

NZGROWER & The ORCHARDIST®

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HORTICULTURE NEW ZEALAND

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Diana Gallagher runs Clevedon Strawberries. See page 10. Photo by Helena O'Neill

DOING THE RIGHT THINGS AND NOT JUST DOING THINGS RIGHT

I have always aspired to make sure the right things are being focused on and progressed, rather than just doing things right, as with the latter it can sometimes be easy to avoid taking leadership on the hard issues.

By Barry O'Neil : HortNZ chair

The Horticulture New Zealand board recently had a strategic review meeting, where we looked at and reviewed our strategy along with its alignment with the Aotearoa Horticulture Action Plan, the really good collaboration initiatives that are underway, and last but not least defining the board's position on the proposed changes to New Zealand's gene regulations.

We had a good strategy session and agreed the priorities and focus our new chief executive Kate Scott and the HortNZ team will have in order to deliver on our purpose of creating an enduring environment where growers thrive.

But I want to update you on the last issue we considered, changes being proposed to our laws regulating gene editing and genetically modified organisms (GMOs), and the HortNZ board's position on the government's proposal. As we know, the government has signalled it intends to change the law, with a bill being prepared which after its first reading in the house will go to select committee where submitters will be able to be heard, before the government aims to pass it into legislation next year.

While the draft bill hasn't yet been released, we understand the proposal will be to allow low-risk gene editing techniques that produce changes indistinguishable from conventional breeding to be exempt from the regulation, and there will be a new regulatory business unit established to control this area. Arguably it's an easy option with something so contentious for us to sit on the fence, keep on 'doing things right' and wait for the changes to happen, and in doing so not upset members who may be strongly for, or strongly against the proposal.

My observation with this proposal is we have a minority of vocal individuals at the 'poles', arguing strongly for their genuine concerns, but that the majority of our members are in the middle, not opposing the proposal but not wanting to get involved, maybe believing they don't know enough about the proposal to make comments, so they will leave it to others to engage.



I believe in situations like this with very challenging and complex technical matters, organisations like HortNZ need to fully engage to understand the issues involved and then take a position that will hopefully provide leadership for the wider industry.



Over the last few years, we have been informing growers of the changes being proposed and encouraging growers to engage in the conversation through meetings, through our bulletin, magazine articles, webinars, and at our conference, updating our members on what is proposed, and in doing to fully understand what our members are saying. We have been meeting with the proponents of this technology who say this change is needed for horticulture to overcome many of the current and future challenges, especially biosecurity and climate change, along with the opponents who say this technology is not needed and if adopted it will have significant impacts in areas like organic horticulture and consumer acceptance. We have also heard members questioning the impacts this could have on trade, not wanting to fall behind our trading partners but also concerned about going too rapidly ahead of them. I would like to take a moment to acknowledge Michelle Sands and her HortNZ strategy and policy team for driving the open communications enabling everyone, growers, industry, scientists, and Māori to engage with us and present their issues and perspectives.

We acknowledge understanding the benefits that are involved is difficult and it's a very technical area, especially when previously there have been some overzealous scientific claims made about what this technology can achieve. Just as it is difficult to understand the risks and whether the risks are actually real in light of experience overseas with those already using this technology.

We have considered what overseas regulators have done, or are proposing to do. While New Zealand is an island we are very connected to the world, especially trading our horticulture exports, and while it is not impossible to have a different position from our trading partners, it could come at a cost. What Australia is doing and has done is especially relevant.

As a country we depend on offshore germplasm for both fruit and vegetable plants, with nearly 100 percent of our commercial vegetable seeds being imported. As these breeding technologies become widely used by our trading partners, including the companies supplying germplasm to New Zealand, it will have a significant impact if we have a different regulatory standard that makes it difficult or impossible to import horticulture germplasm.

With an issue like this it is impossible to get 100 percent alignment, so we are very much into 'doing the right thing rather than just doing things right'! There will be some members who will be very unhappy with the position we have taken, but we have taken it on the basis that as a result of the wide engagement we have had on this issue, we believe this position will benefit horticulture for future success.

 **We believe the approach we are taking is doing the 'right thing' for New Zealand horticulture** 

Our position is that we believe changes to the legislation are needed, just as the rest of the world has changed or is changing. But we are also strong in our belief that using technology to achieve a plant that can be bred naturally, is very different from using technology to produce something that cannot happen naturally.

Precision breeding gene editing used to make changes to plants that could occur naturally over time using traditional breeding is supported by the HortNZ board. Our laws already allow our plant breeders to use irradiation and chemical mutagenesis for 'natural' breeding, and we see CRISPR-Cas9 as a more advanced and precise technology that is able to do the same thing, but better. And we do support such precision plant breeding technology having the minimum of regulatory controls, compared to any technology being used to achieve gene changes that could not occur naturally which we would expect to require full assessment and regulatory controls.

HortNZ will now use this position to prepare a detailed submission to the select committee once we have the actual proposal from government, and in doing elaborate on the technical issues that are involved which we will continue to engage with you on. We are very aware that there may be little time to turn this submission around once the draft bill has been released, which is why we have been having the open conversation with growers over the last few years, and which is why I wanted to update you on the position the board has taken.

We believe the approach we are taking is doing the 'right thing' for New Zealand horticulture to continue to grow and thrive in the years ahead.

Kia kaha. ●



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THANK YOU FOR THE WARM WELCOME

As I settle into my role as chief executive of Horticulture New Zealand, I want to thank growers across the country for the warm welcome I've received.

Kate Scott : HortNZ chief executive

Over the past month, I've had the privilege of meeting many of you and learning about your operations, challenges and ambitions.

Your passion for what you do, your deep connection to the land, and your resilience in the face of challenges have been inspiring.

What's great about growers across New Zealand is the determination, overcoming obstacles - often beyond their control - with a 'get on with it' attitude.

It's this spirit that underpins the success of our sector and will drive its growth in the years ahead.

At HortNZ, we're a small but highly committed team working hard to represent growers on a wide range of issues and opportunities.

From climate change to sustainable land use, our sector is well-positioned to play a pivotal role in New Zealand's future prosperity.

The government's goal to double export value over the next decade aligns with the horticulture sector's own ambition to double farmgate value by 2035. Achieving this will

require collective effort, a united voice, and a focus on innovation.

As we look ahead, I'm excited to be part of the journey.

There's immense potential for our sector to grow sustainably and deliver benefits for growers and all New Zealanders.

But equally important is not forgetting to recognise the incredible work happening right now.

I want to acknowledge the busy period many growers are in, as you juggle the demands of harvest and preparation for the months ahead.

Your commitment does not go unnoticed, and it is a privilege to support you in your work.

Over the festive season, I hope you all find moments to pause and reflect on what you have achieved over the past 12 months. From everyone at HortNZ, I wish you and your families a relaxing time over Christmas.

Thank you again for the warm welcome.

I look forward to working with you to support the future of New Zealand horticulture in the year ahead.



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Gary Moore is a passionate orchard manager whose Tauranga properties consistently perform above average

GROWER BEHIND AWARD-WINNING ORCHARD

Avocado orchard manager Gary Moore was a mechanic and a stay-at-home dad before moving into horticulture in the 1980s. Four decades later, he's one of the best in his field and still counts his job as a 'privilege'.

Carly Gibbs

Gary Moore is a passionate avocado orchard manager whose properties have a competitive edge.

The Tauranga Seeka orchard manager oversees nine properties between Te Puke and Ongare Point, and they consistently perform above par.

At this stage in the season, the year's average export pack-out for the industry is around 55 percent, but Gary's orchards consistently score in the 70s to low 80s.

One of his properties, the Seeka lease orchard Te Roha Whānau Trust (1.9ha), was awarded the Bay of Plenty Highest Yield Award for a 39.3t/ha yield in the 2023-24 season at Seeka's annual grower meeting in August. The orchard also won an award at this year's New Zealand Avocado Growers Association Annual General Meeting.



Gary attributes his growing success to various trials, pruning style, the timing of soil and leaf tests, and planning.

He is diligent about keeping up with pest, disease and fertiliser programmes, saying trees need "food just like animals" or can otherwise slide backwards and take years to recover.

The 63-year-old was a mechanic and a stay-at-home dad before his rugby coach in the late 1980s got him a job at Te Awanui Huka Pak.

He recalls knowing nothing about horticulture back then. However, he was – and still is – a keen outdoorsman, enjoying fishing, diving, surfing and trail biking.



Gary manages the 23.5ha avocado orchard on Motuhoa Island. Photo supplied by Seeka

He owns eight hectares on Tauranga's Belk Road with his wife, Glenda, and in addition to growing 100 avocado trees, he breeds and owns three thoroughbred racehorses.

In the early half of his career, he worked in all areas of kiwifruit, from orchard development to coolstores, loading ships, running machines and managing satellite stores.

Then, in the late 1990s, Te Awanui Huka Pak floated the idea of developing Motuhoa Island near Ōmokoroa into an avocado orchard.

"I was asked if I would be the one to do it, and I said, 'I'm all in,'" he recalls. "I learnt on the hoof. I could experiment on the island and learn about avocados the old-school way."

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Gary travels to Motuhoa by boat, and his phone's camera roll shows encounters with orcas, seals and geese. Photo supplied



Mike Mikaere, co-owner and trustee of Te Roha Whānau Trust orchard

When Te Awanui sold most of its interests to Seeka in 2009, he stayed on and still looks after the orchard today.

Seeka leases a 23.5ha avocado orchard on the island from Tauranga's Borrell whānau called Motuhoa.

“**Gary is a hands-on manager, and after four decades in the industry, he still counts his job as a “privilege”**”

Gary travels there by boat, and his phone's camera roll shows encounters with orcas, seals and geese. He has even spotted Daisy, the famous 2.75-metre great white shark.

In a good year, Motuhoa produces 1500-2000 bins of avocados. The orchard is sprayed from the air by helicopter, saving on fuel and water. Aerial spraying also eliminates pests in the treetops.

It is a unique property and holds a special place in Gary's heart. He is close to the Borrells, saying, “They are whānau to me, and I am to them”.

Even though it is his workplace, he and Glenda often camp at Motuhoa for their summer holidays.

Around the same time Motuhoa was developed, Te Roha Whānau Trust set up an avocado orchard on Tauranga's Kairua Road in Welcome Bay. It also became a lease orchard, which Gary manages.

Mike Mikaere, co-owner and trustee, acknowledges that despite their win this year and good bin numbers (90 this year and 210 last year), times are financially tough. He has witnessed others cutting their trees out but is keeping faith that returns will pick up.

“There's a cost, and I've got other partners who I need to keep calm, but Gary knows what he's talking about. I whakarongo (listen) to his kōrero,” he says.

Mike helps Gary with orchard maintenance, and recently the trustees have invited motorhome owners onto their land as another revenue stream.

“It [the income] keeps the mower and mulcher going, and it also helps Gary by allowing us to put more fertiliser on,” Mike explains.

“**Gary attributes his growing success to various trials, pruning style, the timing of soil and leaf tests, and planning**”

After two years of low returns, Gary acknowledges that growers worry about fertiliser costs. The same can also be said for picking at height.

"We are trialling cutting trees shorter but still need hydraladas," he says. "We have a fleet of 6m hydraladas, and that's the benchmark. Anything over that, if you can't reach it, why grow it, so we cut it off."

He uses pruning waste as mulch, distributing it on the trees' feeder roots on the drip line and beyond.

Gary is a hands-on manager, and after four decades in the industry, he still counts his job as a "privilege". Until recently, he managed 18 orchards, but has since cut his workload by half. He has two full-time staff members, Ross Harper and John McGarth, and ten staff members during harvest season.

Gary drives the forklift during harvest, loads trucks, and runs bins to pickers. He also invites young people into the orchards and volunteers his time as a teacher.

"For me, it's not just the avocados, it's the people I've become involved with," he says. "It's not an eight-to-five job. It's my life." ●



From left, Seeka client relationship manager Alan Cresswell, Mike Mikaere, and Gary Moore at Te Roha Whānau Trust orchard

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Fresh camarosa strawberries at Clevedon Strawberries near Auckland



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SWEET SEASON FOR STRAWBERRIES

With the strawberry season reaching its peak, HELENA O'NEILL chats with Clevedon grower Diana Gallagher and Strawberry Growers NZ executive manager Sally King about how the season is progressing.

More than a dozen cars are parked at Clevedon Strawberries' main site when NZGrower & Orchardist stops by on a Wednesday morning. It may be approaching midday, but the pick-your-own fields are busy with happy punters and the adjacent block is a hive of activity as pickers harvest berries for the on-site shop.

Diana Gallagher, who runs Clevedon Strawberries with her husband Kevin, says their season started a week later than last year but quickly ramped up.

"The two on-site shops are going really well, and we're still at the Clevedon Farmers' Market every Sunday too."

Using a stockpile of their own frozen berries, they can still sell real fruit ice creams from their caravan at the market throughout winter.



Diana Gallagher runs Clevedon Strawberries with her husband Kevin

Clevedon Strawberries usually opens for pick-your-own (PYO) in mid-to-late November. However, the Clevedon site opened to PYO at labour weekend, with the Ardmore site offering PYO a week afterwards.

"The sheer quantity of fruit out there has been huge for a couple of weeks now. I think we've reached our peak season [mid-November]."

While the peak season may have been and gone by the time this magazine has gone to print, Diana no longer stresses over whether there will be fruit from her strawberry patch at Christmas time.

"I used to think 'Gosh I have to have that Christmas Eve fruit in the shops,' but now I'm not worried. Last year we stopped picking for the shop on the 21st of December. From there it was totally pick-your-own until mid-January."

Previously Diana planted the Camarosa variety with a small amount of Albion, but this year the plants are solely Camarosa.

“We struggled to find enough plants last year so myself and some other growers dug up plants from the former Bell’s Berries at Ardmore, but they didn’t do so well as they were second-year plants. Those were the Albion variety.”

With the strawberry plant shortage last year, Diana trialled lettuce, courgettes, chillies, watermelon, and rockmelon alongside the berries at Clevedon. A small amount was sold at the farm shop, but while the watermelon crop was fairly successful, they were large and hard to harvest.

Growing fields of sunflowers at the Ardmore site was far more productive, and will be repeated this season.

“People absolutely love it, and some even dress up. We had a police officer come in early one day and propose to his girlfriend in the sunflowers, really lovely.”

Diana has a good labour force, with the bulk of seasonal staff on working holidays. A lot of staff have been recruited by existing and former employees.

“Every single one of those people working up there has some kind of incredible degree, they all just want to work and stay in New Zealand. They are fantastic people with a fantastic work ethic.”

Sally King, executive manager for Strawberry Growers NZ says it’s been a great start to the season, with great quality fruit and plenty of it, along with fair weather conditions.

“We have enough plants for everybody this year! So considerably more fruit will be available. Now we are just hoping for great weather and careful calibration of our integrated pest management systems so that we can deliver everybody’s favourite summer berry.”

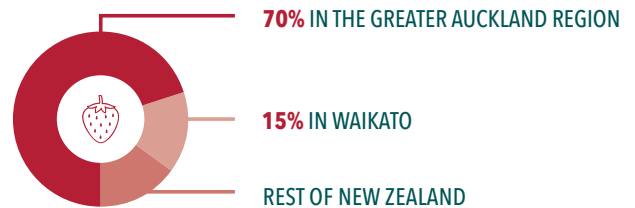
Sally says that while strawberries are a small producer, they are the largest berry fruit category in New Zealand.

“We produce - via approximately 150 growers - 6500 tonnes of fruit annually from an area of 220 hectares. The industry is consolidating, with eight growers accounting for more than 50 percent of strawberry volume, but a very long tail of small growers with small holdings of strawberries - often field-grown, less than half a hectare.”

Ninety percent of the fruit is sold on the domestic market. Strawberries are predominantly grown in the North Island because of its climate, soil types, labour pool and proximity to key markets. About 70 percent of plantings are in the greater Auckland region, 15 percent in Waikato, with the balance in Northland, Hawke’s Bay, Manawatu/Horowhenua, Nelson, Marlborough, Canterbury and Southland.

“The strawberry export industry is based around about ten dedicated growers. Strawberries are highly perishable and must be air freighted to export destinations, and the combination of Covid-19 travel challenges and plant shortages has really impacted our export markets recently. Strawberry exports have declined, decreasing about 60 percent in value.”

STRAWBERRY PLANTINGS IN NEW ZEALAND



Cyclone Gabrielle damaged the nursery stock significantly, with two very poor years with a significant plant shortage (30 percent reduction) meaning only the domestic market could be serviced, Sally says.

“And of course the resumption of normal air traffic has taken time, so it’s great things are returning to something near normal.”

“Thailand and Taiwan were the top two markets in 2023, but suffered significant decreases due to the factors above. On the bright side, we have a record number of registrations to export to Thailand this year and some growers are delivering the very first New Zealand strawberries to Vietnam, our newest destination.” ●



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At the Citrus NZ AGM, Florida grower Nate Jameson shared his experiences with Asian Citrus Psyllid and Citrus Greening, which have wreaked havoc on the Florida citrus industry. Photo courtesy of Citrus NZ

LEVY A LEVER FOR STRENGTH IN NUMBERS FOR CITRUS INDUSTRY

Helping more than 300 growers navigate challenges now and into the future is a big task, but Ian Albers is up for the job.

Kristine Walsh

Leading a big national organisation is no easy task but for new Citrus NZ chair Ian Albers it all boils down to one aim achieving long-term viability - and growth - for the more than 300 member growers that form the backbone of the industry.

And with Citrus NZ heralding Ian's leadership as "the beginning of a new chapter" it is only fitting that one of his first jobs is to front-foot the proposed new Citrus Commodity Levy Order that will allow NZ Citrus Growers Inc (Citrus NZ) to continue its work.

The levy is 'new' in that it will replace the Commodity Levies (Citrus Fruit) Order signed off in 2019.

But the levy rate is the same, as is its purpose to fund the grower body's work in everything from promotion and market access to research and developing new varieties.

Ian says feedback to date has been positive and, on that note, he's not surprised.



"Growers generally accept that the levy is not a huge cost, and for what they pay, they get big bang for their buck," he says.

"The work it funds is critical for the good of the industry, and rolling their resources into one levy gives them the collective oomph needed for surety now, and growth going into the future."

While there are no changes proposed to the levy, Citrus NZ believes seeking feedback gives growers the chance to bring up any issues of concern.

Consultation is well underway and on-line voting is due to open on 25 February and close five weeks later, on 2 April.

When Ian Albers' appointment was announced in October, he admitted he was taking the chair after three tough years for the industry.

"Challenging weather conditions, a pandemic and a cost-of-living crisis created the perfect storm ... literally and figuratively," he says.

"Sustainability is a real challenge for our industry, but I believe the vision in our 2023-2028 strategic plan captures the essence of Citrus NZ's role, 'to sustainably maximise grower productivity and profitability'."

Ian brings to the chair more than 25 years of experience ... it's been quarter of a century since the former Mainlander moved to Gisborne to join First Fresh, the marketing company of which he is now co-owner and chief executive.

Working on behalf of around 150 growers, Ian and his team have travelled around the world securing knowledge and markets, as well as supporting their growers on the ground.



“

*Chair Ian Albers:
"We need to concentrate
our limited resources in
a cohesive way to ensure
members get the best
bang for their buck."
Photo by Kristine Walsh*

Research & Insights Forum

18–19 March 2025, Wellington



Beyond the Ordinary: Navigating Challenges and Redefining Success is the theme for Food and Fibre CoVE's upcoming Research & Insights Forum, which will showcase crucial projects that help address the challenges our sector faces.

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And for the last dozen years he's also been on the Citrus NZ executive, most recently holding the export portfolio.

That in itself represents a period of change for the organisation, which in 2019 streamlined its former structure that had multiple committees looking after a group of products – like the lemon, limes and grapefruit product group.

"Within the product groups there were many issues common to all citrus growers so there was a lot of duplication going on, which was sorted when the new structure came into play," he says.

“
The work that the levy funds is critical for the good of the industry

"The industry was ripe for change, and with the backing of member growers, the move towards a more strategic focus went through smoothly and has since proved its worth.

"An approach like that is always our intent: to communicate with growers, to learn from their feedback, and to act in their interests. It's a two-way street."

In terms of travelling that street, Ian can look from both directions. In addition to marketing, First Fresh has in the last year put its money where its mouth is both by managing orchards and by leasing land to grow its own 'fruit salad' of citrus varieties.

"For us that's important, especially as some growers are ageing out of their orchards," he says. "It shows we see a future in the industry both as a grower and as a marketer."

And that's a future First Fresh is investing in by developing new varieties that in just a few years will – all going to plan – be available as licensed products to both the New Zealand and export markets.

The company recently exported the first boxes of the new seedless Eureka lemons it has been working on with growers, getting a great response from consumers in Japan.

Citrus NZ is also actively engaged in evaluating new varieties, taking a selection of mandarins from the Plant & Food Research Germplasm block in Kerikeri and evaluating them from a growing and consumer acceptability perspective.

Its Gisborne trial of new varieties has been extended to a block in Northland, ensuring they are adequately tested in the two biggest citrus growing regions in the country.

The trial encompasses 12 late-season, easy-peel, low-or-no-seed varieties the company believes will appeal to customers, while extending the season to offer continuity of supply.

"It gives us – and Citrus NZ – an approach from two directions in keeping the industry fresh while helping growers address issues right in front of them," says Ian.

"On the one hand we are advocating for good support from our domestic buyers. On the other, we're providing a solution to customers' desire to have good New Zealand fruit just about all year round."

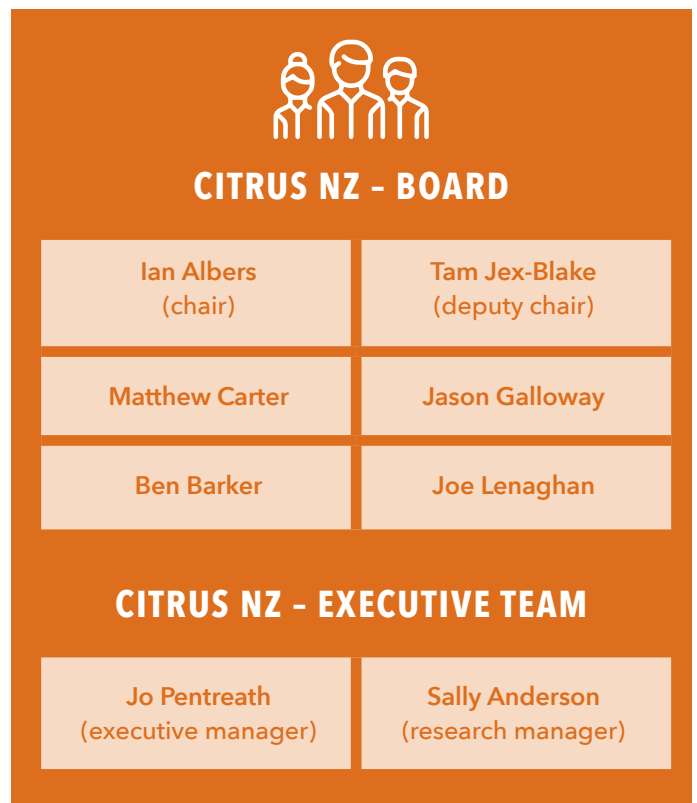
That aim highlights an existing issue Citrus NZ is committed to working on by advocating for a stronger domestic market in which growers' incomes are not derailed by ill-timed imports.

"We do have a good industry, but citrus is the second-largest imported fruit variety in New Zealand – second only to bananas – and having those shipments come in during our main season can be tough on growers," says Ian.

"Our challenge is to work with growers to ensure good supply of great product, while at the same time advocating for our fruit to be first port-of-call when it's in season, rather than having to compete with lower-grade imports."

For the citrus industry individual challenges like that pile on top of two pretty average seasons, punctuated by awful weather including two cyclones, he says.

"So in some respects we're at a bit of a crossroads and I'm keen to lend commercial experience to help achieve a strong and sustainable future for our growers." ●



The graphic features an orange background with white icons of three people at the top. Below the icons, the text 'CITRUS NZ - BOARD' is centered. Underneath, a 2x3 grid of boxes lists the board members: Ian Albers (chair), Tam Jex-Blake (deputy chair), Matthew Carter, Jason Galloway, Ben Barker, and Joe Lenaghan. Below this grid, the text 'CITRUS NZ - EXECUTIVE TEAM' is centered. Underneath, a 2x2 grid of boxes lists the executive team members: Jo Pentreath (executive manager) and Sally Anderson (research manager).



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HortNZ Leadership scholar Reuben Carter with his daughter Heidi at the Oakley's farm

ENGINEERING DRIVES CAREER IN HORT

Reuben Carter is a crop manager with Oakley's Premium Fresh Vegetables in Canterbury, and recently completed Horticulture New Zealand's 2024 Leadership Programme.

NZGrower & Orchardist staff

He was raised on a Northland sheep and beef farm and completed a mechanical engineering apprenticeship and worked in that field for several years.

"I just wanted to leave school and get on the farm, but Dad had seen the financial hardship of the 1980s when the subsidies came off farming so he wanted me to do a trade I could also fall back on," he says.

"I'm very glad I did because I am still using that mechanical background. Today, I was modifying a pumpkin drill.

"After five years I was made redundant, so I went to work in a farm machinery business. That was great, working with everyone from farmers and growers to contractors and doing everything from servicing to fitting out and delivering new tractors and machinery."

At the same time, he joined Young Farmers and got involved in the Young Farmer of the Year competition and found he really missed the farming community.

“

Reuben says he graduated equipped with more tools to deal with the challenges and opportunities in the sector



"I had always been interested in growing, through my parents and my grandfather who had a fabulous orchard and vegetable garden. So, I went to Lincoln and did a Bachelor of Agriculture majoring in plant science and plant production.

"I really liked farming in Canterbury. There is fantastic soil in abundance and I really appreciate the machinery side - there's a lot of big machinery here."

After graduating he joined Barenbrug NZ in Canterbury, completed their graduate programme and worked as an agronomist for the company in Waikato and then as farm manager on their research farm in Darfield.

That was followed by nearly five years managing an arable and livestock research farm for AgResearch at Lincoln. He joined Oakley's in 2023 and oversees broccoli, onions and arable crops.

"I enjoy it and it's a good challenge," he says. "There's a lot of forward planning and forward thinking to be ahead of things." ●

HORTNZ LEADERSHIP PROGRAMME

HortNZ Leadership scholar Reuben Carter says he graduated from the 2024 programme equipped with more tools to deal with the challenges and opportunities in the sector. He also took away a new understanding of the importance of effective communication.

"It's also about clearly communicating our messages about what we want for the industry. There are big opportunities and big challenges, particularly around the regulatory framework and nutrient use and crop protection.

"That needs to be not just about raising the problems but talking about what we see as the potential solutions. I see my future leadership path as being involved in grower groups and supporting a good flow of information."

Learn more about HortNZ's 2025 Leadership Programme at hortnz.co.nz



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CELEBRATING MAJOR MILESTONES

Among the significant anniversaries that New Zealand's horticulture sector marks in 2024, the Hawke's Bay Fruitgrowers' Association's 125 years of service stands out, as do the three pivotal milestones that shaped the kiwifruit industry's global success.

NZGrower & Orchardist staff



Panelists at the 35th anniversary of the Single Desk structure celebration from left to right: John Palmer, Hendrik Pieters and Paul Heywood alongside MC Colin Bond in background

Kiwifruit industry celebrates triple milestone

The New Zealand kiwifruit industry marks three significant anniversaries in 2024, celebrating decades of innovation and growth. Over 400 growers gathered in Mount Maunganui to commemorate the 35th anniversary of the Single Desk structure, the 30th anniversary of New Zealand Kiwifruit Growers Inc. (NZKGI), and the 25th anniversary of the Kiwifruit Industry Restructuring Act (1999).

NZKGI Chairman Mark Mayston delivered a powerful message about unity at the celebration. "Growers must stay united," Mark emphasised. "If we let selfish interests take over, we risk diluting the value of our industry and the future of generations to come."

The Single Desk structure, established 35 years ago, revolutionised the industry by creating the Kiwifruit Marketing Board with exclusive export authority. This foundation led to the formation of Zespri, which has driven the industry's global success over the past 25 years. NZKGI, now marking its 30th year, emerged from the industry's response to financial challenges in the early 1990s.

The celebration brought together industry pioneers and current leaders, including a panel discussion featuring veteran growers Paul Heywood, John Palmer, and Hendrik Pieters. The industry continues to demonstrate remarkable growth, in the 2024 season expected to export over 190 million trays of kiwifruit, and the 2025 season aiming to break new ground by exceeding 200 million trays.



The current Hawke's Bay Fruitgrowers' Association executive team from left to right: Brydon Nisbet, president; Wendy Dowling; Lisa Edgerton; Richard Pentreath; Steven Hartly; Fulton Gillies; Cindy Dixon; Tom Dams, Vice President

Hawke's Bay Fruitgrowers: 125 years

The Hawke's Bay Fruitgrowers' Association (HBFA) reaches a remarkable milestone in 2024, celebrating 125 years of advocating for and supporting the region's fruit growers. "As the Hawke's Bay Fruitgrowers' Association celebrates its remarkable 125-year history, we look back on the legacy of resilience, innovation and community that has shaped the fruit-growing industry in Hawke's Bay," says Brydon Nisbet, current HBFA president.

“
One of HBFA's proudest achievements is the Young Fruit Grower of the Year competition, initiated in 2005



Over the past decade, the association has adapted to significant shifts in the industry landscape. "A gradual decline in family-owned grower businesses has meant

that today, many members are working within larger corporate structures, bringing new dynamics to our organisation," Brydon explains. This evolution has led HBFA to forge stronger partnerships with key industry bodies such as New Zealand Apples & Pears Inc. and Horticulture New Zealand.

One of HBFA's proudest achievements is the Young Fruit Grower of the Year competition, initiated in 2005. The competition has since expanded nationwide, fostering leadership and technical skills among the next generation of growers. The association's commitment to education extends to partnerships with the Eastern Institute of Technology, which has trained hundreds of horticultural students.

Recent challenges have tested the association's resilience, but Brydon remains optimistic: "Horticulture is inherently cyclical, with good and bad seasons shaping each generation of growers. Despite these ups and downs, I firmly believe it is the resilience, determination and passion of our growers that will carry the Hawke's Bay fruit-growing industry forward." ●



The work being done on the effectiveness of fungicides has produced some concerning results

RESISTANCE MANAGEMENT GUIDELINES







*As we enter the summer months and gear up toward harvest, onion growers are reminded that this is the time when *Stemphylium* is likely to appear more commonly in their crops.*

Daniel Sutton : Vegetables NZ research, development & extension manager





Stemphylium leaf blight (*Stemphylium vesicarium*) is a foliar disease that has had a significant impact on the onion industry in New Zealand. Onions NZ has coordinated work looking at how to control *Stemphylium*, either directly through the use of fungicides, or indirectly through the management of other key crop inputs and their impact on disease expression. In particular, the control of onion thrips (*Thrips tabaci*) and the timing of nitrogen fertiliser.

The work being done on the effectiveness of fungicides has produced some concerning results. Plant & Food Research evaluated 14 different fungicide active ingredients against *Stemphylium* samples collected from Pukekohe, Matamata, Hawke's Bay, Manawatu and Canterbury. These results indicate that there is already widespread resistance to a range of commonly used fungicide modes of action (MoA) in multiple onion-growing regions across the country. To combat the further development of resistance, Onions NZ, Plant & Food Research and key industry partners have established guidelines around the use of fungicides for *Stemphylium* management in onions.

GUIDELINES

-  DMIs (demethylation inhibitors, FRAC group 3), SDHI (succinate dehydrogenase inhibitor, FRAC group 7), and QoI (quinone outside inhibitor, FRAC group 11) fungicides should not be part of the Stemphylium control programme.
-  The DMI (group 3) result is representative across the group, and all DMIs should be excluded from the Stemphylium control programme.
-  AP (anilinopyrimidines, FRAC group 9) fungicides must be used in combination with an effective partner (MoA 12 & 29), a maximum of two applications, and preferably used in alternation with another MoA.
-  DCA (dicarboximide, FRAC group 2) fungicides, i.e. procymidone, could be an effective tool but must be mixed with a suitable effective protection partner (FRAC groups 12, 29 or PO7). A maximum of three applications and used in alternation with another MoA.
-  Procymidone use should be limited to targeting Stemphylium, following the above guidelines. No solo use targeting white rot.
-  Phosphorous acid (PO7) should make up no more than 50 percent of the applications in a Stemphylium programme and should be used in alternation with another MoA.

Some additional points to consider:

-  Exclusion from the Stemphylium programme does not mean these fungicides cannot be used in onions, as many will still be needed for white rot or downy mildew control. However, they should not be considered part of a Stemphylium control strategy.
-  No current stand-alone fludioxonil (group 12) or fluazinam (group 29) fungicides are registered in onions. As such there is no guidance on the label rate of stand-alone applications.
-  Procymidone is registered for white rot but not for Stemphylium.
-  There is little information around residue levels of procymidone, 21-day WHP (withholding period). It is suggested to restrict application to earlier in the programme until more information is available.

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FRAC Group	Active	Product	Resistance Management Guidelines
DCA (2)	Procymidone	Sumisclex®, Procym	Maximum 3 applications. Include effective partner. Alternate with another MoA.
DMI (3)	Tebuconazole	Folicur® SC	Do not use for Stemphylium control.
SDHI (7)	Fluxapyroxad	Sercadis®	Do not use for Stemphylium control.
	Fluopyram	Luna® Experience	
AP (9)	Pyrimethanil	Apex®	Maximum 2 applications, tank-mix with effective partner, alternate with other MoA
	Cyprodnil	Switch®	
QoI (11)	Azoxystrobin	Amistar®	Do not use for Stemphylium control.
PP (12)	Fludioxonil	Switch®	Effective Stemphylium partner.
29	Fluazinam	Apex®	Effective Stemphylium partner.
PO7	Phosphorous acid	Foschek®	Effective Stemphylium partner, maximum 50% of Stemphylium programme



At a recent Stemphylium update for growers in Pukekohe, Onions NZ, Plant & Food Research and key industry partners discussed guidelines around the use of fungicides

Seek support and advice for interpreting these strategies into control programmes. Many of the crop protection companies, distributors, crop advisors and agronomists were involved in the formation of these strategies, so they are prepared for grower enquiries.

Remember that fungicides are only one method of disease control. Maintaining crop health and resilience is critical for Stemphylium management in onions. Avoid Stemphylium infection pathways by:

- controlling downy mildew (and other foliar diseases)
- managing onion thrips
- minimising herbicide damage
- reducing water stress with effective irrigation
- optimising plant nutrition for growth without excess soft tissue development.

Fungicides will not control an established disease infection.

Onions NZ is working hard to ensure the message gets out to the industry. The Stemphylium update prior to the Annual General Meeting was well attended, and grower meetings are scheduled through November and December in Hawke’s Bay, Manawatu and Canterbury. ●

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HAVE YOU CLASSIFIED YOUR DAM YET?

NZGrower & Orchardist staff

New Zealand may have as many as 10,000 dams, of which an estimated 1100 are ‘classifiable’ dams. Many classifiable dams may be in use for water storage in horticulture. While many growers have already submitted their dam classification, the government wants to hear from more dam owners.

The Building (Dam Safety) Regulations 2022 commenced on 13 May 2024. The regulations have been made to improve the resilience of New Zealand’s dams and provide a nationally consistent approach to dam safety. Having a dam safety framework brings New Zealand in line with most other countries in the Organisation for Economic Co-operation and Development (OECD).

For dam owners, failure of a dam can impact their business and livelihood – as well as people, property and the environment downstream. Taking an active approach to managing and maintaining their dam is a risk mitigation measure.

Dams are classifiable if they are four or more metres in height and store 20,000 or more cubic metres volume of water, or other fluid. If you determine that your dam is classifiable, you will then need to determine your dam’s Potential Impact Classification (PIC). Owners of dams with a medium or high PIC have further actions they need to take.



Owners of on-farm dams used in horticulture for water storage may be subject to new regulations. Photo courtesy of MBIE

If you do not have a classifiable dam, no further action is required under these regulations.

Dam safety work can be carried out by dam owners, however Recognised Engineers are responsible for auditing and certifying Potential Impact Classifications, Dam Safety Assurance Programmes and annual dam compliance certificates. As at 25 October 2024 there are 30 Recognised Engineers listed on the Engineering New Zealand database. The Ministry of Business, Innovation & Employment (MBIE) is in regular contact with Recognised Engineers and consistently receives advice that there is capacity to undertake the work.

If a dam owner fails to meet their responsibilities under the law, then they may be liable for a fine. For example, it is an offence if a dam owner fails to submit their dam classification to the regional authority for approval.

You can read more about the definitions and regulations, and find resources to support you on MBIE’s Building Performance website: www.building.govt.nz/managing-buildings/dam-safety/

Included on the website is the *Measuring and calculating the height and volume of agricultural dams* resource. This is designed to help horticultural or agricultural dam owners calculate the volume of their dam and understand if they are impacted by the Regulations. ●

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Size 14 - 17 mm
(about the
size of a 10 cent
NZD piece).

Brown
shield-shaped
shell with marbled
pattern (adult
BMSB).

Shell,
legs and
antennae with
light-coloured
alternating
banding.

Produce a
smell of dirty
socks or coriander
when agitated
(= stink bug).

BMSB looks very similar to New Zealand's brown shield bug (*Dictyotus caenosus*), brown soldier bug (*Cermatulus nasalis*), and *Pittosporum* shield bug (*Monteithiella humeralis*)

BROWN MARMORATED STINK BUG – OBSERVATIONS FROM EUROPEAN VISITS

I have been fortunate over the European summer and autumn to visit apple orchards in Italy, France and England, and also kiwifruit orchards in Greece, whilst attending the 43rd Convention of the International Kiwifruit Organisation.

Richard Palmer : Willisbrook Orchard managing director

During my short visit in Italy and France I discussed with growers their challenges with Brown Marmorated Stink Bug (BMSB) and learnt a little more about the challenges and options for control. In Italy the damage from BMSB on apples was evident - often only quite small external blackened patches on a fruit, which when cut showed damaged and brown flesh. Growers are fairly active in controlling for BMSB, using a combination of exclusion, chemical control and parasitoids.

Hail net protecting apple orchards is fairly standard in South Tyrol so the addition of sides to netting to limit BMSB ingress is used by some growers. Growers discussed the use of a generalist parasitoid wasp *Anastatus bifasciatus*,

which is native to Europe. This wasp is reared in Bologna [multiplied for release in targeted areas] and available for growers, and has some advantage over Samurai Wasp in that it is active earlier in the BMSB season and therefore more effective. Unfortunately, being a generalist parasitoid wasp, there is very little likelihood of request and approval for release in New Zealand as it may predate on native *Pentatomidae* species. There are certainly some lessons to be gained from the fruit growers of Italy who have battled with BMSB and developed some reasonable solutions, including community reporting of BMSB. Still the best answer for New Zealand remains to keep BMSB out!



Growers in Italy and France are kept busy trying to control BMSB

At the Convention of the International Kiwifruit Organization (IKO), the French and Italian delegations reported increased presence and spread of BMSB. In central Greece BMSB was very evident in kiwifruit orchards - a vibration trap used in one orchard to monitor BMSB numbers was overwhelmed with stink bugs attracted from up to 1500m away. It felt pretty unusual to be so comprehensively surrounded by one of our worst potential pests! (See photos.)

“ There are certainly some lessons to be gained from the fruit growers of Italy who have battled with BMSB and developed some reasonable solutions



Whilst European growers are coping with BMSB, this is just another knock to production and profit margins, and they remain concerned about spread and limited controls. With lengthy shipping times and costs, and the market reputation built on high quality fruit, every fruit affected by a pest or disease is a straight loss for New Zealand growers or will be a repack cost in-market. With growers' margins already very thin, the need to keep out a pest which is highly damaging and not easily controlled, remains paramount. Given the possibility of BMSB incursion, having a solid response plan, with the best available tools, is also fundamental to horticultural sector biosecurity. ●

WHAT CAN YOU DO?

- 1 **Keep an eye out for BMSB.** Early detection gives us the best chance to manage this unwanted stinky invader. Be vigilant checking your crops.
- 2 **Thoroughly inspect any recently imported machinery and vehicles or luggage** when returning from an overseas trip (particularly on-farm visits) for any signs of this bug. Keep windows closed when unpacking your suitcase and also look into crevices and underneath the lining of the case.
- 3 **If you spot it, catch it, snap a photo and report it!**



Use the Find-a-Pest app if you find anything suspicious:
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Call the Ministry for Primary Industries' pest and disease hotline **0800 80 99 66** or use the online reporting form: www.mpi.govt.nz/biosecurity/how-to-find-report-and-prevent-pests-and-diseases/report-a-pest-or-disease/.



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HOW IS WEED MANAGEMENT CHANGING IN NEW ZEALAND? WE ASKED:

Milton Munro, technical team manager at PGG Wrightson

Jeff Smith, agroecological technical lead at A Lighter Touch

Charles Merfield, head of the BHU Future Farming Centre and weed researcher at FAR

John van der Linden, technical specialist - horticulture at Corteva

Daniel Sutton, research, development & extension manager at Vegetables NZ



Major agricultural suppliers like PGG Wrightson recognise the need for an industry-wide response to the threat of herbicide resistance

WEED CONTROL TOOLBOX

While herbicides have worked well historically, their effectiveness is waning, few new chemical solutions appear on the horizon and markets want us to use less of them. An integrated approach will help manage weeds and maintain the effectiveness of the chemical tools we have.

John Gauldie

“Resistance is the crop protection issue of our time,” says Milton Munro, technical team manager at PGG Wrightson. “We’re not going to spray our way out of the problem. We have to use the whole toolbox, not only the herbicide.”

Glyphosate is the most widely used herbicide in the world, in most cropping situations as well as orchard crops and vineyards. The chemical is also widely used in pastoral, arable and not insignificantly on roadsides, railways and in urban settings.

Herbicide resistance is a global problem that has now reached New Zealand, first reported in resistant ryegrass in Marlborough and Nelson vineyards in 2013.

A team led by Trevor James at AgResearch, with industry support including the Foundation for Arable Research

(FAR) and the Vegetable Research & Innovation Board (VR&I), has been instrumental in putting Integrated Weed Management forward as a solution to the mounting resistance challenges.

The main driver of resistance is repetitive application with the same mode of action. Like glyphosate, the incidence of resistance among other active ingredients such as amitrole, glufosinate and many others is rising.

“Weeds are a massive problem for every crop,” explains Daniel Sutton from Vegetables NZ. “It’s a limiting factor and takes up a lot of time for growers. Particularly for crops like onions and carrots that are in the ground for a longer period.”



Austrian manufacturer Einböck's CHOPSTAR row hoe equipped with the automatic camera steering system ROW-GUARD

The benefit of Integrated Weed Management comes from maintaining the effectiveness of remaining chemical tools by using them judiciously as part of an integrated approach that includes cultural practices and non-chemical weeding.

Jeff Smith, agroecological technical lead at A Lighter Touch, draws a parallel with existing practices to reduce insecticide use.

"Much like Integrated Pest Management, an integrated approach to weed management is a key means of managing the risk of resistance developing to the agrichemicals [that are] so important to the efficient production of our food crops."

This shift is already happening on the ground. "Growers are starting to recognise it," notes Milton. "It's a bit of mind shift away from total control, to tolerating less control and having to think harder about an integrated approach. There's no one solution."

Attention to prevention and practices that give crops the competitive advantage over weeds will become part of management thinking - from row spacing to crop rotation.

"Vegetables have an advantage over fruit and arable crops in that we can rotate between broadleaves and grasses, using different modes of action," Daniel says. "Ground cover is another technique, quickly growing a crop that is going to create shade and limit weed growth."

A wave of investment from overseas equipment manufacturers has increased availability of more modern tractor-mounted mechanical inter-row and intra-row hoe attachments including finger weeders, mini-ridgers, torsion weeders and vertical wire weeders.

A LIGHTER TOUCH: If it's been in the 'too hard' basket it might be time to call 'Merf'



Dr Charles 'Merf' Merfield – adviser / consultant to the horticultural industries on sustainable, organic, regenerative and agroecology horticulture.

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SeedSpider's chief executive Don Sandbrook and senior robotics engineer Tobin Hall with the fully autonomous WeedSpider in a field in Bulls



For permanent crops like orchards and vineyards, an innovative Sustainable Living Sward System uses a range of approaches to minimise crop competition

Charles Merfield, head of the BHU Future Farming Centre and weed researcher at FAR, has produced a wide-ranging report on mechanical row hoe technology for vegetable weeding. These tools are simple to integrate into existing practices, work in a wide range of crops and achieve high levels of in-row weed control.

Timing is important with mechanical weeding, as is accuracy, Charles says. Factors such as crop type, soil and seedbank size will all need to be considered in the management response. Tractors will need auto steering guidance systems. If seeds and seedlings don't go in straight, it slows the weeder down and means larger crop gaps are required.

Charles says growers shouldn't expect the same result from mechanical weeding that they have grown used to from a generation of broad-spectrum herbicide application.

"Part of Integrated Weed Management is not aiming for a clean field and stressing about killing every last weed. It's knowing what weeds are going to be real problems and which can be ignored."

Mechanical solutions for perennial tree crops include offset mowers that mow under branches so growers can keep the weed strip as narrow as possible. However, John van der Linden, technical specialist - horticulture at Corteva argues that weed management is an opportunity for a fundamental shift in thinking about orchard floor management.

"We need to think differently about 'weeds,'" he says. "Ultimately, we need to work with nature, rather than fight against it. We need to put more emphasis on thinking of

solutions to prevent weeds from becoming a problem in the first place, rather than controlling them once they are there."

For permanent crops like orchards and vineyards, John proposes an innovative Sustainable Living Sward System (SLSS) using a range of approaches, such as sub-surface irrigation and carefully selected plant species in different zones to minimise crop competition.

His recent analysis of New Zealand's vineyard operations paints a stark picture: growers are using approximately 9.8 million litres of diesel annually just for tractor operations - equivalent to 196 large truck and trailer loads of fuel. A single tractor pass across all New Zealand vineyards burns through 256,688 litres of diesel and costs nearly \$1 million in labour alone. The numbers are not to single out one part of production, John emphasises, but to demonstrate that every pass that a grower can avoid is progress.

Similarly, in vegetable production, cultural practices that focus on prevention are just as important as control measures. However, compared to fruit growers, vegetable growers may still consume as much diesel, because the number of passes required for mechanical weeding is similar to the number required for spraying.

Perhaps most exciting for vegetable growers is the emergence of robotic weeders - such as WeedSpider, an autonomous or tractor-mounted solution developed by Greentech Robotics in Palmerston North - which can identify beneficial plants and weed around them (and combines it with thinning and precision spraying).

Robots run on solar and battery power, with minimal labour required and work 24 hours a day.

Other promising technologies include ultra-low-energy electric shock systems showing over 90 percent weed control rates, and precision laser weeding systems like the Carbon Robotics LaserWeeder from the United States. Closer to home, AgResearch says its prototype Map and Zap system, which it demonstrated at a Canterbury vineyard in July, has potential for both orchardists and vegetable growers. However, innovation comes with high capital costs and integration challenges - particularly for vegetable crops that are not as high value as fruit crops.

The combination of herbicide resistance, environmental concerns, and changing consumer expectations makes the transition to Integrated Weed Management inevitable. Change is happening in the agricultural machinery space. While companies like Greentech Robotics,

Carbon Robotics and Verdant Robotics invest in autonomous and artificial intelligence (AI) solutions, some of the biggest names have been buying into mechanical weeding. For example, Lemken bought Steketee, Kverneland bought Phenix Agrosystem, and Väderstad acquired Thyregod's full product range of inter-row cultivators.

Major agricultural suppliers are also positioning themselves for this change. As Milton notes, "We're probably one of the country's largest suppliers of agrichemicals, but we recognise that we need to build a robust industry-wide response to the threat of herbicide resistance."

More research is needed to determine the best way to combine management practices with new technologies, across crop types and regions, and in collaboration across the primary sector - solutions that work best for New Zealand's growers. Charles notes, "We are really just starting to figure that out." ●



Jeff Smith, agroecological technical lead at the A Lighter Touch programme

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NUTRIENT UPTAKE IN A CHANGING CLIMATE

NZGrower & Orchardist staff

Claire Scofield is a recipient of a NZ Fruitgrowers' Charitable Trust postgraduate scholarship 2024. Her research investigates the effects of environmental conditions under rain covers on calcium uptake in cherries.

She aims to deepen the understanding of xylem dynamics and the impact of rain covers on these processes, exploring mitigation strategies through vegetative management, nutrient applications, or plant growth regulators. Funded by Hort Innovation and supervised by the University of Tasmania with half of the field research conducted in Central Otago and supported by Plant & Food Research, this study benefits both Australian and New Zealand growers dealing with similar fruit quality issues.

How well are calcium dynamics understood in stonefruit compared to pipfruit?

Calcium dynamics are much better understood in apples than in cherries, largely due to the significant impact calcium deficiency can have on apples, especially through disorders like bitter pit, which severely affects pack-outs. In cherries, the role of calcium is less clear. While calcium is believed to contribute to fruit firmness and post-harvest quality, many other factors also play a role. Research in cherries is limited since there is no direct consequence of low calcium levels beyond potential quality issues. A key difference between apples and cherries is the duration of xylem functionality - which is 30 to 40 days in cherries compared to 60 to 80 days in apples - making the timing in cherries even more critical. While calcium is a central focus in my project, there is room to explore other factors as the research evolves.

DURATION OF XYLEM FUNCTIONALITY



30 TO 40 DAYS IN CHERRIES



60 TO 80 DAYS IN APPLES



Claire Scofield is studying the effect of rain covers on calcium uptake into cherries using potted trees in rain cover tents to enable manipulation of the microclimate and tree nutrition

What key findings can you already share about cultural practices?

The first year was primarily about testing methods, but one of the most intriguing findings was related to increasing calcium movement into the fruit through the removal of new vegetative growth. By removing all actively growing shoots over a season, we saw an average increase of around 30 percent in fruit calcium levels. While this increase is significant, the treatment was quite extreme, and it's not something we would be recommending for growers to implement. However, this year, we're exploring a much milder approach by introducing a very early summer prune (before 40 days after full bloom (DAFB)) to see if it produces a similar effect - this might be something growers could realistically adopt. It's a starting point to understand more about timing, and when are the most critical time points for ensuring uptake.


KEY FINDINGS

INCREASING CALCIUM MOVEMENT INTO THE FRUIT THROUGH THE REMOVAL OF NEW VEGETATIVE GROWTH

AROUND **30%** INCREASE IN FRUIT CALCIUM LEVELS

 **Are more growers moving to rain covers and protected cropping?**

Yes and no. Most growers would agree that rain covers can make the difference between harvesting a crop or losing it during a high-rainfall season. However, the cost of installing these covers, especially over large blocks, can be prohibitive. The uptake of rain covers in both New Zealand and Tasmania seems to be at a similar level. In Tasmania, growers tend to put out their rain covers during flowering to encourage better fruit set. Thanks to the warmer temperatures and dryer conditions after rain, bees are still able to pollinate.

 **How have you split your research on both sides of the Tasman?**

I've been fortunate that growers in both New Zealand and Australia have been really open and willing to engage. In Australia, I've been working with a grower to carry out field trials, and they have been very accommodating, even with some of the unconventional practices we have introduced into their orchards. In Central Otago, I have a few growers who are always happy to chat, share ideas, and offer feedback, which has been invaluable. With support from both sides of the Tasman, I believe there's a shared understanding that this type of research will benefit growers facing the challenges of changing environments and how to adapt. I was also fortunate to attend and present at the Australian National Cherry Industry Conference, where a number of New Zealand growers were also in attendance. ●




Fields trials at the Plant & Food Research Clyde site - growers face similar challenges on both sides of the Tasman

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CROPLADING

Cropload determines many orchard success factors including fruit quality, fruit size, fruit colour development and maturity parameters at harvest.

Meg Becker : AgFirst consultants

This starts with setting accurate, block-specific cropload targets and then setting instructions that allow this target to be accurately extrapolated across a block.

Setting the correct cropload, and then accurately implementing this across all blocks allows growers to maintain adequate fruit returns through growing blemish-free fruit, within colour specifications, good pack-out and fruit size uniformity, and the desired taste and texture.

Natural tendencies and managerial influences

A tree naturally sets itself up each season as a response to seasonal trends and biennial tendencies. This can be led by previous seasons' croploads, stress factors through flowering, plant nutritional status, seasonal weather and pollination conditions. Remembering that a plant's main driver is survival through reproduction.

These factors determine the floral potential, and the tree's natural ability to set and hold a successful crop.

Prior to hand thinning, with a cropload target in mind, growers make the difficult call to flower thin crops to mitigate biennial tendencies and enhance return bloom.

The goal is getting the crop to target as early and cost efficiently as possible.

This has often been partly managed during winter pruning, with some growers using precision management strategies such as spur eradication or bud pruning. This is followed up at flowering and early fruitlet stage using chemical thinners (in pipfruit), with growers making calls on flowering characteristics and pollination conditions. Stonefruit has limited chemistry options, with the Darwin thinner being the most widely used blossom thinner. Kiwifruit growers tend to get in early to reduce cropload before fruitlet thinning using bud and flower thinning.

These early strategies all help to drive good fruit size, carbohydrate efficiencies (and therefore dry matter potential) as well as fruit quality, with energy going into the fruit you intend on harvesting. These early strategies are also key to lowering and managing hand thinning costs and labour requirements.

The individual outcomes of these managerial strategies play a huge role in block prioritisation and final croplading decisions at hand thinning.

Setting the right targets

Setting cropload targets using production history involves looking back to the years of successful harvest - what were you doing right, and how is this repeatable?

Individual block targets should be based on accurate block history, sound block metrics, and robust industry data for each crop type or variety. Set realistic, repeatable targets, if these are new or higher than those previously achieved, what will you do differently to make them achievable? As Albert Einstein said, "The definition of insanity is doing the same thing over and over and expecting different results."

Quantify your canopy fill to set accurate targets. How many missing trees or vines are there in the block? What is the area of replants or non-producing trees? Are the trees or vines filling their allotted space? These parameters heavily influence a block 'canopy fill' and optimum cropping potential.

Croploading influences fruit size and pack-out potential so these need to be outlined when setting your estimates. Pick-out is also an important parameter. Pick-out percentage is defined by the fruit that will be left behind at harvest which includes premature fruit drop, defects, or undersized fruit that never make it into the bin. If a 'groom' or a re-thin is carried out to improve fruit quality before harvest this needs to be accounted for in your pick-out. Ten fruit per tree or vine can make a huge difference to harvest forecasts. If these parameters (pick-out, fruit size or pick-out) are adjusted at any stage, this must flow through to your final forecast.

Another factor to consider when setting block targets is harvest management. Some growers aim to advance harvest timing in some blocks as a key objective to spread labour peaks and hit early varietal premiums. If this is a key goal, then targets should be on the conservative side, keeping in mind that heavy croploads are prone to delaying maturity (and colouring) at harvest.

Determine what variance of acceptance from the target you are willing to accept for each block. Depending on variability this may be just as important as a fruit or tree average. As a manager, heading into thinning, knowing your tolerance from the target is key to managing teams, tweaking thinning instructions, and using fruit counts to make good, accurate managerial decisions. What is the minimum and maximum you are willing to accept?

Lastly, one of the most important targets to set are block specific thinning budgets.

- 1 Look at industry average costs. Using the models devised by the Ministry for Primary Industries (MPI) for the varying crop types you can verify thinning costs per hectare at an industry level. How does your budget compare?
- 2 Historic thinning costs per hectare. In which blocks have you been efficient? How did you achieve this?
- 3 How will you incentivise thinners to work quickly and accurately? By setting a tree rate? A target per day? Or a target per week etc?
- 4 In which blocks can you save costs, versus which blocks will cost more?

Hand thinning to target

In the wise words of the late John Wilton, "Ease of harvest is determined by how well hand thinning has been done".

Success at hand thinning is determined by a clear, easily replicated instruction that achieves within ten percent of the target fruit number. Thinning success can only be achieved with clear targets.

Setting instructions is best done using data to support the 'eye-ohmmeter'. This data also enables growers to prioritise blocks at harvest, thinning those with the greatest percentage above target first.

- 1 Cluster counts and or pre-thin counts determine how many fruiting sites you have per tree, as well as initial croploads by block to help set thinning priorities. Cluster counts (also known as fruit site counts) help determine whether there are enough sites, helping to create the thinning instruction.
- 2 Thin bays to different variations of an instruction. Which instruction gets you closest to the target fruit number?
- 3 Undertake time trials. Forecast the cost of the instructions in each of the blocks. Are you likely to meet the target budget? If not, how can you drive efficiencies?



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Prioritising blocks

Block prioritisation may be based on the variety and its cropping tendencies, marketer signals or payment premiums, for example, where premiums are offered for fruit size, colour standards or quality parameters (dry matter, brix and pressures). This is where the initial thinning focus should be targeted.

Early harvested varieties generally need to be thinned first.

You may also prioritise varieties prone to biennial bearing (an issue in some pipfruit varieties), thinning them earlier (within 50 days of full bloom) to aid in return bloom the next season. This may not be essential if the grower intends on using a summer NAA (naphthalene acetic acid) programme or has used chemical thinning to get cropload down early and establish resting sites.

An overcropped tree needs urgent attention. It is common for a weak or stressed tree to have excessive crops. These blocks may also be where you are trying to induce vigour. For instance in young blocks, so getting crops to target early will drive carbohydrate efficiencies.

Blocks that have responded well to chemical thinners can be left until later in your programme. This decision should be validated with cluster counts or pre-thin fruit counts as mentioned previously.

Setting the instruction

The best, largest piece of fruit is situated on a terminal bud, closely followed by well-positioned spur units. First and foremost, to drive fruit size and quality, where fruit sites are adequate, blocks should be thinned to singles. However, where necessary to manage vigour and meet cropload targets some blocks may need to be held in doubles. This all needs to be considered when a manager sets their thinning instruction.

“

Individual block targets should be based on accurate block history, sound block metrics, and robust industry data for each crop type or variety

If doubles are needed to meet cropload targets, very clear instruction needs to be given (e.g. “doubles on tips” or “doubles in space”) otherwise you run the risk of overcropping. In certain varieties hanging doubles can also create challenges with fruit drop and colour management at harvest.

Another thinning method or common instruction is to give thinners a minimum fruit size to thin to. This is a skilled method of thinning and is more challenging early in the season. Size thinning helps tighten the bell shape fruit size curve at harvest, as well as tightening maturity (late-set fruit are often smaller and mature later). It is important to note that during peak sizing, size should be recalibrated regularly.

Thinning instructions often specify:



The number of fruit to be left in a cluster or a fruit site



A spacing between fruit



A minimum fruit size (or simply stating “removal of small fruit”)



Defect removal (hail damage, russet, blackspot etc.)



Remove shaded fruit

Training and supervising

No matter how good a thinning instruction is, there will always be variation of outcome within a thinning gang.

Training of thinners, and then supervision of the implementation and execution is key.

A well-supervised thinning job improves the quality of execution productivity and can improve fruit quality outcomes.

It is a supervisor’s role is to assess:

- **Team (and individual) efficiencies** - to drive economic success and meet targets in a timely manner. Awareness of progress against budget is essential, even at this level.
- **Accuracy with the implementation of instruction** - “Do it once, do it right.”
- **Technique** - to minimise fruit damage and health and safety accidents (which circles back to improving efficiencies).

Regardless of how experienced the thinning team is, training in technique and ensuring thinners understand the thinning instruction for each block is essential. Poor technique in thinning and ladder handling can lead to inaccuracies, fruit damage, and injuries (maximise efficiency while minimising physical effort).

There can be large differences in the quality of hand thinning and interpretation of an instruction among thinners. Careful and regular monitoring of each worker’s thinning result is required to smooth out these variations.

To drive productivity, many growers pay piece rates or use incentive schemes. To drive quality, a trick aside from good training and supervision is to explain to the pickers at harvest they will be assigned the rows they thinned, and that an overcropped tree has poor colour and more defects. This strategy is only possible if you have a team that will be with you through the season - but remember, a poor thinning job now will make it much harder to make money at harvest.

Quantifying variability and management post-thinning

The old philosophy of “you can’t manage what you don’t measure” comes into play here. Variability should be identified at the time of thinning. Clear instructions, good supervision, followed up by good data monitoring should give growers confidence each thinner is carrying out a consistent job.

As you can only readily pick up a minimum of about 20 percent variation by eye, it is necessary to count fruitlets to determine the quality of the thinning job, with post-thin fruit counts being the most accurate forms of quantifying final croploads.

Have a staff member in charge of carrying out fruit counts directly behind your thinners. They may not count all day depending on the scale of your orchard, but their role should be to check variance from target throughout the day.

Fruit counting is most accurately done at an individual branch level (tallied up to a whole tree), or if working in kiwifruit counting along the wires or canes (tallied up to a bay count). This improves accuracy as individual branch tags mean managers can be sure nothing has been missed, and they can easily validate that the counting is correct.

New technologies such as drones and fruit counting cameras are also good data collection tools to outline variation in cropload across the block; however, manual fruit counts are still essential to calibrate the relativity of these maps.

“
A well-supervised thinning job improves the quality of execution productivity and can improve fruit quality outcomes

Counting technology provides broad spectrum information e.g. identifying a change in fruit density (a missed row, or an overcropped corner of the block), which then allows a manager to take a more targeted approach in investigating what historically may have been missed.

Where necessary a cosmetic groom may be appropriate before harvest to improve class 1 pack-out outcomes. This must not become a ‘re-thin’, as by this stage you should be confident in the fact that original targets have been met.

It is the fruit that remains on the tree post-thinning that determines the crop outcomes. ●



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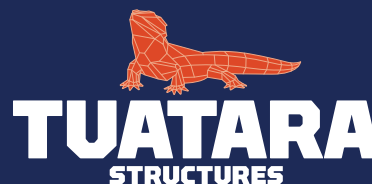




Figure 1: Recently girdled kiwifruit trunk, spring 2024



Figure 2: Where irrigation sprinklers wet the vine trunk, skip irrigating for a few days after girdling

SUMMER TIPS FOR GROWING KIWIFRUIT

In this article, I'll focus on tips for key summer activities on kiwifruit orchards – girdling and male-vine trimming.

Ruth Underwood : Horticulture consultant, Fruition Horticulture (BOP)

Girdling

Girdling trunks has become a standard seasonal activity in most kiwifruit orchards. It can have a really good impact on fruit size and sweetness, as well as boosting flower numbers the following spring. Doing it right, with close supervision and with good vine hygiene is important to get the intended results.

What does girdling do?

When we girdle vines, we are removing a portion of the vine phloem. Phloem is the part of the vine that transports the 'sugar' materials produced by the leaves. The phloem can move this all around the rest of the vine, including to the roots. There is a really important layer of the trunk just underneath the phloem, called the cambium. It is the same part of the trunk or stem that is matched up during



grafting so the grafted pieces knit together. After girdling, the cambium produces a lot of new cells, that callus and mature into phloem to replace the phloem removed during girdling. If the girdling goes too deep, it removes the cambium as well as the phloem, so it is more difficult and slower for the vine to callus across the girdling wound. This increases the chance of vine growth being affected more than temporarily, and infection occurring at the girdle.

If the girdle wound goes even deeper, it will damage the xylem, which is the vine's water-conducting system. Cutting into the xylem disrupts supply of water travelling from the roots to the vine above the girdle, often with serious impacts. This may heal, from callus by the cambium at the edge of the girdle, but much more slowly, and with greater risk of infection.



Figure 3: Prune males soon after flowering as male flowers starting to decay in the canopy can spread rots to developing fruit

What helps reduce infection

Disease can occur around any wound, but girdles are especially susceptible to infection because they are large wounds, and under the canopy moist conditions may favour disease. To reduce infection occurring at the girdle site:



Choose dry weather for girdling, where dry weather is forecast for the next few days.



If your irrigation system wets the vine trunk, skip using irrigation for a few days after girdling, while the wound site dries out.



Ensure girdles are done to the correct depth so they heal quickly.



Clean tools frequently to remove the plant material.



Disinfect tools regularly with recommended products.

Supervision

Girdling is relatively fast, and not expensive compared to other orchard activities. Take the time to check all those working on girdling know how to do it correctly at the outset, and check back regularly as work progresses. If the girdling is too shallow, it doesn't remove all the phloem and you miss out on the intended effects. This shows up soon after girdling, as the phloem and bark not removed oxidises to a brown colour. You can remedy this by clearing the remaining phloem and bark down to the cambium, but it would have been much better to get the depth right initially. If the girdle is too deep,



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you need to boost supervision, and re-brief or swap out any specific worker going too deep. It may help to apply a protective spray over the girdle, and some people use a hand-held spray bottle routinely on their girdles.

If you are doing several girdles during the season, you have the option to re-open a recent girdle rather than making a new site on the trunk. Check to make sure removing the callus isn't also ripping off some of the cambium. If this occurs, try adjusting your technique, and if the cambium is still being damaged, you may be better to make a separate girdle.

“
Girdling trunks has become a standard seasonal activity in most kiwifruit orchards

This practice has proven so worthwhile, most vines now have a lot of girdle sites. Space any new girdle at least several centimetres apart from another recent girdle to reduce the chance of the bark peeling off in between the two recent girdles.

When to girdle young vines

There is no hard and fast rule about how young is too young for girdling young vines. The benefits can be significant, and there is considerable economic imperative for a young orchard to produce high-earning fruit. This is a job to do gently, as the young vines have softer trunks. The main thing is still to check you don't go too deep and into the cambium or xylem. Girdling done too deep on a young vine will be even less likely to heal. You may choose to skip any young vines with especially skinny trunks, even though this will increase variability.

Male vine pruning

For our female cropping vines, we are well aware that wood grown early in the previous season makes the best fruiting wood. For male vines too, we want wood that produces good flowers. Pruning straight after pollination gives a good length of time for male wood to regrow. The best male vines have plenty of growing points along their leaders, but relatively weak and spurry growth. If you are short of growing points, you are more likely to get regrowth the younger the wood you prune into. If you do need to 'remodel' your male vines, plan to do it over a couple of seasons rather than being brutal in one season. It can be worthwhile training a new leader on a male vine to replace a poorly furnished leader. If so, the replacement leader is best selected before pruning the male vines.

Pruning the males promptly also reduces fungal disease pressure both from the increased airflow through the canopy and from physically removing flower debris that is starting to decay from the vine canopy.

Many male vines need further trimming later in the season to reduce shading of the fruiting canopy. Make sure this is just a trim, and not a hard prune. If you remove too many of the regrown shoots, you will be depending on late-grown shoots for your next flowering, and that is the opposite of what you want! I've even seen male vines weakly flowering at quite the wrong time after being pruned hard late in the growing season. Ideally, the male vines will produce several 'waves' of flowers with their king flowers opening first, followed up with several stages of side flowers so there is extended flowering and good overlap with the female vines.

In short, don't brutalise your male vines with multiple hard pruning. They are unlikely to respond with the growth and return flowering you want for your next crop.

Enjoy the summer

There's plenty to do on kiwifruit orchards through the summer, but some flexibility with timing. It's a good chance to take a break and enjoy summer activities away from the orchard to refresh. It very quickly rolls from harvest into the busy parts of the new growing season, so seize that chance for a break for you and your team, before things get hectic again with your 2025 harvest.

Summary

- 🌿 Kiwifruit vines are pretty resilient, but still need careful treatment, particularly during girdling.
- 🌿 Girdling done well will help with fruit size and sweetness - while minimising risk to vine health.
- 🌿 Managing male vines well will help reduce disease pressure now, and boost pollination outlook for the next crop. ●





Jody Scott says New Zealand has some of the best growers and apple breeders in the world needed to produce quality cider

CIDER RENAISSANCE IN THE MAKING

Growing New Zealand's cider industry is, as Jody Scott from Peckham's Cidery and Orchard concedes, a chicken-and-egg situation. The cider industry needs to be financially attractive for growers to plant cider varieties. But to become financially attractive, the industry needs growers to produce the fruit.

Anne Hardie

Jody and his wife, Lois, bought the award-winning cidery a couple of years ago. He previously ran Zeffer's cider operation in Hawke's Bay. He is also chair of Fruit Wine and Cider Makers Association NZ, so he knows a thing or two about cider, and they export a small amount of their product. He is also positive the cider industry can achieve its \$1 billion-a-year target over time.

As he points out, the one thing that sets Peckham's Cider apart to win awards in New Zealand is fruit quality. That quality earned them the New Zealand Champion Producer award at the recent New Zealand Fruit Wine and Cider Awards which preceded the New Zealand Cider Festival in Nelson in November. The festival itself was an opportunity for festival goers to sample some of the 100-or-so ciders on offer from New Zealand cider makers.



Peckham's Cidery is a little unusual in New Zealand though, because its cider is made from cider apple varieties that are grown on the Scotts' Tasman orchard. Most cider in New Zealand is produced from low-quality eating apples that are not up to export grade - and that is the crux of the report *Roadmap for Premier Cider Industry in New Zealand* published by Cider Apples NZ (CANZ) earlier this year. Cider apple varieties don't make a great eating apple, but Jody says the complexities of taste make them great for cider.

"Cider in New Zealand is pretty heavily price driven and you can't tell the difference between the average New Zealand cider on the shelf and any other cider on the shelf."



Jody Scott says the cider industry will have to be ambitious to achieve its goal

That's why he says the New Zealand cider industry is in "pretty poor shape". Rather than compete on price, he says the industry needs to compete on quality. Especially going forward as people drink less but seek quality.

To do that, he says New Zealand needs to produce unique cider apple varieties that create an industry with something different to export around the world, just like it has done in the past with wine and to a lesser degree with beer.

"In an ideal world, it tastes delicious and it's a New Zealand taste. That's the way to create export success. It needs to have a stamp on it.

"We have some of the best winemakers in the world, and best growers and best apple breeders, and we're an ambitious exporting country."

He knows there are wineries that would be keen on producing cider, because the winemaking process is similar with cider. Potentially, there could be contract growers and cideries just like the wine industry.

The challenge with traditional cider apple varieties to date is they tend to be low yielding. In New Zealand, these varieties make up less than one percent of apple plantings and generally belong to cideries.

CANZ began a fast-track programme of cider apple varieties in 2022 and due to its selection management protocols, expects to have varieties available by 2028. It has initiated a programme with Prevar, Plant & Food Research and two private New Zealand eating apple breeding programmes to evaluate material using the protocols and technology it has developed. Driving the programme is CANZ's founding partner and long-time plant breeder, Allan White.

His CANZ co-founder and fellow director is cider maker John Powell, who says most of New Zealand's cider is made from varieties such as Braeburn and Royal Gala which make a very bland cider. Hence, most New Zealand ciders are flavoured or highly sweetened to try and give them body or a point of interest.

He likens the cider industry to wine back in the 1980s and 1990s when that industry was in its infancy in New Zealand. It wasn't until Sauvignon Blanc came along and put New Zealand wine on the map, that the wine industry took off. In 2023, the wine industry reached about \$2.4 billion in exports and John says it took about 30 years to reach its first billion. John reckons the cider industry, using the knowledge gleaned from wine, could potentially reach the billion-dollar mark in about 15 years.



Traditional cider variety, Harry Masters' Jersey, at Peckham's orchard



In November festival goers enjoyed a variety of ciders at the New Zealand Cider Festival in Nelson

“Cider is probably one of the last major beverages to go through a premiumisation process. What’s made it lag behind other beverages is probably the lack of suitable raw material globally and that’s what we want to capture here. It has suffered from under-investment for about two centuries now. So, it’s time for a cider renaissance.”

The wine industry is “facing headwinds”, John says, so what makes him think cider can succeed? It comes down to demographics, he says. An older population drink wine and the baby boomer market is starting to shrink. Cider drinkers on the other hand – those who drink traditional cider – tend to be a younger demographic globally, he says, who are under 40, have a higher-than-average income, and cider is considered the most gender-balanced alcohol category. Plus, cider has about half the alcohol content of wine which appeals to people.

“
The challenge with traditional cider apple varieties to date is they tend to be low yielding

He still has to convince growers to plant cider apple varieties as the new varieties become available. Already, there is some interest from growers who have an area to plant and are deciding what to put in the ground.

John says part of the attraction for growers though will be the robust nature of a cider crop. After all, blemishes on

cider apples don’t matter – it’s about the juice. That makes it easier to get the apples off the trees mechanically as well. Jody and Lois, like many cider apple growers overseas, simply shake the apples off the trees.

The aim of the company is to develop new varieties of cider apples, protect them with Plant Variety Rights (PVRs) and license them for propagation in licensed nurseries – similar to other apple breeding programmes. John says they will structure royalties in a way that growers will not have to pay as much up front, which should help lower the capital cost for growers.

Jody and Lois plan to trial some of the new cider apple varieties in the orchard and Jody says there are three particularly strong contenders he likes from the CANZ project that have not been in ciders before. He says cider apples have more flavour compounds than other apples or grapes, which can therefore produce more diversity. A couple of varieties in the trials have pink flesh which he says could produce a rosé cider, which makes it interesting.

“Cider lovers will start to see some interesting things popping up in the next two to three years with new apple varieties being played with.

“Cider in this country has never really had its quality renaissance that wine and beer have had. That’s still to come.”

Jody says the industry has to be ambitious and reckons there are enough ambitious cider makers, winemakers and growers to take a risk. ●



Vangelis Vitalis, New Zealand's chief negotiator, and Stephanie Honey, chair of the NZ Horticulture Export Authority, at the launch of the Barriers to Our Export Trade report

LOWER TARIFFS WELCOME BUT TRADE CHALLENGES INCREASE

The cost of tariffs on New Zealand horticulture has dropped under two percent, down from almost 11 percent in 2010, according to the latest Barriers to Our Export Trade report by the NZ Horticulture Export Authority.

John Gauldie

The *Barriers to Our Export Trade* report covers New Zealand customs export data for the year ending 30 June 2024, but already reflects industry savings from the EU-NZ Free Trade Agreement (FTA), mostly due to kiwifruit that arrived in the European Union from 1 May when the agreement came into force.

"The lower cost of tariffs demonstrates the tangible impact of Free Trade Agreements in reducing trade barriers," says Simon Hegarty, chief executive at NZ Horticulture Export Authority (HEA).

He highlights that the impact extends beyond direct savings by stimulating more trade and contributing to the higher total value of horticulture exports.

"I think there is definitely a causal relationship between the steady reduction of trade barriers over the last 20 years and increases in horticulture export earnings, which have risen 192 percent in the corresponding period."

The total cost of tariffs fell to approximately \$135-\$155 million in 2024. The variance reflects the volatile cost of freight that makes it difficult to estimate CIF (cost, insurance and freight) value. A large part of the direct tariff savings may end up sinking into rising freight costs.

"Although the global supply chain has improved considerably since the Covid-19 pandemic," Simon says, "the ongoing disruption in both Suez and Panama Canal traffic has taken capacity out of shipping and caused rising costs and pressure on our networks."



“We are vulnerable when shipping lines are drawn to more lucrative routes than coming down to New Zealand. The availability of containers in New Zealand is another concern.”

The report also draws attention to the increasing use of non-tariff measures such as unjustified phytosanitary requirements, unnecessary delays caused by inspections and onerous paperwork. These measures are often not covered by FTAs.

“Unfortunately we’re seeing more non-tariff measures from some countries which can limit and frustrate exporters to the point where in some cases the economics of complying make trade unviable. Industry sectors and the Ministry for Primary Industries (MPI) must appropriately resource this area if New Zealand is to combat this challenge and maintain a competitive presence in export markets.”

Overall export earnings from horticulture continue to rise, however the trajectory slowed to an average one percent a year from 2022 to 2024 - a marked slowdown that reflects the cost of severe weather events in the 2022-2023 season, including Cyclone Gabrielle.

“
The cost of tariffs on New Zealand horticulture has dropped under two percent, down from almost 11 percent in 2010

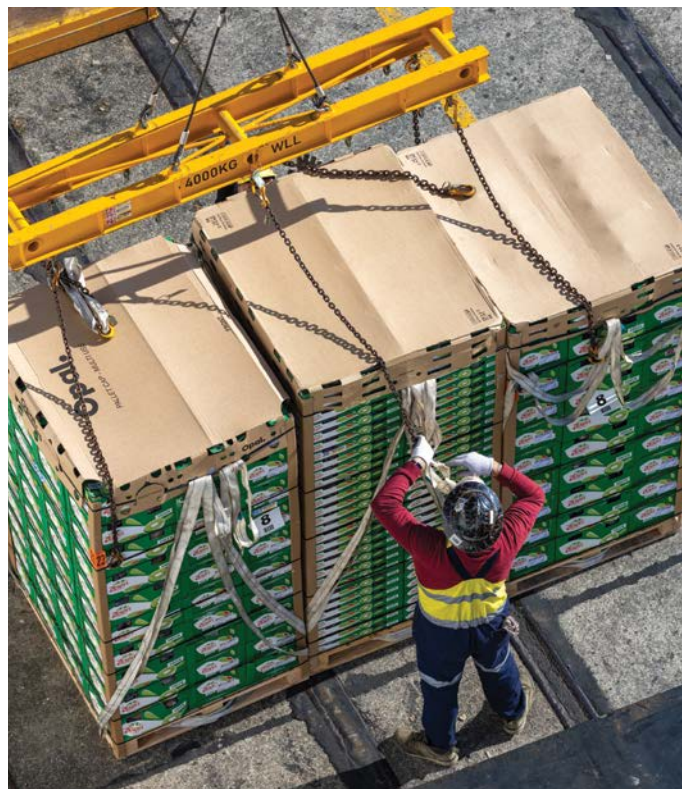
China remains New Zealand’s top horticulture market with FOB earnings surpassing \$1 billion for the first time last year. In addition, trade with China’s special administrative region Hong Kong increased to \$120 million.

As our leading export market, China accounts for approximately 20 percent of New Zealand’s horticultural exports. This reflects a more diverse market spread compared to the early 2000s, when the EU market dominated with a 42 percent share.

Following a dip in 2023, trade with the EU rebounded in 2024, with the bloc regaining its position as our second largest trading partner, generating \$837 million in earnings, mostly thanks to kiwifruit.

“With the EU we are only now seeing the full benefits of zero tariffs heading into 2025 when all our kiwifruit and onion shipments will be tariff free. Plus we are yet to see what long-term effect the FTA will have on expanding trade.”

The Gulf Cooperation Council (GCC) and United Arab Emirates (UAE) FTAs with New Zealand will begin to improve trade from next year, although tariffs were already



In October the last of Zespri’s 62 charter vessels for the 2024 kiwifruit season departed from Tauranga. Photo by Vinnie Maniot, Liquid Pictures

relatively low. The GCC countries together already account for \$73.5 million in horticulture exports from New Zealand - more than the United Kingdom takes.

Total export earnings from Australia remain stable but fail to reflect the volatility at crop level. Avocado exports dropped dramatically, while blueberries saw an equally large increase.

The ASEAN countries together import more of our fruit and vegetables than Australia. Those countries continue to rise in importance, reflecting the pivot away from Europe to Asia. For example, trade with Vietnam has grown seven-fold in the last decade (although export earnings took a dip in 2024).

Increasing trade with ASEAN countries also contributed to an increasingly diversified marketplace outside the top five export destinations.

However, the picture of more diversified export destinations is not matched by crop diversity. The domination of kiwifruit and pipfruit remains around 77 percent of total export value. ●



Growers interested in receiving the full report (PDF) can email Barbara Maré at HEA: barbara@hea.co.nz







Most of the core FERDINAND study team at the University of Auckland's Human Nutrition Unit, including Associate Professor Jennifer Miles-Chan fourth from the left and PhD student Ibrahim Mohamed second from right

MANAGING BLOOD SUGAR

Diabetes is rising in New Zealand, but horticulturalists and scientists believe they may have solutions.

Karen Trebilcock

QUICK SUMMARY

-  Living with diabetes with a healthy diet of vegetables and fruit
-  Can fruit-based health products help address the growing diabetes crisis?
-  Research shows timing and order of fruit consumption affects blood sugar levels
-  Natural supplements create value from orchard waste products

Figures for the year ending 2023, released in August by Health New Zealand Te Whatu Ora, show 323,700 New Zealanders now live with some form of diabetes, an increase of 95,700 people in three years.

"If we continue at this current rate there will be approximately 510,000 people living with diabetes by 2040, which is alarming," Diabetes NZ chief executive Heather Verry says.

The International Diabetes Federation (IDF) projects 783 million adults will be living with diabetes by 2045 worldwide.

"Many people with diabetes struggle with what to eat and how to manage their blood sugar levels to get good glycaemic control," says Liz Dutton, head of clinical services at Diabetes NZ. "In fact, it's one of the most common questions we are asked about and the most googled on our website.

"Our guidance is that a healthy diet for someone with diabetes is not really that different to anyone eating well," she continues. "We recommend vegetables are given a leading role along with a moderate amount of carbs. Fruit and vegetables that are lower on the glycaemic index (low GI) are more slowly digested and produce a more gradual rise in blood glucose levels so those are the best options for someone with diabetes or prediabetes."



The classic Kiwi breakfast - however eating the kiwifruit 30 minutes before the cereal could help with glycaemic control

Associate Professor Jennifer Miles-Chan and PhD student Ibrahim Mohamed at the University of Auckland’s Human Nutrition Unit are looking at New Zealand feijoas which they say are packed full of bioactives such as polyphenols and abscisic acid.

“Polyphenols improve impaired glucose regulation and abscisic acid decreases fasting blood glucose and improves glucose tolerance,” Jennifer says.

Trial work to see how well Feiolix®, a freeze-dried powder made from whole feijoas, in combination with a clinically proven low energy diet, affected body weight and blood glucose levels finished earlier this year, and although the results are still being analysed, so far they look good.

The trial, ‘Evaluating Feijoa for Diabetes Prevention in a Multi-ethnic New Zealand Cohort,’ also known as the FERDINAND trial, looked at 97 overweight Aucklanders who also had raised blood sugar levels. Half were given about a gram of Feiolix and the other half a placebo every day for six months.

During the first two months, all the participants were also put on a low energy diet with an expected weight loss of between five and ten percent.

During the following four months the focus was on maintaining the weight loss through healthy diet and weight loss advice.

Preliminary results show all 62 people who completed the trial lost weight, regardless of Feiolix consumption.

However, at the end of the study the fasting blood glucose in those taking Feiolix was still lower than at the start of



the study, while for those taking the placebo their fasting glucose had bounced back to baseline (prediabetic) levels.

While these preliminary results look promising, Jennifer says “it’s still early days, and there is a lot more data to look at”.

Feiolix is a patented freeze-dried product manufactured by Auckland-based Anagenix.

It uses feijoas from New Zealand orchards which Anagenix says contain more bioactives due to the country’s higher ultraviolet (UV) levels.

The tree produces more bioactives in its fruit as a defence against UV.

Anagenix also produces green and gold kiwifruit powder for gut health as well as a combined boysenberry and apple powder for healthy respiratory function.

Other New Zealand grown fruits and vegetables are being put under the spotlight by the High-Value Nutrition Ko Ngā Kai Whai Painga National Science Challenge which is working with some of the country’s biggest growers and exporters to develop products aimed at the prevention of diabetes by early intervention.

But looking deeper into how fruits and vegetables affect blood sugar levels is Plant & Food Research principal scientist John Monro.

“Fruit has a range of attributes that may be harnessed to allow their many health benefits to be enjoyed at the same time as they suppress the glycaemic response to co-consumed starchy foods.”



The number of New Zealanders living with some form of diabetes has jumped to 323,700. Photo courtesy of Diabetes NZ



Clinical trials of a natural supplement from apple orchard waste could begin in 2026

He presented his paper “Fruit Attributes for Glycaemic Control” at the IX International Postharvest Symposium in Rotorua in mid-November explaining the amount of fruit, the order they are eaten with carbohydrates and the time interval between eating fruit and carbohydrates all affect blood sugar levels.

John started investigating more than 10 years ago how a breakfast of New Zealand favourites kiwifruit and Weetbix affected blood sugar levels, also known as the body’s glycaemic response.



Fruit has a range of attributes that may be harnessed to allow their many health benefits



“The kiwifruit lowered the blood glucose peak and even stopped blood glucose going below baseline, preventing hypoglycaemia.”

He says one of the reasons is because much of the sweetness of fruit comes from fructose, not glucose. Fructose is processed in the liver rather than entering the bloodstream for distribution throughout the body as glucose is.

As well, fruit contains dietary fibre which slows the bulk transfer of sugar from carbohydrates to the gut wall for absorption. Fruit’s organic acids also lower the stomach’s pH (acidity/alkalinity) which affects gastric emptying.

All three of these factors affect not only the digestion of fruit carbohydrates but also the starches eaten with it.

“But because fruit sugar also has some glycaemic effect, the optimum strategy for reducing blood glucose response is to consume fruit close enough to starchy foods to impair its digestion but far enough from it so the glycaemic responses to fruit and starch do not overlap.”

He says for this to happen, fruit must be eaten first so its components are present and waiting to interact with the starchy food.

“As the glycaemic response peak takes about 30 minutes, a separation of 30 minutes would allow the response to the fruit to be about 30 minutes past its peak by the time the response to the starchy food had peaked, so the two foods would not be additive in their effects.”

John is part of a team at Plant & Food Research, including Andrew Dare, Richard Edmonds, Carolyn Lister and Carl Massarotto trying to bring to market a natural, readily available supplement using bioactive compounds from apples which could help those trying to manage high blood glucose levels.

Even better for growers, the apples used will be from orchard waste - the ones that are usually left lying on the ground.

Apples will be selected this growing season for a pilot trial involving about 15 people next year, run out of Palmerston North.

"If it goes well, we're hoping to have a larger clinical trial in 2026 and 2027," Andrew says.

He has been working on the project for about five years but has been researching the compounds found in apples since his PhD days ten years ago.

Although there is interest overseas in similar compounds in fruit, he says New Zealand has the advantage of large orchards and so large amounts of waste apples.

"We also grow very high-quality apples and have a reputation for our food production. As well, we have the expertise here."

Whether the final product will be a capsule, a drink or a food, Andrew is not yet sure.

"We have a terrible rate of diabetes in this country, as does the world, and it's our big hope that we can do something about it," he says.

"If we can produce something that is cheap and easy to use it will be another tool for people to manage their glucose levels." ●



A trial is investigating how feijoa powder, in combination with a clinically proven low energy diet, affect body weight and blood glucose levels. Photo by Trefor Ward

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New Summerfruit NZ Board member Jerf van Beek




JERF SEES SUMMERFRUIT GROWTH

New Summerfruit NZ board member Jerf van Beek brings fresh enthusiasm and vision to the industry. Following the board's successful focus on eating quality improvements over recent years, Jerf sees significant potential in expanding export markets.

"Now it is time to put the pedal to the floor to increase consumption as there are some real gains to be made by growing exports," he says.

Jerf advocates for technological advancement in the sector, particularly in rootstock development, drawing parallels with innovations in the apple industry.

He replaces Roger Brownlie, whose leadership through Covid-19 and Cyclone Gabrielle has been commended by the organisation. Roger, who served as both chair and vice chair, hands over the vice chair position to Blair McLean, while Trudi Webb continues as chair.

 For more information visit:
www.summerfruitnz.co.nz



Pipfruit export values more than doubled in the decade to 2023




PIPFUIT'S ECONOMIC IMPACT MEASURED

New research reveals New Zealand's apple and pear industry generated nearly \$2 billion in total revenue impact to the national economy in the last 12 months. The sector's export value more than doubled from \$347 million to \$892 million in the decade to 2023.

NZ Apple and Pears chief executive Karen Morrish says the economic report by MartinJenkins provides a valuable snapshot as the industry continues to target value growth. "We're pleased to see that the growth in our export value has come from increased productivity and investment as well as the diversification of international markets."

The industry, employing over 12,000 permanent and seasonal employees, has demonstrated efficiency gains with a 70 percent reduction in chemical usage in the ten years to 2023 and a decreased carbon footprint across operations.

 For more information visit:
info.applesandpears.nz



Fresh Facts shares annual insights about New Zealand's fresh produce industry



**DOWNLOAD
FRESH FACTS 2024**

United Fresh general manager Paula Dudley says Fresh Facts 2024 contains critical data and insights to enable New Zealand's fresh produce industry to thrive.

"As a key player in the fresh produce sector, we hold a collective responsibility to generate measurable, timely, intelligent and accurate data. This data is vital to helping both our industry and its partners plan, foster and grow domestic and export value chains efficiently."

Produced in partnership with Plant & Food Research, Fresh Facts 2024 provides comprehensive data on volume, export markets and five-year trends across different produce sectors, serving as a crucial tool for industry-government engagement.

To download Fresh Facts 2024 visit:
unitedfresh.co.nz/technical-advisory-group/fresh-facts



The Fruit in Schools initiative is celebrating 20 years



**30 YEARS
OF 5+ A DAY**

5+ A Day was launched to consumers in 1994 to encourage New Zealanders to eat more fresh produce for good health. The message was subsequently rolled out to schools and early childhood education centres, and now a generation of tamariki has grown up learning about healthy eating habits using 5+ A Day resources.

5+ A Day also supports the government-funded Fruit in Schools initiative which is celebrating its own 20-year milestone in 2024. Fruit in Schools currently provides fresh produce daily for 126,000 tamariki and staff at 566 schools nationwide, allowing them to try over two dozen varieties of fruit and vegetables during the school year. This equates to 27 million servings of fresh fruit and vegetables provided annually to help nourish minds and bodies.

For more information visit:
5aday.co.nz

POSITIVE END TO SEASON AND YEAR

James Kuperus : Onions NZ chief executive



As 2024 draws to a close, it will be remembered as a better season for growing and a poorer season for exporting.

Growing conditions were much kinder and crop yields were up significantly. However, the larger crop was greeted by difficult market conditions and shipping issues caused by the disruptions to shipping through the Suez and Panama Canals.

The main market disruptor was Indonesia, with the requirement to fumigate onions with methyl bromide, and a delay in issuing import permits. As Indonesia is our largest export market, this caused significant issues with export onions needing to go to other markets, which pushed the price down.

The Ministry for Primary Industries (MPI) and Ministry of Foreign Affairs and Trade (MFAT) did a fantastic job to secure an agreement to remove the fumigation requirement by 1 August. Even though this was late in the season, it still meant that approximately 10,000 to 12,000 tonnes of onions could be exported to Indonesia.

Freeing up trade

Implementing the EU-NZ Free Trade Agreement (FTA) on 1 May instead of 1 August this year resulted in approximately 30,000 tonnes of New Zealand onions entering the European Union tariff free, rather than paying the 9.6 percent tariff. This was extremely welcome, and the industry looks forward to next season when all of our exports to the EU will enter tariff free.

In terms of India, we are ramping up our understanding, investment and support for improved market access. We face both tariff and phytosanitary issues (fumigation), which have prevented trade from taking place.

Similarly, we face a non-tariff barrier with the Philippines: since 2016 no import permits have been issued despite having access to the market. However, there seems to be a glimmer of hope, with the Philippines Bureau of Plant Industry visiting New Zealand in late September to undertake an audit of our systems to reinstate trade.

Humble to Hero project

Humble to Hero is a partnership programme between MPI and the New Zealand onion industry, which provides support for innovative grower driven projects.

This programme is now hitting its stride, with several workstreams delivering:

Nutrition claims

We have completed work on understanding the nutrition profile of New Zealand onions compared with the onions of our main competitors. The research did find elevated levels of quercetin and other phytochemicals in New Zealand onions. These compounds are known for their antioxidant and immunity enhancing properties.

However, because there is not enough clinical evidence to support a full health claim, we are exploring other options for content claims or health linkages that differentiate the New Zealand onion.

Indonesia cooperation

We have concluded the first year of this three-year programme with the Indonesian Ministry of Agriculture. Surveys and demonstration plots have been completed with Indonesian shallot farmers, to better understand current challenges. We have also started trials to improve crop yield.

New Zealand Onions campaign

This year, we launched the New Zealand Onions campaign in Indonesia to raise awareness of New Zealand onions and grow the market further. The campaign highlights the positive attributes of our onions, namely around food safety, quality, storage and taste. To explore what we are doing, visit www.newzealandonions.com.

A S Wilcox biopesticide project

This project is taking food waste and looking at adding value by developing biopesticides as an alternative to synthetic pesticides. The project's first year was lab-based, developing a concentrate that will be tried in the field this year.

The overall outcome we are seeking is to improve the sustainability of growing systems, while giving growers an alternative use for their waste. ●



For more information, contact Onions NZ
info@onionsnz.com

RECORD ATTENDANCE FOR FEIJOA GROWERS AGM

NZGrower & Orchardist staff

There was a record turnout for the NZ Feijoa Growers' Association Annual General Meeting (AGM) and field trip events in Auckland at the end of October.

The AGM was held at Quality Produce Packers in Mt Wellington, and activities over the two days included visits to the Fresh Direct market floor in Mt Wellington and the Foodstuffs distribution centre in Māngere.

"We have about 100 feijoa growers in New Zealand and about a third of them attended this year, which was a great percentage," said Feijoa business manager Matt Thorn.

"Everyone found it really informative and a great networking event and we are hoping for even more growers next year. We hold the AGM and field trips in a different location each year. Last year's was in Gisborne and the next will be in Tauranga."

The AGM began with a welcome from Fresh Direct director Marcus Turner, who shared some of his family's centuries-long history in commercial horticulture, dating back to the 1600s in Cambridge, United Kingdom.

“

Everyone found it really informative and a great networking event and we are hoping for even more growers next year



Fresh Direct owners Jeffery and Peter Turner's great grandfather set up Turners Mart – later Turners & Growers – in the 1890s. Peter's father Jack was responsible for coining the term 'Kiwifruit' when the name was changed from Chinese Gooseberry.

Aotearoa Horticulture Action Plan programme manager Anna Rathé outlined the sector's vision to double horticulture exports and how that can help the feijoa sector increase business.



Feijoa grower Brent Fuller and Fresh Direct's Marcus Turner

There was also a talk on University of Auckland research into whether feijoa powder could potentially help prevent type 2 diabetes. See article on page 46.

Roger Matthews (chair) spoke about the research projects that we recently finished and asked members to suggest research needs for the future.

"The next day we did the field trips," says Matt. At Fresh Direct, the growers got to see how products can come in 24 hours a day and are divvied up for sending out. They found that fascinating – seeing the pallets of a single produce destined for supermarkets and also mixed pallets for smaller shops around Auckland.

"The Foodstuffs distribution centre was also very impressive. They distribute to New World and Pak'nSave and growers found it very interesting to gain an understanding of how that all works.

"Most growers don't get to see the process after they send their crates off and appreciated the opportunity to gain a good understanding of all the logistics and processes involved." ●

REGENERATIVE AGRICULTURE FRAMEWORK: A NEW ERA FOR POTATO FARMING

Contributed by Potatoes NZ

Potato growers are facing unprecedented challenges. Climate change, variable weather patterns, rising input costs and regulatory uncertainties are all putting pressure on the industry. In response to these challenges and to create a more sustainable business now and in the future, companies are partnering with growers to re-imagine potato farming through a commitment to implement regenerative agricultural practices.

What is regenerative agriculture?

Regenerative agriculture is an ecosystem-based approach to farming that aims to improve farm resilience, crop yield and quality by enhancing soil health and water quality, optimising water use, increasing biodiversity, and reducing the impact of synthetic inputs. This approach is built on six key principles:

- 1 Ensure farm resilience: Strengthening the farm's ability to withstand and recover from adverse conditions.
- 2 Armour soils: Using living plants to decrease soil erosion and increase soil organic carbon.
- 3 Enhance crop and ecosystem diversity: Promoting biodiversity in crops and soil.
- 4 Minimise soil disturbance: Reducing soil erosion and compaction, maintaining soil carbon and structure.
- 5 Reduce agro-chemical impact and optimise water use: Lowering the risks associated with crop protection products and promoting soil biodiversity to enable natural soil functions, such as pest and disease suppression.
- 6 Integrate organic and livestock elements: Incorporating organic matter and livestock to enhance soil health.

These principles aim to increase soil organic carbon, improve soil fertility and resilience, enhance soil infiltration and water holding capacity, and boost soil biodiversity.

A commitment to smarter, more sustainable farming

McCain has produced a regenerative agriculture programme designed to enhance farm resilience by improving soil health, water use efficiency and biodiversity, while reducing climate impact through lower greenhouse gas emissions. These efforts align with their Smart & Sustainable Farming commitments, which include reaching an 'onboarding' level of regenerative practices across 100 percent of McCain potato acres by 2030 and an engaged level of regenerative practices across 50 percent of McCain potato acres by 2030.

Also looking to develop research partnerships and leverage collective action to advance regenerative agriculture and operating three 'Farms of the Future' by 2025, McCain continues to develop and transfer regenerative agriculture practices to growers.

Alongside these commitments, McCain has set specific supporting targets, which include a:

- 25 percent reduction in CO₂ emissions per tonne from potato farming, storage and freight by 2030
- 15 percent improvement in water-use efficiency in water-stressed regions by 2025
- crop target ensuring 20 percent of all potato crops grown for McCain use water stress-tolerant varieties by 2025.

Scott Clelland,
agriculture manager
at McCain Foods,
recently joined the
Potatoes NZ board





A nature strip/flowering strip as a regenerative agriculture practice

Collaborating with growers: a local approach

McCain works closely with farmers to tailor practices to local conditions, which involves conducting baseline assessments with growers to inform regional goals and action plans, as well as regional and sub-regional assessments on priority practices.

Scott Clelland, agriculture manager at McCain, emphasises the importance of this tailored approach.

“Our commitment to regenerative agriculture is not just about setting global targets. It’s about working hand-in-hand with our growers to understand their unique challenges and opportunities. Regenerative agriculture is about the whole farming system, including all of the crops in the rotation,” says Scott.

“We have been working with the growers and agronomists to focus on yield improvement, especially since 2012 following research into declining yields and findings that pointed to the value of longer, more varied crop rotation for better soil health. Our grower group and agronomists have a really positive mindset around extending crop rotation and crop diversity and taking good care of the soil – all core targets for regenerative agriculture. More recently we have also done some border plantings to encourage and release beneficial predators.”

Working towards a more sustainable future

Committing to regenerative agriculture represents a significant shift towards more sustainable farming practices. By focusing on improving soil health, optimising water use, enhancing biodiversity and reducing synthetic inputs, growers can create a more resilient and sustainable future for potato farming. This initiative not only addresses the immediate challenges faced by growers but also sets a foundation for long-term agricultural sustainability.

“The future of potato farming depends on our ability to adapt and innovate. Regenerative agriculture offers a pathway to not only sustain but also enhance our farming practices. By embracing these principles, we are investing in the health of our soils, the quality of our crops, and the resilience of our farming communities,” says Scott, who recently joined the Potatoes NZ board.

As the industry navigates the complexities of climate change and economic pressures, a regenerative agriculture framework offers a promising path forward. By partnering with growers and leveraging innovative practices, companies can create a more resilient, more sustainable future for potato farming. ●

UPDATE FROM TOMATOESNZ

Dinah Cohen : TomatoesNZ general manager



As we enter the last month of 2024, it's a good opportunity to reflect on what TomatoesNZ has been working on for you, the grower, as well as letting you know what the 2025 workplan includes.

Some of the focus of 2024 centred around the commodity levy renewal, without which, TomatoesNZ wouldn't have funding to continue. This began with the board voting to keep the same proposed levy and consulting the grower membership on their views on work undertaken and improvements that could be made. One small improvement that meant a lot to some of our growers was that, where possible, communications are given in different languages.

This was first employed to disseminate important information following the detection of Tomato Brown Rugose Fruit Virus (ToBRFV) in South Australia. We worked hard with the Ministry for Primary Industries (MPI) to ensure a trade embargo was put in place as the detection came at the height of Australian fresh tomatoes arriving into New Zealand and industry thought that this posed an unnecessary risk. The trade embargo continues and we will work with MPI again ahead of next winter to check what risks still exist.

The commodity levy vote occurred in June and thanks to your support we had a strong mandate to continue levies at the same level. The application form was submitted to MPI in the same month, with advice given to the Minister for approval a few months later. By the time this goes to press, the commodity levy legislation should be nearly complete, enabling this funding mechanism to continue from April 2025.

“

TomatoesNZ has been involved in discussions with other vegetable product groups about how we can better work together, providing efficiencies in the way we operate

With this in place, I'm pleased to tell you about other workstreams that will be the focus for next year. TomatoesNZ introduced growers to our Integrated Pest Management (IPM) guide in August and we will continue to develop this as the trial enters its third year. The work with Bioforce and A Lighter Touch, which boosts levy funding with a 40 percent contribution from the Sustainable Food & Fibre Futures (SFFF) fund, has shown that introducing beneficial insects at the right time and in the right quantities can reduce the need for chemical and other preventions to control common greenhouse pests. The data from the trial greenhouses over the current summer will feed into edits and additions to the IPM guide which we will bring you as part of an education day in 2025. New resources already being worked on include a guide to the harm that different activities can have on beneficial insects and a 'How to' sheet for good spraying techniques. A practical workshop on spraying is planned for mid-March - more details to follow.

TomatoesNZ is supporting grower and researcher Francis Ferrada-Hartley in a project on leaf mould that he is conducting with Massey University. He hopes to determine if the disease present in New Zealand has mutated leading to resistant strains not performing as well as they did previously. We will keep you up to date with the findings as they become available.

Berlin 5|6|7 Feb 2025

**MAKE
FRUITFUL
CONNECTIONS.**

**FRUIT
LOGISTICA**

The leading trade show for the
global fresh produce business.

A small delegation of TomatoesNZ and Vegetables NZ growers will visit Fruit Logistica in Berlin in early February. Thanks to Fruit Logistica for the tickets

The TomatoesNZ board has also agreed to start work on what is required to apply for the PepMV (Pepino Mosaic Virus) vaccination, used in many countries around the world as a way of managing this virus. This process will be long, taking years and with no guarantee of a successful outcome, but if PepMV is left to spread, the chance of mutations increases, making the cost to growers managing this disease unpredictable. The vaccine is the only defence growers around the world have to PepMV, so the board believe applying to register it in New Zealand is worth attempting. I will keep you up to date during the process. In the meantime, if you spot any unusual leaf or fruit appearance in your greenhouse, please get in touch with me.

Not all work has gone to plan this year. Many conversations were had with ministers and their employees around the proposed changes to industrial allocation baselines that the Ministry for the Environment determined from data supplied by growers earlier this year. While the new baselines have Cabinet approval, meaning that

tomato growers who claim an industrial allocation will be worse off by up to \$30k per hectare, we are continuing to lobby for assistance that is available for all greenhouse growers to make decarbonising more accessible to all growers.

Finally, throughout the year, TomatoesNZ has been involved in discussions with other vegetable product groups about how we can better work together, providing efficiencies in the way we operate. Once agreement has been reached on what this might look like, we will seek your opinions and see if they align with those of the TomatoesNZ board. To date the board has been very focused on collaboration where it is appropriate, but in so doing, maintaining a strong voice for the tomato industry. Watch this space! ●



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



PLANT FOR SUCCESS

Champ

Winter harvest cauliflower at 125 – 135 day maturity (location dependent). Sowing mid January to end of March for July to end of September harvest. Strong plant vigour producing an excellent wrapped and well tucked curd.

Also for autumn-winter harvest:
Bamba, Darbos, Maestri, Pelous.

Kaniere

Crisphead lettuce for late autumn up to mid winter harvest (location dependent). Well wrapped with dark green leaves. Producing flat/round head with nice internal colour. Kaniere cuts cleanly and has a small-medium butt. Can also harvest in spring. BI 1-28, 30-32.

ToBRFV

With the threat of Rugose virus getting ever closer, we now have virus resistant tomato seed in stock.

For medium to large truss/loose pick –
Maczize XR & Xaverius XR.
Cocktail – Justax XR.
Cherry/Plum – Red, Pink, Brown, Orange.



Call us today about our range
0800 Lefroy (533 769)
www.lefroyvalley.co.nz

REFLECTING ON 2024

Antony Heywood : Vegetables NZ chief executive



As the year draws quickly to a close, there's a tendency to reflect; but it's also good to look to the future.

Months and months of favourable growing conditions have resulted in plentiful supply and prices that represent excellent value for consumers. Have consumers taken advantage of this situation? And do the media still position vegetables as being expensive? I'm afraid the answers to these two questions are: no, consumers are not buying more; and yes, the media still has a tendency to say that vegetables are expensive.

But the media has done the vegetable industry a recent favour by reporting on the New Zealand Institute of Economic Research (NZIER) report *Making the Economic Case for Vegetable Production*. This report concluded that if New Zealand keeps on putting in policies and practices that limit vegetable production, prices will go up by as much as 100 percent, making a head of broccoli \$9.00 to buy, in the not-too-distant future.

Horticulture New Zealand commissioned this report as part of the advocacy it is doing with Vegetables NZ to ensure the coalition government honours its promise to ensure vegetable growers have a pathway to consent under new resource management legislation. Vegetables NZ's position is very clear: only a National Environmental Standard for Commercial Vegetable Production will put the industry back on a firm footing and enable it to expand to meet future demand for fresh, healthy food for New Zealanders at reasonable prices.

This year, we have expanded our advocacy to include Ministry of Education and Ministry of Health officials and their Ministers. We have done this because the link between eating fresh vegetables and health and wellbeing is not being made strongly enough in government policy. An Otago University study in 2023 shows that if a cohort of people ate the recommended servings of vegetables a day, the health system would be better off by more than \$800 million, over the course of that cohort's lifespan.

A recent, exhaustive study by the Australian Bureau of Statistics showed that Australians eat far fewer vegetables than previously thought: less than two serves a day.

This study is being used by the Australian vegetable industry to secure federal government support to increase consumption. Vegetables NZ is closely watching what is happening in Australia and will apply the lessons learned there back here in our advocacy.

As a way to sharpen consumer thinking, Vegetables NZ launched the Add One More Vegetable campaign on 1 March this year. Because we do not have the advertising budget that fast food makers have, we have used our relationships with 5+ A Day and one of the retailers to get the Add One More Vegetable message out there. We will continue to take this approach, focusing on Add One More Vegetable as more of a concept than a brand, given our limited budget.

Thank you for your continued support

Of course, Vegetables NZ could do none of this without the continued support of growers, through the fresh vegetable commodity levy order. More than 90 percent of growers by volume voted in support of continuing the levy, during the referendum in June this year. We thank you for that.

Looking ahead to 2025, we will again be visiting all the major growing regions in the first half of the year with a research roadshow. We will also continue to run field trials and workshops at the demonstration farm in Cronin Road, Pukekohe. These were very well supported by growers in 2024.

We will continue to work with HortNZ and the government to ensure that a National Environmental Standard for Commercial Vegetable Production is achieved within the term of the current coalition government.

We will also continue to promote vegetables as being critical to health and wellbeing as well as position the vegetable industry as being central to New Zealand's food security with Members of Parliament, government officials and the media.

Our industry has a great story to tell. Why? Because of our role in providing New Zealanders with great tasting, healthy and fresh food. We must however, ensure our industry is sustainable and able to once again thrive.

Vegetables NZ looks forward to celebrating progress on this front early in 2025. ●

NAVIGATING CHANGE AND INNOVATION – THE FOOD AND FIBRE FORUM YOU CAN'T MISS

The 2025 Food and Fibre Centre of Vocational Excellence (Food and Fibre CoVE) Research & Insights Forum is set to be a must-attend event for anyone involved in New Zealand's food and fibre sector.

Following the success of last year's forum, with over 100 passionate attendees, the theme for this year – Beyond the Ordinary: Navigating Challenges, Redefining Success – promises an in-depth exploration of the future of vocational education and training (VET) in the sector.

This two-day event, on **18 and 19 March 2025**, will provide valuable insights, and will address the evolving challenges facing the industry, with a special focus on workforce development, skills for the future, and how emerging technologies are shaping the way we work. Given the current climate of uncertainty surrounding upcoming reforms, this forum presents a valuable opportunity for industry leaders to come together and explore innovative solutions for building a future-ready workforce. It is a vital event for anyone looking to stay ahead of the curve.



Given the uncertain future of Food and Fibre CoVE, make sure to attend the final Research & Insights forum in its current form, and to be part of the conversation shaping the VET future for the food and fibre sector.



What You Can Expect

Over the course of the forum, attendees will have the chance to:

- **Gain New Perspectives on Workforce Development:** Participate in insightful presentations and discussions about preparing the next generation of workers for careers in the food and fibre sector. Learn how flexible, transferable skills can be developed to meet the future needs of the industry.
- **Discover Emerging Technologies:** Explore the role of technology – such as virtual reality (VR), artificial intelligence (AI), and gamification – on training and operations. Learn how these tools can transform learning experiences and improve business practices.
- **Engage in Interactive Workshops:** Engage in hands-on workshops that tackle pressing issues like adapting to VET reforms and navigating uncertainty in the industry. Gain practical advice on how to prepare your business for a rapidly changing landscape.

Why You Should Attend

For anyone working in the food and fibre sector, the Research & Insights Forum 2025 is a unique opportunity to stay ahead of industry trends, tackle workforce challenges, and engage with innovations in vocational education and training. Whether you're focused on workforce development, technological integration or leadership initiatives, this event will equip you with the knowledge and tools to succeed in a rapidly evolving landscape. ●

Don't miss out on the chance to network with industry leaders, share insights and learn from leading experts. **To view the full programme and book an earlybird ticket, visit foodandfibrecove.nz**

NEW SUN PROTECTION WITH NO VISIBLE RESIDUE

Dimmer® is a new 100 percent natural product that covers apples with an invisible layer that protects from heat stress and ultraviolet (UV) damage caused by direct sunlight.

The special formulation is 99 percent freeze-dried, food grade *Arthrospira platensis*, a blue-green algae commonly called nutraceutical spirulina. (Spirulina is also popular as a health supplement.)

Richard Bawden, Grochem research and development manager, says Dimmer has been trialled in New Zealand for the last two years with very successful results.

"Dimmer's real beauty, along with its efficacy, is that it doesn't leave any visible residue. That's quite a big deal as existing products have very visible residue."

"With Dimmer there is no pre-harvest interval, it has low dose rates and provides superior protection against UV damage. It's like a see-through sunscreen."

“

Dimmer has been trialled in New Zealand for the last two years with very successful results

Richard says where conventional sun protection products are visible on apples it can hamper picking as pickers are looking for optimal colouring and ripeness. "Most growers will be looking for two to four picks based on colour, and if the sun protection is visible, you can't do that."

He says as Dimmer can be put in the tank with most other commonly used apple orchard products there's no extra work required. Simply add to the cover spray and go.

"For best results make multiple Dimmer applications, first application in December then ahead of the next heat stress period occurring - that's going to vary from region to region and be influenced by the season. In the case of a prolonged heat period, reapplication should be made at 14-day intervals or after more than 20mm of rain."

No pre-harvest interval, low dose rates and superior protection against UV damage



Full crop coverage is needed and Grochem recommends that Dimmer be applied at a volume of at least 500-1000 L water/ha.

Richard says sunburn necrosis, browning and photo-oxidation sunburn can be major and costly issues for orchardists, resulting in apples being downgraded or rejected.

Sunburn necrosis is the thermal death of the skin and damage to underlying tissues, while sunburn discolouring results in undesirable yellow to brown patches on the apple but not deeper damage. Photo-oxidative sunburn (photobleaching) causes a distinctive white discoloration on fruit.

Richard says the appearance of fruit really counts - especially for high-value export markets and it can often be a matter, for orchardists, of walking a fine line. "Consumers and exporters want a nice, shiny, unblemished apple but with too much sun exposure you get marking, and those apples will be rejected at picking or packing. You will have lost fruit and revenue." ●

For more information regarding Dimmer, contact your local Grochem regional manager

®Dimmer is a registered trademark of Globalchem.



POSITIVE BIOME SHIFT THROUGH FUMIGATION

TriCal NZ – formerly Leicesters Soil Solutions – is bringing enhanced global soil health expertise to New Zealand growers following the company's acquisition by the multinational TriCal Group. The transition occurred after Brian Leicester's retirement this winter, concluding his 35-year service to New Zealand's agricultural sector.

"Soil health is the future for us," says De Wet Pretorius from TriCal NZ, who worked alongside Brian for two decades. The company's integration with TriCal Group, which was already their chemical supplier, promises expanded access to global soil health knowledge.

While fumigants face scepticism, De Wet addresses misconceptions: "People say that we are sterilising the soil. But we're not. That's what methyl bromide did. But the chloropicrin mixture doesn't sterilise the soil."

“

Our solutions based on Chloropicrin control the soil pests and allow the beneficial microorganisms to re-colonise the soil again

Following the Environmental Protection Authority's 2010 revocation of methyl bromide approvals for soil fumigation, TriCal now applies EPA-approved chloropicrin-based fumigants. These products target soil-borne pathogens, including those causing apple replant disease.

"Chloropicrin is a class 6 chemical, it can be hazardous and we realise it. But used correctly by people with the correct licences, with the correct conditions, the risk is negligible. It's really controlled. It's a completely closed system from cylinder through piping into the ground. It's not a spray. It's all underground."

Recent research from Colorado State University indicates post-fumigation increases in beneficial organisms, suggesting temporary positive biome shifts without long-term microbiome impact. The findings point to potential optimisation of pre-plant fumigation when combined with irrigation, ground cover, and other inputs.



TriCal agronomist Juan Pablo Cristofalo (left) and manager De Wet Pretorius

TriCal NZ's recent trials in Ohakune and Matamata, analysed by Biome Makers in California, support these findings. Juan Pablo Cristofalo, TriCal NZ's agronomist, reports significant post-fumigation increases in beneficial microorganisms.

"There is a huge list of these beneficial microorganisms, but just to mention some of the most studied ones, we are talking about Trichoderma, Pseudomonas, Bacillus and other genera of interest. These beneficial microorganisms play a vital role in healthy crop growth."

He explains that intensive cropping can deplete beneficial microorganisms, allowing pathogens to dominate. "Our solutions based on Chloropicrin fix these scenarios, controlling the soil pests and allowing the beneficial microorganisms to re-colonise the soil again. These beneficial microorganisms interact in a positive way (through symbiosis) with the roots of the crop, allowing them to grow in a healthy way." ●

TriCal NZ is the new name for soil fumigation contractor Leicesters Soil Solutions, which has been acquired by the North America-based TriCal Group.

tricalnz.com





Lettuce wish you a Merry Christmas

Lettuce:

Sunberg • Nolaf

Rhone Red • Oriola

Wilderbeast • Icemaker

Tomato HREZ ToBRFV:

Tobinaro

Tomagino Seram • Icaria

Avalantino Rei • Rhodium

Cauli: Altair

The team at Enza Zaden wish you a very merry festive season.
To ensure delivery before Christmas our last dispatch date for
2024 will be Wednesday the 18th December.
We look forward to seeing you again from Monday 6th January.

www.enzazaden.com/nz

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