beans.

The project came about due to a number of factors; loss of chemistry through regulatory change, risk of resistance building up in remaining control options, and changing overseas market access requirements, driven by supermarket chains and distributors not wanting certain chemicals used on the produce they were buying.

"It was a trend we could only see continuing into the future. Biologicals are the future direction for crop protection, and if we're reasonably early adopters by establishing through this project what works and how, New Zealand process growers will be ahead of the curve on a world stage."

Some of the biological products being evaluated as part of the project are not yet registered for use in New Zealand. They are subject to an Environmental Protection Authority containment and field trial approval, which enables them to be included in the project trials.

Results from the first two seasons are so far looking promising in terms of finding products that will be effective against fusarium in peas and sclerotinia in beans, and a third season of trials has just been completed, with the data now being analysed.

These beans grown in Canterbury are part of the trial evaluating 26 biological products, generating a wealth of data about their efficacy

Plant & Food Research senior scientist Dr Soonie Chng, who has led the research, says the project has been a challenging one, with so many variables – two different crops, two different diseases, one above ground and one below ground.

"These are biological products, so you're dealing with living organisms, that's also one of the challenges. And that's why you're never going to have exactly the same performance from them all the time."

This has been reflected in the trial results which saw a number of stand-out products in the first season in terms of performance. However, in the second season, the impact of different disease pressure, an early season frost and weed competition in the bean trial, impacted their efficacy.

"Despite being under that pressure, there were a couple of products that stood out and stayed consistent. The control was not extremely high in the second season, like we saw in the first year, but the consistency was there, which is very promising," Soonie says.

"We're working with living organisms, so we have to learn how they're going to perform under different weather conditions. Whether they're going to stay on the plant, stay in the soil, how long they will stay viable, if they'll get washed off because of the rain."

The combination of products working together is also key to success. Heinz-Wattie's has partnered in the project since it began, and senior agronomist Nigel Rowe-Lucas says what has become clear is treatments need to be in combination, "there's never going to be a silver bullet."

While the first two seasons of trials were in Canterbury only, in the third year, a bean trial has also been set up on a Hawke's Bay site, selected by McCain's who have now joined the project. Next season, in the project's fourth year, a Hawke's Bay pea trial will also be included, enabling North and South Island comparisons.

The 350 process vegetable growers in New Zealand are located across the two Islands, and Soonie says having data from both Canterbury and Hawke's Bay is important. "We need to make sure we understand how the products work in both regions, with different soil conditions and climatic conditions."

HOW YOU COULD BENEFIT:

- **Get ahead of global competitors** through early biological control adoption
- Control fusarium and sclerotinia **without relying fully on chemicals** that face resistance or regulatory restrictions
- Reduce spray applications with **better disease cycle understanding**
- **Meet changing market expectations** about the use of some chemicals
- **Explore potential yield increases** by applying biologicals

WHAT ARE BIOLOGICALS?

Biologicals is a broad term used to describe crop management products derived from natural sources, including plants, fungi, and bacteria. The term can also be used to encompass biocontrol organisms, also known as natural enemies, beneficial insects and biological control agents depending on the context.

Biological products which are applied to a crop include biofungicides, bioinsecticides and bioherbicides, collectively known as biopesticides. Biopesticides include live microbes (such as bacteria, fungi and viruses) and/or their extracts, crude or purified plant extracts, pheromones and other natural biochemicals.

Biostimulants are products used to stimulate plant growth and optimise plant health, and biofertilisers are substances that contain natural products/ living organisms used to increase fertility of the soil or directly on plant foliage.

Any biological product that makes a management claim, such as pest, disease or weed control, must be registered under the ACVM Act 1997 and, where relevant, have Environmental Protection Authority approval to import or manufacture. The regulatory approval and registration processes for biopesticides currently follow a similar pathway to synthetic agrichemicals.

It is also the project team's intention to use next season's trials as demonstration sites, enabling growers and representatives from processing companies to visit and observe trial performance by appointment. In the fifth and final year of the project, demonstration trials will be used to host field walks with growers and agronomists to share findings on the use of biological products in a disease management programme.

Nigel says extending knowledge from the trials to growers is critical to the project. "Explaining how the products work and how to get the best out of them is vital. Some growers have used biologicals, but a lot are not familiar with them, so there is a lot for growers to learn and it's about walking them through that."

The focus of this third season of trials has been on refining the products and ground-truthing the findings from the first two seasons. The third and fourth year of trials will also generate data for application timing of these products.

> **"26 products have been evaluated across the two crops, generating a wealth of data about their efficacy**

However, what the project has learned about application timing is not just restricted to when and how the biological products are most efficacious. As part of their work, Soonie and her team at Plant & Food Research have established a much greater understanding of the disease cycle in sclerotinia in beans, meaning spray applications can be reduced.

"We identified it was actually at flowering when the disease infection started, which is something you visually can't see. By the time you see the colour change (indicating disease presence), it's too late, basically the damage is done. The flowers are infected and you see a lot of them being aborted by plants."

Understanding the life cycle of the disease and how it coincides with the crop cycle is a significant step forward in terms of reducing fungicide inputs and the ongoing sustainability of products – helping to prolong their longevity by avoiding over-use.

Where growers used to spray every 10–14 days, this year's trials have reduced the number of applications to a pre-flowering and mid-flowering spray, Soonie says.

This is another example of the multi-faceted nature of the project and the benefits it is delivering, not only for process growers, but also potentially for other crop sectors. In the project to date, 26 products have been evaluated across the two crops, generating a wealth of data about their efficacy.

What this has created is an appetite from some product companies to investigate wider use of their products, Soonie says.

"What we're seeing is for some of the companies, because their product has shown efficacy in peas and beans, they're now looking at expanding that research to other crops and diseases, even on fruit crops."

Process Vegetables NZ chair David Hadfield says biologicals are the future direction for crop protection

The two diseases which are the focus of this project are common to other crops, and within A Lighter Touch fresh vegetables has already taken products that showed efficacy for sclerotinia in the bean trials and have trialled them in lettuce crops.

> **...you're dealing with living organisms, that's also one of the challenges**

For Process Vegetables NZ, the data and knowledge generated through this project is just the first step on the journey. David says some of the products investigated in the project achieved yield increases but no disease control efficacy.

"They've been dropped from this project because they're not achieving what this project is funded to focus on, but we intend to go back and look at the best ones to see whether we can achieve yield increases from them."

He is also keen to look at the potential for the use of biological products for control of other diseases and in other crops, such as carrots.

"Going forward beyond this project, that's one of the things we'll be looking at, what's the next project we can do in this area that benefits both the processor in their marketing and the grower in the way they farm." ●

Lots of helpers plucking and assessing bean yield and quality from Carbon Positive trial plots!

GETTING TO **CARBON POSITIVE**

How can regenerative agriculture principles be applied to intensive process cropping? That has been our key focus in the 'Carbon Positive' project for the last three years, and with three years to run, our team has reviewed and reset over recent months.

Dan Bloomer : LandWISE

Carbon Positive is a joint LandWISE and Hawke's Bay Future Farming Trust project funded by the Ministry for Primary Industries (MPI), Hawke's Bay Regional Council (HBRC), Heinz Wattie's, McCain Foods, and Hill Labs.

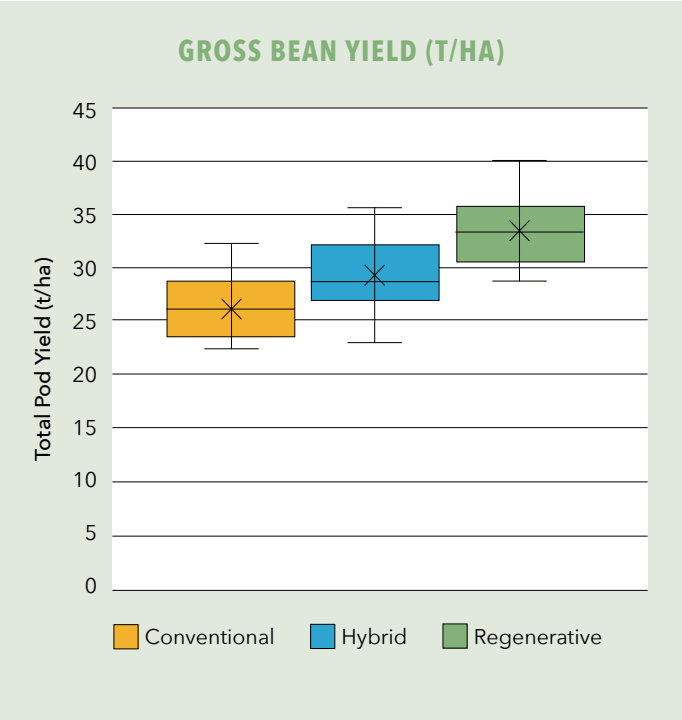
Each of the three management policies we have been implementing ('Conventional', 'Regenerative' and a 'Hybrid' version that grabs elements from the other two) produced good process tomato yields for Heinz Wattie's in 2023–2024, and the whole area was resown in cover crops.

To relieve compaction, the very last operation was aeration to shatter cultivation pans with a roller to level the surface. This meant the shattered soil was left for several months, allowing roots, earthworms, and soil microbes to establish pathways and build strength.

Research by Dr Marc Dresser showed that deep ripping before cultivation makes things worse, because the fine soil particles from cultivation fall into the gaps below and make the lower layers even more dense.

Reset 1: Continue with aeration being the last operation

Cultivation was needed in the ryegrass-sown Conventional plots after winter lambs caused significant soil pugging, but the soil under sprayed out pasture was very wet. Even direct-drilling the Hybrid plots caused surface compaction and the wet soil opened and provided slug heaven.



Box plot showing significantly different bean yields from Conventional, Hybrid and Regenerative plots

The bean harvest crew at work

Reset 2: Simplify cover crop mixes – try annual ryegrass and clovers and/or vetch

In the 2024–2025 season we grew process peas and green beans for McCain Foods. The group decided to forgo peas in the Regen plots in favour of growing more cover crop biomass and avoiding early spring cultivation. That obviously has an impact on gross margins. Would we see a corresponding benefit in future crops?

We made an operating profit from the Conventional and Hybrid peas, but the early planting did compact the cold, wet soil. The Regen avoided that, but… trying to terminate multi-species Regen cover crops without chemical herbicides proved problematic again.

Crimper rolling can work if done when the crop plants are in their reproductive phase. If it is still vegetative, the probability of regrowth is high. The likelihood that five or seven species planted together in April will all be at the right stage at the same time in spring is minimal. We had tillage radish dropping seeds, oats growing vigorously, clovers and vetch only just getting started. Early frosts had killed the sunflowers and buckwheat. We mulched the cover crop on 1 October to stop radish becoming a weed, lost growth potential and entered fallow early. Some oats regrew and were disced, but some regrew again.

After the pea harvest and our attempts to mechanically terminate the Regen cover crop, the entire trial area was disc-ripped and rolled to level the plots ready for the bean harvesters.

Reset 3: Reset the deck

Everything was left fallow for about a month, which is McCain Foods practice to avoid volunteer peas contaminating the bean crop. Just before planting, all treatments were sprayed out with glyphosate. So the Regen plots were mulched, disced, disc-ripped and sprayed out and, of all treatments, had the longest (three months) fallow without soil cover or living roots. Regen?

Reset 4: Focus on minimising fallow

Regenerative farmers in the United Kingdom visited by Phil Schofield, and Quorum Sense aligned growers in Canterbury visited by Dan Bloomer and Alex Dickson, all strategically use glyphosate in their farming systems. "Regen ag is not organics," they say. The EIQ (Environmental Impact Quotient) score of glyphosate is lower than many alternatives. Glyphosate is a tool in our arsenal and if it is the best option, we will use it. All the growers we visited noted that it unlocks the potential for many other positive actions and allows many benefits to be obtained.

Reset 5: If appropriate, use glyphosate to terminate crops

All treatments were direct-drilled with beans on 28 December. Throughout the season, we saw the Regen beans grow faster and have the highest canopy cover. At harvest, we hand-sampled and found the total fresh biomass and the gross bean pod yield had the same pattern, and yields were significantly different. The same was true for factory yields after machine harvesting and grading for defects.

LANDWISE CONFERENCE 2025: GETTING TO CARBON POSITIVE!

Havelock North

21–22 May 2025

The LandWISE Conference in May will address all these issues. Professor Pii-Tullia Nikula will open discussion with Carbon Accounting: Scopes, Solutions and Target Setting. Other speakers will tell their reduction stories, and we will present our calculations for Regen versus Conventional growing. We will update delegates on regenerative cropping, cover cropping, simple soil health tests, smarter weeding, and bio-strips and pods and other research from A Lighter Touch.

Ultimately, we need to stop burning dinosaur food, and an obvious option is electrification. Mike Casey of Forest Lodge Electric Cherries and chief executive of Rewiring Aotearoa will lead us into that discussion, supported by local chapter, Electrify Hawke's Bay. Hear about the Lincoln University electric research farm, about how a simple solar system can power a home entirely off-grid, and look at electric utes with on-board power outlets. There will be plenty to stimulate in Havelock North on 21–22 May 2025!

We are grateful for the support of our sponsors and especially the vegetable industry for supporting ten student places to encourage young talent into our sector.

Registration is open. Follow the QR code to register.

Assessing the soil after growing and discing a multi-species cover crop found good improvement after months undisturbed

Carbon positive plots with new peas in the cultivated Conventional (left) and direct-drilled Hybrid plots (centre), and mulched cover crop Regenerative plots (right)

We can't say why – maybe less disease pressure by missing peas? Maybe the better physical state of the soil by avoiding early cultivation and planting in the wet? Maybe the cover crop biomass was feeding the soil microbes or releasing nutrients? Maybe something else…

We have been learning to grow crops in a way that may increase soil carbon sequestration. But what are the associated emissions from the other inputs we use such as machinery, diesel, nitrogen fertiliser and agrichemicals; and what is the embedded energy in these other inputs?

New LandWISE research associate, Olivia Webster, has compiled emission factors for our machinery, fertilisers, agrichemicals and livestock. It shows carbon dioxide, methane or nitrous oxide emissions, and the total expressed as CO_2 equivalents. Nitrogen fertilisers and fossil fuels stood out as inputs to watch. That is, until you factor in livestock.

Growers Tim Rosamond and Michele Ricou have opened their property for tours, where host Tim shares their journey, knowledge, and food made from avocados, such as ice cream and guacamole. Photo by Katie Cox Photography

GROWING REVENUE WITH TOURISM

From glamping to orchard tours and farm cycling trails, agritourism in rural New Zealand is growing, providing backyard opportunities for growers to benefit from multiple income streams.

Carly Gibbs

Intrepid city dwellers standing under orchardist Tim Rosamond's towering avocado trees often do a full-circle spin in awe.

Tim sees the transformation in tourists who visit his 260-odd trees through his Avocado Tours NZ business. He frequently hears, "Wow, this place is huge and so pretty".

His 12-metre-spaced trees, 10–12m high, make it feel like they're standing in a "forest park".

From on-orchard tours like Tim's to glamping beneath the sunset shadows of shelter belts, agritourism – a combination of agriculture and tourism – is growing, providing opportunities for growers to benefit from multiple income streams.

However, Agritourism New Zealand chief executive Marijke Dunselman says many rural landowners are unaware of its potential or believe that a large property is needed.

"I know people with a 0.4ha mushroom farm involved in agritourism. If you have a nice spot and build a luxury cottage, some people charge $500 a night, with breakfast included. The return on the investment can be quite amazing," she says.

On a bigger scale, agritourism can help with property succession if children want to come home but use their skills differently. Marijke gives the example of a young South Island couple she's worked with who set up a glamping site and cottage on their family's farm, earning them $180,000 annually.

Graeme Crossman (pictured front) takes cruise ship passengers to three Te Puke orchards, filling 400 coach buses between October and March

Elsewhere, Kiwi business PurePods charges $690 a night to stay in a glass eco-cabin. PurePods has a shared revenue model in which a rural landowner provides space for a pod but doesn't have to engage with visitors, except to clean the pod and provide food.

In Nelson, near neighbours have opened a cycle trail through orchards. Elsewhere, horse trekking, four-wheel driving, hunting (deer park), mountain biking, bird watching, and motorhome camping are favourable ventures.

While agriculture is more known in agritourism, Marijke says many international visitors seek horticulture experiences because they are more accessible and non-confrontational, with no animal killing.

"Anything that connects people with the land, food, and animals is growing globally," she says. "People are interested in stories, real experiences, and how fruit or vegetables are grown because most have never seen that. They just see them in the supermarket or on their plate in a restaurant. Then when they go home, it has a different meaning and connection, so it's great marketing."

Tim from Avocado Tours NZ offers an adventure tour ($59pp) and a gourmet tour ($75pp), both with tastings. The tour is run over 1ha of his 3.8ha orchard. He's also cleared a third of his shed, divided it off, and renovated the original contractor's toilet for guests. "Keep it basic," he says. "People appreciate it's a working orchard."

The former Wellington IT executive learnt on the fly when he and his partner Michele Ricou bought the orchard they've called AvoYum three years ago.

"It was quite the leap of faith to get into avocado growing just as the market hit rock bottom," Tim, 55, says. "Ideally, we wouldn't be doing the tourism business because avocados would be making money for us. But that's not what is happening and what many primary industries are currently struggling with. I had to find other sources of income, or Michele would make me get a real job," Tim jokes.

Tim decided to explore agritourism after being encouraged by Katch Katikati, the town's promotional agency.

He works full time on the Hass and Reed orchard, while Michele works full time off it. His tours – catering to everyone from college students to rest home residents and international travellers – are "building". He now has silver Qualmark accreditation under the Sustainable Tourism Business criteria, a rating system to celebrate excellence in service and sustainability.

> **"People are interested in stories, real experiences, and how fruit or vegetables are grown**

In their first year, he ran the tours on "the smell of an oily rag".

In the second year, the couple invested their earnings and got busier. This year, Tim hosted 130 visitors in February, with eight days of tours in a row.

Building networks and getting Google hits took time, and his business will likely stay seasonal. That suits him, as he and Michele also run an Airbnb, and he does the orchard maintenance himself.

Over the past six years, agritourism has grown so much that an online training programme is now available through Agritourism NZ. The course provides the framework to run a successful venture.

Industry bodies, such as Kiwifruit Vine Health, are also available for advice on how to keep commercial crops safe from the spread of pests and diseases, the importance of biosecurity and hygiene messages, routine monitoring, and maintaining a register of attendees for traceability.

Cromwell, Central Otago, is an idyllic spot for this Haurapa 'PurePod', one of many dotted across New Zealand

PRACTICAL TIPS

- "**Keep it basic**. People appreciate it's a working orchard." – grower Tim Rosamond
- **Even small properties can succeed** in agritourism with the right approach.
- **Implement biosecurity measures** when hosting visitors to protect crops from pests and diseases.

"On-orchard tours, events, and field days are an opportunity to showcase kiwifruit orchards and the great work growers do on their sites to keep vines healthy while growing quality kiwifruit," says Leanne Stewart, Kiwifruit Vine Health chief executive. "By implementing simple steps when hosting visitors, you can help protect your orchard, income and the kiwifruit growing community from biosecurity threats."

Oscar Nathan, general manager of Tourism Bay of Plenty, says the growth in agritourism supports the sustainability goals prioritised within New Zealand's tourism sector and, when done right, encourages spending visitors to frequent some less-travelled parts of our country.

It also supports a broader range of businesses and communities, attracts travellers beyond peak summertime, and offers a more authentic visitor experience.

"It encourages travellers to spend more time in New Zealand, in line with a global trend towards slow travel," he says. "This is especially important when potential visitors have to consider the pros and cons of taking a long-haul flight to get here."

Or, in Graeme and Gayleen Crossman's case, a long ocean cruise.

The longtime directors of Kiwifruit Country Tours take international cruise ship passengers to three Te Puke orchards, filling 400 coach buses between October and March.

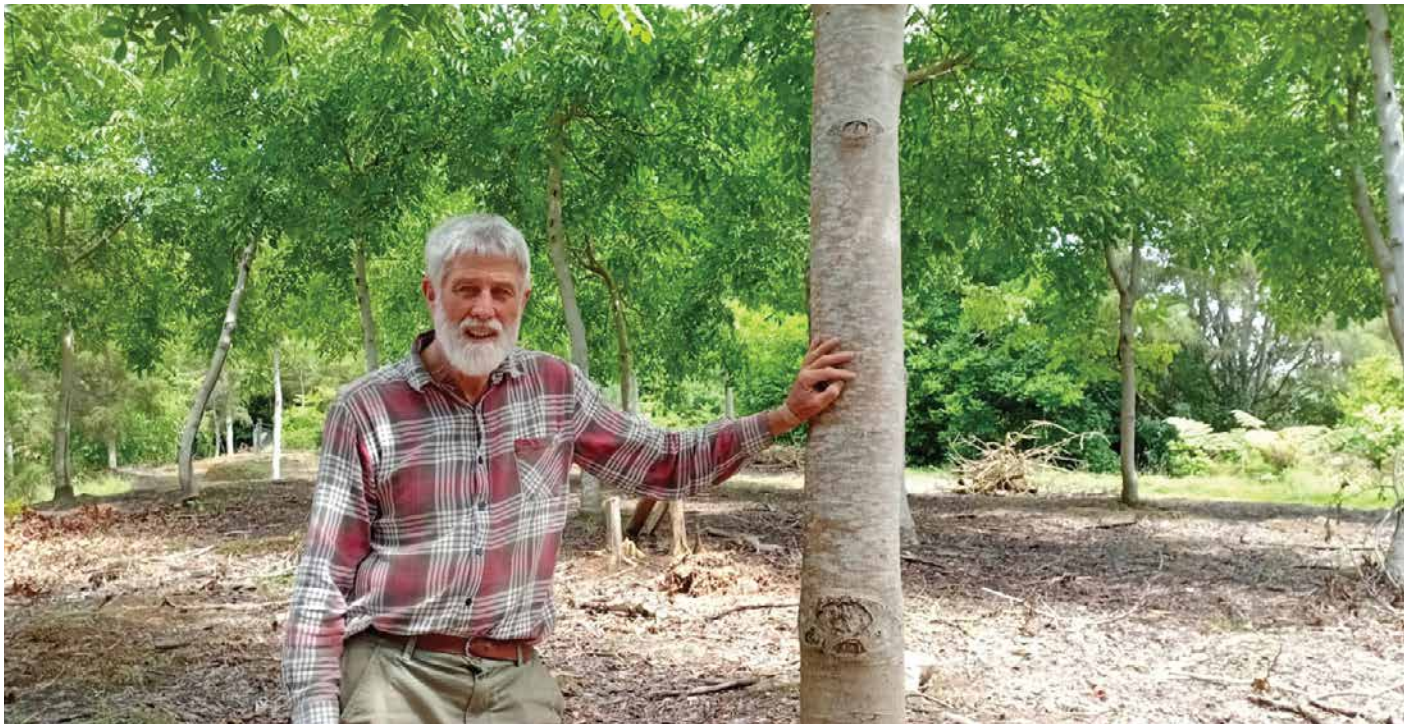
They offer 13 tours with a kiwifruit component and work exclusively with cruise line Inbound Tour Operators.

In addition to seeing how kiwifruit grows and hearing the area's history, visitors learn the nutritional value of kiwifruit and taste the fruit (supplied by Zespri) and other products made from it.

"They go back home with real enthusiasm to get buying them," Graeme says.

The same marketing happens at Tim's place.

In an online review, one honest guest wrote, "I'm not usually a fan of avocados, I was mostly there to go along for the ride... BUT Tim's guacamole was so good that it might have just changed my mind."



Walnuts are mostly grown in Canterbury, but Nick Nelson Parker has bred a new variety that can cope with Bay of Plenty's climate

WALNUTS READY TO MOVE

New Zealand imports 1000 tonnes a year of shelled walnuts (mostly from the United States), but walnut grower Nick Nelson Parker says domestic demand for the homegrown product is steadily increasing. Nick updates us on his new variety 'Legacy' and shares advice for anyone considering planting walnuts.

Nick Nelson Parker : Walnut Woodland

For the past 64 years I have been selecting, propagating, growing, harvesting and selling walnuts. Years ago, as part of this lifetime project, a friend and I set up a walnut rootstock trial. I had a very vigorous species, *Juglans sigillata*, originally from Yunnan in China, so we agreed to give that a go.

After grafting, I had a few seedlings left over. I planted them out as another line – a dumb thing to do! The nuts were as hard as iron. In fact the Chinese call them 'iron walnuts'. Well, one of them, a hybrid with a local tree crops variety, started producing really good nuts, and lots of them.

During the time I had a tree nursery, well-meaning people would often ply me with new varieties, all of which were 'the best one they had ever seen.' My training in population genetics by Professor William Libby at Forestry School made me more cautious.

Correctly harvested, fresh walnuts seem to create their own demand, Nick says

That led to planting thousands of trees and laying out proper trials. I've named my hybrid selection 'Legacy' because at this age and stage I think it's time for me to say "This might be the best nut I've ever seen!"

A desirable quality in any walnut is the proportion of kernel to the whole weight of the shell, called the 'crackout'. Crackout percentage makes a big difference to the economics of putting nuts through a cracking plant.

The average crackout for the New Zealand walnut population is 41.2 percent, ranging from 5 to 61 percent. Wilson's Wonder is 34 percent. My new discovery came out at 53 percent, which is high even by Californian standards.

A small walnut industry has sprung up in Canterbury using the dry environment to help control the major disease, bacterial blight. [Ed. – Refer *The Orchardist* July 2022 article on the New Zealand Walnut Industry Group and Walnuts New Zealand Co-operative.] My hybrid walnut variety gives us opportunity to spread beyond these narrow climate restrictions. Yunnan has quite a wet climate, so my hybrid is coping with the Bay of Plenty weather well.

> **A desirable quality in any walnut is the proportion of kernel to the whole weight of the shell, called the 'crackout'**

Legacy is not patented, to reduce any impediment to people growing them as a grafted plant. Walnuts are notoriously hard to graft. We have some available to get people started, but nurseries may want to graft them as well.

The vigour and form of this tree also gives opportunity to derive a timber crop, gratis, at the end of the rotation. The only other place producing a walnut crop on trees finally harvested for timber is in Sorrento, Italy. They use a seedling line, which will not work with Legacy, being an inter-species hybrid. It shows a unique set of characteristics that are very unlikely to manifest in even one seedling, let alone a whole plantation of them.

We have a stall at the Tauranga Farmers' Market. As we have presented our customers with a wide range of nut types, it has been most interesting to see what appeals; especially in taste. We eat walnuts every day and the freshness of the nut is the overriding factor.

The market reaction has become an important part of the breeding programme. While Legacy is not everybody's favourite, it is universally acceptable, and increasing numbers of people ask for it by name. Selling the crop has not been an issue for us. Correctly harvested, fresh walnuts seem to create their own demand. I find that people start to consider eating walnuts once they have tasted a fresh locally grown one. ●

Contact *NZGrower & Orchardist* if you would like to get in touch with Nick: **editor@hortnz.co.nz**

NICK'S ADVICE

A consequence of growing walnuts for so long is that I have made lots of mistakes; so here are some considerations for anyone thinking about a walnut plantation.

- **Choose reasonably flat ground** – graded even – for machine harvesting.
- **Avoid exposed sites** but without shelter belts, which get in the way and harbour rats.
- I have not got a handle on how fertile the soil needs to be – my place is an infertile ridge, but the trees are **growing well with mineral fertiliser**.
- **Consider tree spacing** to optimise tree growth and nut set.

NEW ZEALAND FRUITGROWERS FEDERATION

DIRECTOR NOMINATIONS

Leon Stallard's term as director of Hawke's Bay/East Coast and Brad Davies' term as director for Northland/Auckland expire at the conclusion of the New Zealand Horticulture Conference in August 2025.

We are now seeking nominations for directors for the next three-year term; both Leon and Brad are available for re-election.

It should be noted that the future role of a New Zealand Fruitgrowers' Federation (NZFF) director will be solely as a trustee of the New Zealand Fruitgrowers' Charitable Trust.

Nomination forms will be e-mailed to all eligible fruit growers with nominations closing on 1 May 2025.

Golden Queen peaches from Te Hapua Orchard in the Hawke's Bay

MEMORABLE STONEFRUIT SEASON WINDS UP

A bountiful stonefruit harvest in Hawke's Bay has meant some growers have produced twelve times the number of cherries as last season, whilst in Central Otago the fruit has been of very high standard despite variable weather conditions.

Aimee Wilson

Cherry exports surpassed 5000 tonnes for the first time nationally, with competitive overseas markets the only challenge in the game.

Summerfruit NZ technical advisor Richard Mills says good winter chilling conditions and soil moisture set growers up well for the 2024–25 season, and even the widespread rain on Boxing Day had little effect – particularly in the north which was tracking weeks ahead of Marlborough and Central Otago.

Former Summerfruit NZ chair Roger Brownlie operates The Orchard Hawke's Bay Ltd in Bay View, Eskdale, with his wife. Eskdale is one of the early production areas.

After a great winter and a very dry spring and summer – the opposite of 2023 when there was very little fruit available in December due to 70 percent less sunshine hours – Roger had a full crop of cherries and apricots two weeks earlier than usual this year.

"An early season is always a good season."

The last time he had been able to produce 12 tonnes of cherries was back in 2017.

Likewise Joe Burbury at Te Hapua Orchard on the Tukituki River had a large summerfruit crop.

Joe leases his parents' orchard to grow Golden Queen peaches for Wattie's, as well as cherries, apricots and nectarines, but his orchard was under eight feet of water following Cyclone Gabrielle.

He was fortunate enough not to have silt and was able to save 30ha of his 35ha orchard – but still lost between 200 and 300 trees, including his first crop of watermelon that ended up floating down the river and being fished out by local anglers.

Selling to MG Marketing as well as from his popular roadside stall, Joe saw his cherries blossom four weeks early and had Earlise® cherries for sale at the end of October – which has never happened before.

Usually his first crop comes in around 15 November, so it was a pleasant surprise, "and it was just chaos trying to get everything done," he says, as workers were usually still thinning the crop at that time of year.

His Recognised Seasonal Employer (RSE) scheme crew weren't due to arrive until after Labour weekend, so it was all hands to the pump employing locals to frantically thin and pick the 12-tonne crop of cherries.

His cherry crops were miserable the past three years with some varieties failing to produce anything, so it was quite an unexpected surprise to have it all turn around this season.

"The rain was perfect and we actually had to irrigate a lot more – like every second day."

Down south, Marlborough's five summerfruit orchards also had a good season with a sunny dry harvest period, and in Central Otago there were variable conditions again this season – which differed considerably from Roxburgh through to Tarras which is north-east of Wānaka.

> **An early season is always a good season**

Richard Mills says Central Otago had a difficult season with the weather, including a cold start that pushed back harvest several weeks – well behind Hawke's Bay.

Despite not settling into a rhythm typical for Central Otago of consistently long, hot and dry growing days, when the fruit arrived in December it did surprisingly well in terms of quality, if not size.

Cromwell grower Simon Webb of Webb's Fruit says his fruit quality was high this year and the weather was conducive to growing good peaches, apricots, nectarines and plums.

Abundant stonefruit from Te Hapua's roadside stall

The new Summer Blaze apricot variety is making a big impression

Operating several roadside stalls along a busy stretch of state highway between Wānaka on one side and Queenstown on the other, the orchard also supplied the domestic market.

He says peaches and nectarines had zero rejections from quality control and that was a great sign. The consistent high quality also speeds up the entire operation, especially the packing shed.

In 2023–24 Simon had a bumper crop of apricots and that continued this season as well, but there were issues with the skin of the fruit that was sensitive to marking easily, "which seems to happen when they are brought into the ambient temperatures," he says.

Demand for stonefruit on the domestic market slowed in late February and March as consumer interest dropped off, and that has affected prices.

"The cost of living is hitting home and where there is a special on, the fruit is really moving, but otherwise it's not."

Heritage fruit such as greengages were very popular this season – almost every roadside stall down in the Teviot Valley was selling them, and Simon says his crop has done well at market too.

Ettrick-based grower Stephen Darling of Darlings Fruit, at the southern-most end of the district, says the Teviot missed the cold southerly Central Otago weather in late spring and early summer.

But there were two rain events in late January that had the potential to impact apricot varieties.

"It was a challenging spring and summer and we had an unusual growing season – for when we had warmth and when we had cooler weather," he says.

> **"The cost of living is hitting home and where there is a special on, the fruit is really moving, but otherwise it's not**

Overall the apricot volumes have been good, both domestically and for export, with export data showing 126,672 kg in mid-March.

"We had a favourable harvest and we're pleased with the volume that came off our trees."

Emerging volumes of the new 'Summer' apricot varieties are also starting to get some presence overseas, as well as on the New Zealand market.

The new Summer Blaze™ variety in particular, is making an impression, and its appearance is a big part of that.

"They are spectacular on the tree," Stephen says, and this is backed up by Richard at Summerfruit NZ as well.

"It's an incredible piece of fruit and quite different to grow. They are quite shiny on the tree," Richard says. ●

Women in Horticulture's Carmel Ireland and Stephanie Wrathall

GENDER GAP IN LEADERSHIP

Following this year's International Women's Day, concerns remain regarding the gender disparity in New Zealand's horticultural industry leadership.

"Although women make up nearly half of the horticulture workforce, they represent just 20 percent of leadership positions," says Stephanie Wrathall, project manager for Women in Horticulture. "The time has come to ditch unconscious bias and stereotypes and get more rural women into top leadership positions."

Flexibility is key, as new research released by the Food and Fibre Centre of Vocational Excellence identified 15,200 rural women connected to the food and fibre sector who aren't working full-time.

"Women can really enhance the success of our nurseries, orchards, greenhouses, fresh produce farms, export businesses and industry organisations. But we have to make room for them in the workplace and be prepared to make changes to the way we train and operate our businesses. We need to encourage women to put themselves forward – many underestimate the value of the skills they already possess from working part-time or general life experience."

The Salvation Army's State of the Nation 2025 report shows significant gender pay gaps persist, with Pacific and Māori women earning approximately 20 percent less than European men.

unitedfresh.co.nz/women-in-horticulture

The project is now entering a full feasibility planning phase

HAWKE'S BAY WATER STORAGE PLANS

HortNZ has welcomed Hawke's Bay Regional Council's decision to advance plans for a 27-million-cubic-metre water storage facility at Whanawhana on the Heretaunga Plains.

"The Heretaunga Plains is one of New Zealand's most important food-producing regions. Its soils and climate enable a high degree of crop diversity, but a secure and sustainable water supply is crucial," says Michelle Sands, HortNZ's strategy and policy general manager.

> **"The Heretaunga Plains is one of New Zealand's most important food-producing regions**

HortNZ acknowledges that the underlying aquifer, which supplies much of the water for horticulture, must be carefully managed to protect the health of spring-fed rivers and streams.

The council is now entering a full feasibility phase for the project, which aims to support the region's people, businesses and environment by harvesting water when abundant to replenish rivers and the aquifer.

www.hortnz.co.nz

Eat more vegetables and stay out of hospital

FRESH PRODUCE CAN SAVE TAXPAYERS MILLIONS

A new study reveals how increased fruit and vegetable consumption directly reduces hospitalisation risks and can address New Zealand's growing healthcare challenges.

Dr Carolyn Lister calls the study, led by Brunel University of London, "a wake-up call for all New Zealanders," noting that by 2028, approximately 1 million Kiwis will be over 65 – potentially doubling to 2.2 million within 50 years. Carolyn is principal scientist & science team leader – food & health information at Plant & Food Research and a trustee for the 5+ A Day Charitable Trust.

The 5+ A Day Charitable Trust supports the Fruit in Schools programme, benefiting over 126,000 children. However, only one in four Kiwis currently eats the recommended daily servings of vegetables.

"There's a huge opportunity here to make a real difference," Carolyn continues. "Each fruit and vegetable offers a unique combination of nutrients and phytochemicals that are essential for our health. Studies show the most consistent decrease in disease risk is observed when people increase the diversity of the vegetables they eat."

5aday.co.nz

Growers visiting the covered section of the Maungatapere orchard

TAMARILLO GROWERS ORCHARD WALK

In March the NZ Tamarillo Growers Association held their Annual General Meeting and orchard walk in Maungatapere, with growers from 13 of the current membership of 30 orchards attending. Secretary Robyn Wickenden says the participants explored the orchard which is set up in two halves: one under a wind cloth on the side of Whatitiri mountain; and the other out in the open further down.

It provided an interesting case study of the issues of growing under cover with increased insect populations and reduced pollination. This year they have added six hives of Biobees bumblebees to help with pollination as well as lifting the sides of the wind cloth. They are seeing much better sizing of the fruit compared to previous years when the best description was they resembled "bunches of cherries".

The psyllid-transmitted liberibacter infection rates are around 18 percent under the cover whereas out in the open are down to low single digits. This was attributed to a tractor and sprayer unit less than ideally spec'd to enable penetration in the thicker growth. They have made some modifications to their sprayer to penetrate the higher growth with a 'snorkel' and only spraying insecticide one side at a time.

Robyn thanks the Horticentre Charitable Trust for funding the meeting day.

www.tamarillo.com

KIWIBERRY EXPORTS TO CHINA **RESUME AFTER NINE YEARS**

Neil McLoughlin : Executive officer, NZ KiwiBerry Growers

Early last month, the New Zealand kiwiberry industry announced that New Zealand kiwiberries are once again eligible for export to China. This marks a significant milestone that reopens doors to Chinese consumers who value the unique flavour and nutritional benefits of kiwiberries.

Exports of New Zealand kiwiberries to China were active for six years until March 2016. Following that period, a nine-year absence occurred during which the NZ KiwiBerry Growers executive worked tirelessly to regain access to the Chinese market. Reclaiming this access required intensive regulatory compliance upgrades and multiple audits to meet stringent Chinese import standards.

After years of persistent effort, we celebrated a breakthrough with a successful audit by the General Administration of Customs (GACC) in mid-January this year, followed by another in late February. With these approvals in hand, exports to China have now resumed. Two consignments dispatched at the end of February have successfully cleared customs and are currently being distributed.

We can now supply an additional high-paying market with strong demand, potentially leading to higher sales prices. While China represents an exciting new opportunity, exporters will continue to support existing markets globally.

New kiwiberry growers Viarni Bright and Patrick Torr in the Bay of Plenty with NZ KiwiBerry Growers chair Geoff Oliver

This resumption of kiwiberry exports to China stands as a testament to New Zealand's commitment to fostering robust international trade relationships and supporting its growers. As New Zealand steadily expands its agricultural export reach, industry stakeholders remain optimistic about the positive impact of tapping into the lucrative Chinese market.

> **"The high demand and strong returns from China will no doubt lead to better results for our kiwiberry category, which will encourage increased plantings and larger export volumes"**
>
> Geoff Oliver, chair NZ KiwiBerry Growers

In addition to the exciting news of regaining access to China, NZ KiwiBerry Growers has been working closely with Zespri's New Cultivar Programme on trialling multiple new kiwiberry varieties developed by the Kiwifruit Breeding Centre. These trials are looking to understand the performance of these new varieties when managed by commercial growers, which could eventually add to the future growth of the New Zealand kiwiberry industry.

SHIELDING OUR **SPUDS**

Kate Trufitt : Potatoes New Zealand chief executive

The recent fruit fly incursions in Auckland and the detection of Tomato Brown Rugose Fruit Virus (ToBRFV) in Australia serve as stark reminders that our potato industry faces similar serious threats, including Potato Spindle Tuber Viroid (PSTVd).

When – not if – a new pest or disease incursion threatens New Zealand's potato industry, how strong will your farm defences be? Our biosecurity response doesn't rest on border controls alone, but on our daily practices.

How well we as growers collectively maintain robust on-farm biosecurity will go a long way to successfully containing the threat.

When I visit growers, I know that they have a good grip on the necessary measures. However, I think all of us would agree that under the daily pressures of growing – particularly during these trying times – sometimes we take our eye off the threat.

As the saying goes, an ounce of prevention is worth a pound of cure. Don't wait for an incursion – refresh your On Farm Biosecurity Plan with your team now. Every operation differs in scale and needs. But by adopting these measures, you protect not only your own business but our entire potato industry.

There is no getting around the fact that these measures require grower investment in both time and money – resources in short supply for many of us. However, as I've seen firsthand at the Te Ahikawariki Vegetable Industry Centre of Excellence (VICE) in Pukekohe, good outdoor crop biosecurity can become second nature with the right systems and commitment.

Industry organisations work together closely and provide consistent advice across the sector, but potatoes are particularly vulnerable to pests and disease. Potatoes New Zealand provides useful resources and guidelines about the specific threats.

Biosecurity practices like washing down machinery can become second nature with the right systems and commitment

The movement of people, vehicles, and equipment presents the greatest biosecurity risk. Controlling access through designated entry points and parking areas is essential, as is maintaining thorough cleaning protocols for your machinery and vehicles.

> **Together, we can build a resilient biosecurity system that protects New Zealand's potato industry for generations to come**

No matter the size of your business, it's so important that your staff and workers understand the importance of biosecurity measures. They may not realise how easily pests and diseases can spread if introduced. Make sure training is part of your On Farm Biosecurity Plan, include biosecurity in staff induction and provide regular refresher training. Personal hygiene practices cannot be overlooked.

Regular crop scouting allows for early detection, and the "Snap it, Catch it, Report it" approach ensures prompt response to suspicious findings. Reporting a potential incursion is a responsibility that I know every grower takes seriously, but it is naturally also a worrying step to take. That's why it's also important to contact Potatoes New Zealand as soon as possible, as we can provide support and advice to help with business continuity and liaison with the authorities.

Together, we can build a resilient biosecurity system that protects New Zealand's potato industry for generations to come.

Contact the Potatoes New Zealand team

info@potatoesnz.co.nz 0800 399 674

REFRESH YOUR ON FARM BIOSECURITY PLAN

For advice on your biosecurity measures, contact the Potatoes New Zealand team. I encourage you to download the Potatoes New Zealand On Farm Biosecurity Advice poster (QR code below).

Control access with limited entry points

Establish a main access point for each farm area with clear signage for your property or leased block. Implementing a visitor register system creates accountability and tracking of who enters your property.

Establish designated parking areas

Keep off-farm vehicles separate from your production areas to minimise contamination risks and maintain cleaner boundaries between external and internal farm environments.

Clean machinery thoroughly

Wash down farm machinery from top to bottom before entering and after leaving your property. For maximum protection consider using a broad-spectrum disinfectant after washing to eliminate potential pathogens.

Install footbaths and boot cleaning stations

These critical hygiene barriers prevent soil-borne diseases from spreading. Remember that if footwear needs cleaning, ensure soil is removed before using disinfectant. Disinfectant won't work on dirt.

Consider staff clothing and footwear

Keep personal possessions out of production areas and consider providing staff with appropriate dedicated clothing for farm work, reducing cross-contamination risks.

Sanitise equipment between rows or blocks

Tools, machinery and crates are all items that can harbour viruses. Regular sanitisation prevents disease spread through equipment.

Keep detailed records of all biosecurity activities

Document pest monitoring, plant material movements, and cleaning logs for vehicles and machinery to maintain accountability and traceability.

Monitor crops frequently for early detection of problems

Regularly check new plantings for anything out of the ordinary, as early detection provides the best chance of containing any issues before they spread.

Follow the "Snap it, Catch it, Report it" approach

Phone MPI on 0800 80 99 66 immediately if you find anything suspicious, enabling rapid response to potential threats and then phone Potatoes New Zealand.

Discuss biosecurity expectations with contractors

Contractors following good biosecurity practices may be slower – but what level of risk are you prepared to accept? Establish clear expectations and consider including biosecurity requirements in contracts.

NEW VEGETABLE **INDUSTRY COLLABORATION**

A significant new initiative is underway in our vegetable industry, with five major product groups joining forces to explore greater collaboration across the sector: Vegetables NZ, Process Vegetables NZ, Potatoes New Zealand, Onions NZ and TomatoesNZ.

James Kuperus has been appointed as project manager, bringing his extensive experience as Onions NZ chief executive since 2018.

"We're pleased that James has agreed to take on this pivotal role," says Owen Symmans, who chairs the project's governance group representing all five participating organisations.

The collaboration aims to deliver tangible benefits for all growers. As Owen explains, "Greater collaboration across the vegetable industry will result in greater efficiency, which will mean we can achieve more with each levy dollar for every vegetable grower."

While details are still being developed, the initiative aligns with the broader Horticulture Industry Collaboration project led by HortNZ.

It's anticipated that growers will have the opportunity to approve any new collaborative model during the 2025 round of annual general meetings starting in August. Between now and then, there will be "ample opportunity" for growers to express their views before final decisions are made.

Jon Davison from the Potatoes New Zealand Board expressed support, stating that "Potatoes New Zealand supports working collaboratively with other vegetable groups to get better outcomes for potato growers."

Similarly, Process Vegetables NZ chair, David Hadfield, believes "it is time for the vegetable groups to come together, so we are of scale and relevance to government, with our messages and requests. Coming together will also enable us to gain efficiencies in the use of levy dollars."

KEY POINTS

- **Five vegetable product groups are exploring a new collaborative model.**
- **James Kuperus has been appointed project manager, stepping down from his role as Onions NZ chief executive.**
- **Onions NZ has appointed Kazi Talaska as their new general manager.**

TomatoesNZ chair Barry O'Neil added that his organisation "strongly supports this initiative" and looks forward to working with James "to find solutions to the challenges inherent in any project like this."

Vegetables NZ deputy chair, Warwick Simpson, highlighted that "a unified approach to advocacy will give better results for growers, and reducing duplication in other areas will make growers' levy go further."

> **"...this initiative represents an important evolution in how the vegetable sector organises itself**

While James transitions to his new role, Onions NZ has appointed Kazi Talaska as their new general manager, effective 1 April 2025.

Owen emphasises that this initiative represents an important evolution in how the vegetable sector organises itself: "It's time we bit the bullet, put some resourcing towards this project, and do the work to develop the best structure for the industry going forward. The current model has served us well for the past 20 or so years."

"What we need to do now," Owen continues, "is challenge ourselves and work through the issues and obstacles to ensure a new collaborative model is able to support vegetable growers' needs for the next 20 plus years."

NEW MANAGER FOR FRUITGROWERS' TRUST

The New Zealand Fruitgrowers' Charitable Trust was established in 1985 with an endowment from the New Zealand Fruitgrowers Federation.

Since then, while maintaining the endowment's real value (i.e. inflation-proofing it), the trust has paid out millions of dollars to support the industry.

The trust offers grants to the New Zealand fruit growing industry and is interested in applications that focus on research, education, fruit grower groups, generic industry issues, industry people, and the flow-on benefit for New Zealand.

> **The trust is interested in applications that focus on research, education, fruit grower groups, generic industry issues, industry people, and the flow-on benefit for New Zealand**

After serving as executive officer for the past eight years, Keith Mackenzie has retired. Keith has been a 'safe pair of hands' for trust affairs and the management of the iconic heritage Huddart Parker building on Post Office Square in Wellington, a key asset of the trust.

During that time, Keith has been involved with a significant upgrade and repainting, and roof repairs on the building.

Alan Bird has taken up the role of executive officer of the trust from 10 February 2025. Alan has extensive experience in finance and property asset management. He returns to Wellington from the Cook Islands, where he led the finance function for the management of the Cook Islands government's land and building portfolio. He has also held roles with several agribusinesses in New Zealand, leading finance, property, and corporate support teams.

New Zealand Fruitgrowers' Charitable Trust chair Andrew Fenton (centre) with outgoing executive officer Keith Mackenzie (left) and incoming executive officer Alan Bird

THE NEW ZEALAND FRUITGROWERS' CHARITABLE TRUST WAS ESTABLISHED IN 1985 WITH AN ENDOWMENT FROM THE NEW ZEALAND FRUITGROWERS FEDERATION

Trust chair Andrew Fenton says, "We have been very fortunate to have had the benefit from the calibre and skill of Keith while at the helm and we are very pleased to welcome Alan with his broad finance and business experience. The trust continues to be in good hands." ●

For more information on the New Zealand Fruitgrowers' Charitable Trust, visit: **nzfct.org.nz**

TomatoesNZ

TECH IN THE NETHERLANDS

Dinah Cohen : TomatoesNZ general manager

Following Fruit Logistica in Berlin (see March's NZGrower & Orchardist *for my report), the group of six participants representing greenhouse (GH) growers from both TomatoesNZ and Vegetables NZ and myself travelled to the Netherlands to meet a wide range of suppliers.*

We went to find out about leading research, new innovations and what is next for the GH industry. Front of mind for us was the crossroads that the New Zealand GH industry is currently facing with many of our GHs near or even beyond the usual lifespan of this infrastructure. This trip was in part to better see and understand what the latest options are for GH tech and to understand how Dutch growers are managing their energy inputs.

Hygiene is considered at the planning stage of new GHs rather than as an 'add on'. That includes an area for staff to change into uniforms, the installation of washing stations that can't be bypassed and different employee zones to keep the staff from different compartments from mixing. If trucks need to come onsite, this is also considered so that a one-way system can be implemented. All of this is to ensure that hygiene is top priority for keeping all diseases out of the GH.

Screens are standard with new GHs, at least one but usually two or even three. The GHs that we saw had LED lighting (we didn't see the sun when we were there so understandable!) so one screen would be for black-out as per legislation. One or two screens are for saving energy and some greenhouses have a pest protection screen. An alternative to this was netted vents which also seemed to be common. The humidity in the Netherlands isn't as bad as it is in parts of New Zealand, so this would be something to consider with both screens and netted vents. It's worth asking screen suppliers if they have screens which absorb moisture and what effect if any this has on the lifespan of the screen. Some growers in New Zealand have had screens retrofitted so it is also worth having conversations with your networks for advice. One thing to note is that every screen has NEN ratings which are independently determined so allow comparisons; look at the diffuse stat to see how the light entering your GH will be impacted.

The participants visited Ridder in the Netherlands to see the MetoMotion picking machine

The grower delegation visited the Netherlands during a chilly February. The photo right shows a foot and hand washing station common before entry is allowed

Energy sources can have an influence on location. We saw GHs that were located near data centres; the GH operation provided the data centres access to water for cooling purposes and the resulting warmer water could then be piped through the GH for heating. Geothermal bores have become commonplace in the Netherlands as another source of heat. In New Zealand we have low temperature geothermal relatively close to the surface but in the Netherlands they drill down for several kilometres. [Look out for details of a TomatoesNZ and Vegetables NZ geothermal mapping project with GNS Science in future *NZGrower* & *Orchardist* issues.]

The Dutch government has an insurance scheme running that pays out for any drilling that is undertaken that doesn't find a geothermal source. Buffer tanks are needed with geothermal heating because, unlike gas or recycled oil, the tap can't be turned off once accessed. For smaller growers situated near each other, heating and CO_2 supply and storage were sometimes shared meaning the costs of these were also shared. We visited a site that was capturing CO_2 from flue gas and storing it in huge balloons:

www.greengasliquids.com/galloxol/

We also visited Botany, a trial site aiming to reduce the energy input in a tomato and cucumber GH by 40 percent for lighting (changed from HPS to LED) and heating. For the heating, they achieved this reduction purely by drying out the GH air. Research has shown that 60 percent of heating can go simply on getting rid of moisture, leaving just 40 percent of energy input into raising the temperature. An air exchanger is used to suck out the GH air, dry it, heat it and then blow it back in. When we visited it was a chilly 2 degrees outside with a light frost, in the GH the pipes were cold, but the air was dry and warm. It's worth checking for updates on this project:

www.grodan.com/global/knowledge/collaborations-and-trials/Low-energy-tomato-growing/

Finally, in terms of **robotics** the most promising machine we saw was the MetoMotion picking machine supplied by Ridder: **grow.ridder.com**. This is different from other harvesters as the aim was never for it to pick 100 percent of the crop. The thinking is that this would never result in an affordable product that would get to production. Instead having a machine that can pick 80 percent of available truss tomatoes with five machines covering 5ha, supervised by one human, working 2 x 8 hour shifts is more realistic. If all the costs involved with labour (HR, sick days, holidays, managers etc) are considered, there will still be a saving in labour costs, even with humans going in to finish the 20 percent of picking at the end of the week. This is another one to watch!

If you have any questions about anything fresh tomato related, please don't hesitate to contact me: **dinah.cohen@tomatoesnz.co.nz**

FEIJOAS EARLY WITH **EXCELLENT QUALITY**

NZGrower & Orchardist staff

This year's feijoa harvest underway at Kaiaponi Farms in Gisborne

New Zealand's beloved feijoa season has kicked off with a bang this year, with growers and marketers commenting on both its early arrival and good early volumes hitting the market.

Roger Matthews, chair of the NZ Feijoa Growers' Association, praises the exceptional fruit heading out of the orchard gate: "Fruit quality is outstanding, it's looking good on the shelf."

The early fruit is mostly from Gisborne and Hawke's Bay – up to about a month earlier than usual. Dave Hansen from Kaiaponi Farms in Gisborne says their trees are producing great fruit 2–3 weeks early, thanks to some fine weather.

"Overall the fruit quality and size is very good. The volume probably hasn't got back to where we'd like it yet. We're still dealing with a couple of years of wet – the trees with heavy crop loading in some blocks are struggling a bit.

"We saw some strong pricing very early on but that came under pressure pretty quickly. Although the market seems to be moving through the fruit pretty well, so volumes seems to matching up with demand. We'd just like to see higher returns."

Ivan Nola from Fresh Direct says, "Feijoas are earlier than normal, but not just earlier – large volumes too. Normally it drips in during the early season, but it's been straight into it this season.

"Having the big volumes so early means we're not really getting the early season initial high prices, more like a mid-season price. It's not too bad, but you wouldn't want prices to get lower."

However, while the early regions are busy picking, growers in other areas such as Northland and Waikato were reporting still being some way off. There's a good chance that an earlier finish from the east coast will reduce the country's mid-season volumes as other North Island regions begin supply, followed by Tasman and Blenheim growers.

An early start in Gisborne and Hawke's Bay has led to strong volumes

While domestic consumption dominates, export markets continue to provide a small but reliable outlet for premium fruit – all by air freight, according to Duncan Rutherford, export manager at Fresh Produce Group. "We're doing 5000–6000 trays, mostly to the United States," he says.

By mid-March, exports were still to begin, but Duncan is expecting a similar export season to previous years. The American market primarily serves specialty retailers during the counter season.

NZ Feijoa Growers' Association general manager Matt Thorn says it's great to see Kiwis have been enjoying feijoas from late February.

"The fantastic quality and great value for money makes this year's crop a good news story, so we're hoping that consumers are going to make the most of the season."

DON'T MISS THE FEIJOA AGM

Join your fellow feijoa growers at the NZ Feijoa Growers' Association Annual General Meeting in Tauranga in late October. It's an opportunity to share ideas and socialise with fellow feijoa growers. Don't forget to join the NZ Feijoa Growers' Association mailing list by emailing **matt.thorn@hortnz.co.nz**

SIGNIFICANT CHANGE AHEAD FOR AVOCADOS

Brad Siebert : NZ Avocado chief executive

With a more successful 2024–25 season now in the rear-view mirror, the focus rapidly shifts to the season ahead of us.

Those who have been growing avocados for even a short time will know that no two seasons are ever the same, with challenges and opportunities presenting themselves in various ways.

Historically, the avocado export programme has relied on significant volumes to Australia. However, shifting market dynamics, due to increased supply to Australia's east coast from Western Australia during what has traditionally been New Zealand's seasonal window, have altered the landscape. While exporters will seek new opportunities and target seasonal windows of value there is no doubt the industry will face increasing competition from Peru, Mexico, Colombia and Australia in many of our target markets.

What does this mean for 2025–26?

Volumes will need to be redirected to a more diverse marketplace, with many exporters exploring opportunities in North America and Asia. This shift in market focus is likely to result in increased harvest volumes much earlier in the season. While this adjustment to our export strategy provides optimism as market diversification remains an industry priority, it also brings challenges. Export fruit will be needed from early July, with significant volumes needed between August and October.

WHILE THIS ADJUSTMENT TO OUR EXPORT STRATEGY **PROVIDES OPTIMISM AS MARKET DIVERSIFICATION REMAINS AN INDUSTRY PRIORITY**, IT ALSO BRINGS CHALLENGES

A season of change, but not of fear

Will the 2025–26 season be different? Yes. Should that be a cause for concern? No. Recent years have demonstrated that New Zealand growers, packers and exporters are resilient, adaptable and capable of achieving success. The level of industry-wide dialogue is high, contributing to a robust and strategic plan for the season ahead. Growers understanding their marketer's flow plan and communicating with their packhouse on how their orchard fits into this will be critical.

> **Industry-wide initiatives can help maintain a positive balance between export demands and local market conditions, and strategies to support the domestic market are in focus**

Export pack-outs directly impact the New Zealand domestic market. An earlier export harvest could lead to increased volumes reaching local shelves earlier in the season. The domestic market is a vital component of the industry and fluctuations in supply can influence value. However, this can be planned for. Over the last few years, the New Zealand market has become more resilient and better equipped to absorb volumes. Industry-wide initiatives can help maintain a positive balance between export demands and local market conditions, and strategies to support the domestic market are in focus.

The industry is engaging with key stakeholders to ensure the best possible outcomes, from fruit quality research, market and trade insights and continuing to optimise the operating environment through advocacy work with local and central government. There are also many steps growers can take to maximise their chances of success in the 2025–26 season. NZ Avocado will therefore be looking towards new ways of communicating critical information to growers in the lead-up to the harvest season and likewise will rely on grower feedback to ensure our efforts are well targeted to grower needs.

FRESHWATER MICRO-CREDENTIAL

Our sector bears responsibility for safeguarding rivers, lakes, and streams. A new NZQA Level 4 micro-credential, 'Assess and Manage Risks to Freshwater from Horticultural Production', will soon be available. This 100-hour programme equips growers, employees, advisors and council staff with practical knowledge to identify and mitigate freshwater risks from horticultural operations. The programme covers assessment of potential risks to freshwater, identification of on-farm risk factors, and recommendation of best practices. To register your interest, please contact **mark.shelly@hortnz.co.nz**

GROWSAFE SPRAYER CALIBRATION COURSE

In June-July Growsafe is running a series of one-day calibration courses for growers of all types of crops. It is a Growsafe certified course and GAP compliant for making sure those sprayers are properly calibrated, and growers are getting the best out of their equipment. Contact **dean.bowden@growsafe.co.nz** to find out if your region is covered and confirm dates.

MINIMUM WAGE INCREASE: APRIL CHANGES

Are you prepared for the minimum wage adjustments? From 1 April, the adult minimum wage increases from $23.15 to $23.50 per hour, whilst starting out and training minimum wages rise from $18.52 to $18.80. This increase applies to all employees 16 and over, including those paid by salary, piece rates or commission. These rates are before tax and any lawful deductions such as PAYE tax, student loan repayments, or child support. Visit the Employment New Zealand website for more information on how to prepare: **www.employment.govt.nz**

VEGETABLE RESEARCH ROADSHOW RETURNS

Following last year's successful debut, the Vegetable Research Roadshow returns to update growers on cutting-edge research. Hosted by Vegetables NZ with support from Vegetable, Research & Innovation and other product groups, these nationwide workshops invite all growers and industry representatives to participate. The roadshow demonstrates the collaborative nature of research in the vegetable sector and provides an opportunity to discuss and give feedback on the latest results. Visit the Vegetables NZ website for dates and locations: **www.freshvegetables.co.nz**

SIGN UP

Get the latest horticulture industry updates, programmes and events in your inbox with **HortNZ's Weekly Briefing**. Email **comms@hortnz.co.nz** to receive the weekly email.

PUKEKOHE **LETTUCE AND SPINACH FIELD DAY** A 'WRAP'

Terranova's field days have become an institution around Franklin after more than 20 years, and still as popular as ever.

Held twice a year (early March and early August), on Carter's Farm in Patumāhoe, where Terranova has a trial facility screening all their new candidates against their current varieties, covering over 25 crop categories. "We aim to screen out varieties unsuitable for our conditions before they go to on farm trials" says Graham Rose, sales manager at Terranova Seeds.

At this autumn field day on 5 March there was strong attendance from growers and the trade, who enjoyed a trial tour in glorious sunshine, followed by lunch.

Rijk Zwaan are an important supplier for Terranova and the trial showcases their varieties of lettuce and spinach, including new varieties for addition to the NZ assortment.

Spinach highlights

Stoat RZ is Terranova's slowest growing variety for summer harvest; approximately 35 days to maturity on an upright plant. It has dark green, medium savoyed, robust oval leaves which process very well. In addition to the downy mildew package the variety is strong against *Fusarium* and *Stemphylium vesicarium*. The benefit of this resistance has been observed in commercial production in New Zealand.

Although out of slot in this trial, the Skipjack RZ and Nasua RZ look like good options for winter to spring harvest, with very upright, dark green leaves. Only available as trial seed, interested growers should contact their local territory manager.

Lettuce highlights

In the Iceberg segment Sendanas RZ and Lentanas RZ are available for grower trials. They complement Toscanas RZ which is an excellent commercially available option for harvest January to March. Toscanas RZ is particularly strong against bolting and tip-burn.

Also attracting interest was Kenita RZ Mini Crunchy Cos, with delayed pinking with Knox. Ideal for single leaf or as a whole head.

Crystique RZ Crystal leaf with Knox features high yield, and crunchy, juicy leaves. Slow bolting with excellent shelf life. It is ideal for processing, farmers' markets and home gardens. Trial seed available.

Lollo Biondi Lungavilla RZ is commercially available and the proven Lorenzo RZ replacement. Samples available also on request.

NEW 79-IN1642 Salanova green oak with Knox is indicating good yields, and offers a strong mildew resistance package. Available for trial only.

Exanimo and Exframe are the leading incised bag products, with consistent high yields all year round. Delayed pinking with Knox.

The next trials field day will take place on 6 August at Carter's Farm with a BBQ lunch provided. Growers and interested parties should RSVP to secure a time to view the trials.

To secure winter spinach seed and book spring and summer varieties or to order trial seed, **contact your local Terranova Seeds representative**.

Terranova SEEDS

IR or HR: what's the difference?

Enza Zaden identified the gene that ensures high resistance to ToBRFV in their coming tomato varieties. But what's the difference between Intermediate (IR) and High (HR) Resistance?

No Resistance

- Virus multiplies to a high level in the plant.
- Yellow spots and wrinkled patches on plant & fruits.
- Presence of virus particles in the plant or fruits.
- Yield can be affected.

Intermediate Resistance (IR)

- Virus propagation is delayed.
- Presence of virus particles in the plant or fruits.
- The crop can show symptoms of the virus in the leaf and/or fruits.
- Yield can be affected.

Enza Zaden High Resistance (HR)

- Highly restricts the accumulation of the virus.
- No spread of the virus in the crop.
- Yield is unaffected under normal disease pressure.

Tomato & Capsicum Seed Available Now!

ENZA ZADEN

Follow the QR code for information on ToBRFV and HREZ varieties

Or speak to one of our representatives:

email: sales@enzazaden.co.nz

Phone +64 9 963 0122