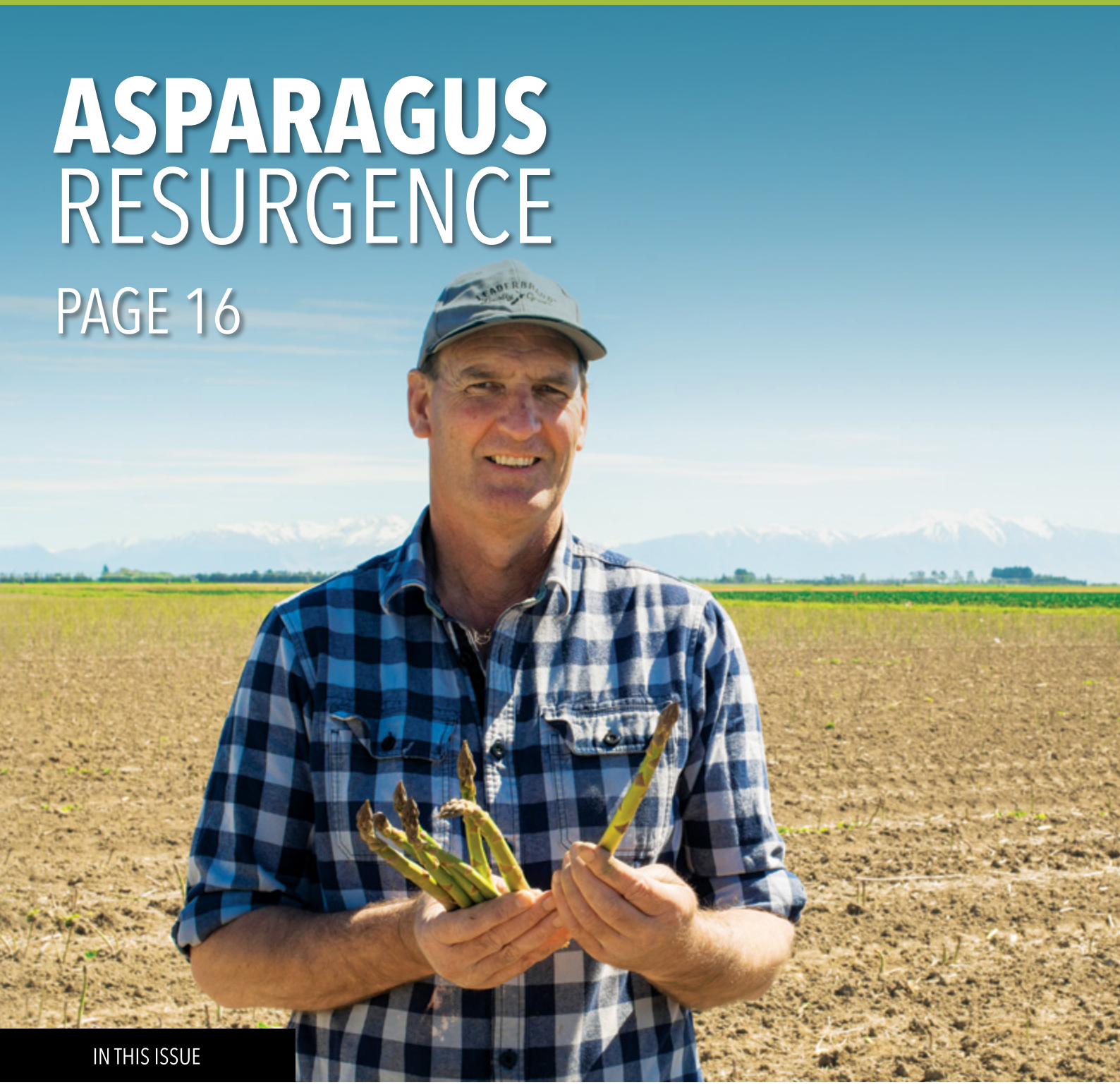
NZGROWER®

VOL 78 | NO 10 | NOVEMBER 2023

HORTICULTURE NEW ZEALAND



ASPARAGUS RESURGENCE

PAGE 16

IN THIS ISSUE

GRIMME
GB330 Belt Planter

- 3 rows per 1.8m bed – more tubers per Hectare of uniform size.
- Faster planting with speeds up to 10km per hour.
- Fertiliser and spray options.
- Deactivation of planting elements via section control

GRIMME
GL660 Planter

- 6 row planter, 7 ton hopper high out.
- Uniform growing through soil covering tubers from hyd depth control and auto shaping board pressure.
- Fertiliser and spray options.
- Deactivation of planting elements via section control.

GRIMME
GL410 Planter

- 4 row lighter weight planter suitable for rolling contour fields.
- Can be fitted with shaping boards to reduce green tubers and less erosion of the moulds.
- Suitable for lighter lower Hp tractors from 80hp.
- Fertiliser and spray options.

The right tools for the job, comprehensive support, and expertise to keep your business growing.

To improve yield and profitability you need specialised tools, and the best advice and back-up. GRIMME offers the most comprehensive and widest product range in the potato, beet and vegetable sectors.

For your local LANDPOWER Vegetable Centre dealer go to:
vegetablecentre.com
Roger Nehoff 027 438 566 **Nigel Prattley** 027 403 6518

LANDPOWER Vegetable Centre

LAN-VC_Nov-23

CONTENTS

UP FRONT

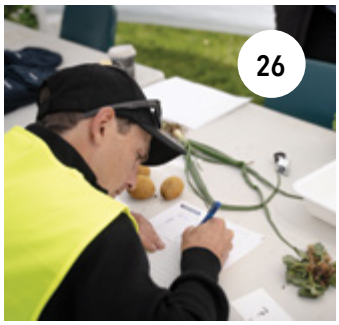
YOUR INDUSTRY

TECHNICAL

PRODUCT GROUPS

WHAT'S NEW

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



ON THE COVER:

Mike Arnold, LeaderBrand's South Island Manager, says the company is growing about 50ha of asparagus at its two Canterbury sites.
Photo courtesy of LeaderBrand, see page 16.

Horticulture™ New Zealand
Ahumāra Kai Aotearoa

CONTACT US
Freephone: 0508 467 869
Web: www.hortnz.co.nz
Phone: 04 472 3795
Email: info@hortnz.co.nz
Horticulture New Zealand
PO Box 10232
Wellington 6140
Level 4, Kiwi Wealth House, 20 Ballance St, Wellington 6011

WHAT ARE THE BIGGEST CHALLENGES HORTICULTURE FACES?

Barry O'Neil : HortNZ president

With a new government we are naturally keen to engage on the most significant issues that face our sector. So, for horticulture what are these?

Our Board recently had a strategy session where we asked ourselves that question. If we peel away some of the daily challenges, what are the key strategic issues facing us that could mean we are going to succeed, or alternatively if not addressed that we disappear over time.

We ended up with three core issues: Climate change and adaptation, water allocation and storage, and food supply and security. There are others of course but as we looked at those other issues we saw work was already well underway, and we are very engaged already to have policies that will support our sector in the not too distant future.

With climate change and adaptation what are our key issues? Arguably the country has spent too much time focused on mitigation without understanding we also in parallel need to adapt, or we will struggle to survive – as Cyclone Gabrielle unfortunately taught us.

We will always be growing on flood plains, and while covered cropping and even vertical farms will become more important in the future, they won't take us away from the majority of growing that happens now and will still in the future, on flood plains. We support landing a primary sector mitigation approach, but what about the adaptation part, which is also really as hard? Should people be allowed to live in potentially dangerous flood areas, or not? How do we get central and regional government, iwi, industry and community all agreeing on our flood protection systems working as they need to, cleaning out the silt and gravel regularly, strengthening banks regularly, building dams at the heads of major rivers for storage that can also control the flows etc? Sacrifice areas and spillways are probably needed for when water needs to be released, but how do we get agreement on where these are? And with all of this the big question is who will pay? And do we need an EQC (Earthquake Commission) type insurance covering land damaged by significant flood events, similar to earthquake protection, not covering 100 percent of the damage but covering enough to assist growers getting back on their feet?

Water allocation and storage is also fundamental to climate adaptation, as unfortunately the reality of climate change is both too much water, and too little with prolonged spells of hot and dry conditions. Re-allocation when it comes to over allocated catchments is really hard. Is it existing users who get priority, is it the most sustainable users who get priority, is it the most efficient users of water who get priority, is it that Māori land that is under-developed should also get priority? If it is going to be all of these, which is most likely, where as a country we will end up agreeing with this, then the only way out of this conundrum is to allocate more water; and the only way we can do that is by storing water when we have too much, for when the community, growers, and the river need it. It must be a win/win, and water storage can be just that.

> **"Arguably the country has spent too much time focused on mitigation without understanding we also in parallel need to adapt, or we will struggle to survive**

We need to get serious about large water storage schemes, funded at least partially by government as well as by private investors, as users don't have the ability to front these initial costs; but we and others who use water can pay off the infrastructure costs over time by charges on water use. Water storage schemes need to be a partnership between communities for water supply, industry and Māori, so we all can support them, and we can all benefit. Small and medium-scale has its place as well, but the reality is if we are going to do this right, we will need scale to be more cost-effective.

Food supply and security is also totally aligned in the top three, and it is not just a domestic vegetable supply versus fruit export scenario, it is actually fundamental to what we as a country want our future to be. Do we want to be able to supply Kiwis with

fresh and healthy fruit and vegetables grown in New Zealand, or are we going to allow an outcome where most will be imported frozen…? That is the scenario we are facing, and to us it's a no brainer, we want our children and grandchildren to always have access to our own produce. And we need to get Kiwis eating healthy, nutritious food to address the health consequences we are seeing all too much of in New Zealand.

We can protect our highly productive land by regulation, but if the use of that highly productive land to produce fresh fruit and vegetables is not economically viable, then we will either have legal disputes as owners of that land look to sell into higher value uses, or owners of that land will look to use it in the most economically productive way, which in today's world is kiwifruit or dairying – and I don't think we want to see all our highly productive land go that way.

Smaller growers are very much struggling, as it is a fact of life that scale does allow greater financial viability through tough times, and we will see a future of more big corporate growers. But we also need to find a way of enabling the small and medium growers to remain viable, to provide the greater diversity of the 'what and when' with produce, as most other countries around the world have been able to do when recognition of the reality of food supply and security hits home.

> **We need to find a way of enabling the small and medium growers to remain viable**

There are other significant issues out there, a totally messed up resourcing and consenting system, an Environmental Protection Agency approval system that is for all intents and purposes broken, labour policies that seem to incentivise low productivity, etc. etc! But all of these are to us areas that the new government can address, and we are already well engaged in getting change with these.

Unfortunately it seems that as a country we are currently unable to come together to agree on solutions for the really hard issues, so we keep on delaying making decisions, and kicking the can down the road for someone else to handle. That is just not good enough and has to change; address them we must, for everyone's future.

> **Central and regional government, Māori, industry and community must find a way of working together**

Central and regional government, Māori, industry and community must find a way of working together to be able to make decisions within a reasonable time and cost framework. We are fiddling while Rome burns, and we can't take 20 years to land these issues, nor can we afford to spend hundreds of millions of dollars arguing the solutions. The solutions are under our noses, this is not rocket science and we need to all engage with open minds, understand the issues and options available, agree the way forward and make it happen.

Thankfully these issues and challenges all map and align into the work programme of the *Aotearoa Horticulture Action Plan*, which is in the process of being implemented. We need to all get behind it, as if we are going to progress and address these three issues, without everyone working together it won't happen. That's what the action plan has been developed for!

Kia kaha. ●

NZGROWER

Acting Editor:
John Gauldie
Email: editor@hortnz.co.nz

Advertising Manager:
Debbie Pascoe
Ph: 027 485 8562
Email: debbie.pascoe@hortnz.co.nz

Design:
Scenario Communications
Ph: 04 385 9766
Email: joy@scenario.co.nz

Subscriptions:
Email: info@hortnz.co.nz

NZGrower is produced by Horticulture New Zealand and is free for all levy payers. The magazine is also supported by: Vegetables New Zealand Inc, Process Vegetables NZ, TomatoesNZ, Potatoes New Zealand Inc, Onions New Zealand Inc.

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

ISSN: 2230-2700 (Print)
ISSN: 2744-5712 (Online)

This publication uses vegetable based inks and environmentally responsible paper produced from Forest Stewardship Council® (FSC®) certified, Mixed Source pulp from Responsible Sources.

Paper produced using Elemental Chlorine Free (ECF) and manufactured under the strict ISO14001 Environmental Management System.

The wrapper we use is 100% recyclable, it is LDPE 4 (Low Density Polyethylene) Soft Plastic and meets the required standards. For further information refer to: https://www.recycling.kiwi.nz/our-story

GOVERNMENT MUST 'PREPARE THE GROUND'

Nadine Tunley : HortNZ chief executive

Horticulture has a vital role to play in building, for the benefit of all New Zealanders, an economy which is sustainable both environmentally and economically. To facilitate this, our new government must 'prepare the ground' to create and maintain the conditions our industry needs to thrive and to continue to supply nutritious fruit and vegetables to New Zealand and the world.

After the October election, on behalf of growers Horticulture New Zealand presented a briefing document to the new government. It focused on the *Aotearoa Horticulture Action Plan*, a partnership between industry, government, Māori and science, which doubles farmgate value by 2035 in a way that improves prosperity for our people and protects our environment.

HortNZ is recommending that the new government develop its work programme based on that strategy.

Within the action plan there are five immediate priorities under which the government can quickly make a significant difference, we focused on these in our briefing:

- Water storage
- Reliable supply of healthy locally grown fruit and vegetables for New Zealanders
- Streamlined assurance processes
- Employment flexibility
- Certainty for Pacific workers and employers.

There is also a big work programme for our industry, in partnership with the government, to increase resilience to climate change and tackle labour shortages and spiralling costs.

Predicted drier-than-normal conditions from the El Niño weather pattern will bring water availability and storage into even sharper focus.

So, we are encouraging the government to move rapidly to remove resource consent obstacles to new water storage, and to support investment in water storage.

As part of planning for resilience and adaptation to climate change, we are advocating that future water needs are modelled by region, crop, and growing systems (including on Māori land and isolated rural communities) and maps for strategic water infrastructure investments are evidence-based.

Many New Zealanders are struggling with the cost of living which is putting pressure on food budgets. With the right policy and regulatory settings, growers can provide a reliable and resilient supply of fresh fruit and vegetables and contribute positively to New Zealand's food security.

That is why HortNZ is encouraging the government to move quickly to signal the importance of horticulture in national and regional policies, so that central and regional government agencies are directed to reduce regulatory costs and constraints on growers.

> "Horticulture employs over 40,000 people but faces a labour shortage. There is much to be done in immigration and vocational training to grow a larger base of people with the skills needed

We also want the government to keep pressure on supermarkets and the grocery sector through the Grocery Commissioner, who should hold supermarkets to account for their role in food waste and food insecurity.

One quick, easy and highly effective way to reduce the regulatory costs for growers is for government to recognise our current GAP (Good Agricultural Practice) certification framework as adequate proof that growers are meeting regulatory standards.

It is critical to ensure the standard under the Resource Management Act (RMA) for recognising industry schemes for Freshwater Farm Planning, provides a pathway for comprehensive recognition of the GAP programmes.

We are also urging the government to extend the legal recognition provided in the RMA to other domains, so GAP industry standards can be recognised as meeting regulatory requirements for:

- Food safety
- Social practice
- The Recognised Seasonal Employer (RSE) scheme.

Horticulture employs over 40,000 people but faces a labour shortage. There is much to be done in immigration and vocational training to grow a larger base of people with the skills needed.

The first, most significant step the government can take is to give the industry more flexibility in how it employs and rewards people by removing Fair Pay Agreements and other legislative barriers.

Workers coming to New Zealand through the Recognised Seasonal Employer (RSE) scheme are a vital part of our workforce. Without this scheme, we would be unable to harvest many crops. We want to ensure the RSE scheme is sustainable for both the Pacific and the horticulture industry.

To provide certainty, it is essential to rapidly conclude work on policies relating to accommodation standards, recognising industry assurance schemes, and keeping costs of compliance affordable.

HortNZ is looking forward to working with our new government to realise, for growers and all New Zealanders, HortNZ's vision: **Oranga kai, oranga tangata, haere ake nei, Healthy food for all, forever.**

YOUR INDUSTRY

ACROSS THE SECTOR – ACROSS THE COUNTRY

Photo by Smoke Photography

LIGHT AT END OF THE TUNNEL FOR STRAWBERRY GROWERS

Geoff Lewis

Photos by Trefor Ward

Strawberry Fields general manager Darien McFadden talking to one of his pickers

When you Hoover the strawberries from the top of this year's Christmas pav – consider the challenges faced by growers of the delectable red fruits.

Many growers have struggled to find enough plants to put in the field this year – a circumstance created by difficult weather conditions, the cumulative impact of government policy, labour constrictions and even personal health issues.

At the same time new technologies and growing styles are illuminating the way ahead for the industry.

Strawberries New Zealand executive manager Sally King reports propagators usually supply around 13 million plants to commercial growers, but this season will struggle to make 9 million.

"We are hard pressed. There will be fewer varieties. We can't meet demand overall, which is not ideal. In the short term there's going to be a lower supply, higher prices and less available for export."

Sally explains the vast majority of domestic strawberry production goes to the local market, but the shortfall means potential markets opened by recently negotiated deals in South East Asia will struggle for any product.

Strawberry growers are dependent on a small number of propagators mostly centred in the northern Bay of Plenty. These enterprises, including established family businesses, receive rootstock via Lincoln University, which itself receives genetic material from overseas developers.

The process of getting strawberry plants from propagators to growers and then to market takes about four years. It begins with imports of genetic material from overseas developers – traditionally the University of California's plant breeding and genetics division at Davis. This then goes to Lincoln University's plant health unit before being sent out to the propagators as Mother plants. When planted, each of these can produce runners and around 300 daughter plants, each of which are then harvested and sent out to the growers.

Near Katikati, there are two families of strawberry propagators who have known each other for generations – the Taylors and the Rapleys.

Hamish Taylor and his brother Adrian are directors of the Taylor Strawberry Plant Nursery.

Hamish says he's turned away many growers needing plants this season. While there are people propagating indoors, propagating strawberry plants remains mostly an outdoor operation and has been heavily hit by inclement weather over the past few years.

Hamish Taylor and his son Asher (15) at Taylor Strawberry Plant Nursery

"Why there is such an extreme shortage is because it rained almost the whole time. We have not had the sunshine hours we need for the plants to reproduce properly. It has been a disaster for a lot of people and for the strawberry industry.

"The other thing about the weather is that when it's wet we can't do the weeding. We have to keep the weeds under control."

Several years ago, the government banned the use of Methyl Bromide as it depletes the ozone layer. However, it was also a key means used to sterilise soil and keep the insects, fungi and weeds under control. Without this, the weeding becomes a far more labour-intensive task, which adds to the ongoing struggle to find labour, Hamish says.

The Taylors' operation doesn't use enough labour to qualify for the Recognised Seasonal Employer (RSE) Scheme – so ten to 15 workers have to be found locally.

This year's planting of 1.8 million 'daughter' plants is about 60 percent of 2018's total.

"The industry is changing a lot," Hamish says. "There are new people coming in and propagating their own varieties, a move to tunnel production rather than outdoors, and some propagators have temporary licences due to the shortage.

"Labour and plant supply are strangling the industry. I've had people calling me for months (to get plants). I haven't been able to do anything for them."

Not far away, on the northern shores of Tauranga harbour, is Bruce Rapley at Rototawai Farms, whose family has been in strawberry plant propagation since the early 1950s. For decades they have propagated about half the strawberry plants needed by growers all over New Zealand. But Bruce has serious health issues to deal with and has identified 2026 as his last in strawberries. Added to this has been the weather.

"The past season has been the worst weather in my 44 years in the industry. It would not stop raining. When it did, it was not long enough for us to get on top of the weeding."

At peak production Bruce propagated 7.3 million plants. Last season it was down to 3 million.

"We dropped five varieties, but the weeds took over. We tried to save some but flagged it and lost four to five hectares.

> **"In the short term there's going to be a lower supply, higher prices and less available for export**

"We let the growers know they would only get 70 percent of what they needed. It wasn't that we didn't have the staff, we just had wet windy weather for weeks on end, it was shocking.

"It's the stress of it all. It's been a great industry, moving out has been a hard decision. I want to say a special thank you to my wife Delphine and sons Bradley and Curtis and families for their love and support through some difficult times over the years."

The chairman of New Zealand Berryfruit Propagators (NZBP), Peter McIntyre, says the past 18 months has been "horrible" for the industry, which he expects to shrink before it begins to grow again.

However, there are major moves afoot, including an expansion in covered growing, and the use of varieties that provide heavier fruit and can add up to three months to the season.

"We are starting to get a number of systems from other countries, and there are companies working to find the varieties that do best. Three years ago the only varieties you could get were from the University of California.

> **"The past season has been the worst weather in my 44 years in the industry. It would not stop raining**

"Now there's a lot of new varieties. We had three growers start up in plug production last year (for covered crop, hydroponic strawberries) and we have another three gearing up this year, and another three or four applying for licences."

Peter says while indoor growing has its own set of problems, it does allow for greater productivity, and the industry is still learning.

In the foreseeable future, outdoor growers would continue to be major players in the strawberry industry, including traditional 'pick your own' operations, he says.

Near Hamilton, Strawberry Fields general manager Darien McFadden counts himself as one of the lucky ones this season with around 600,000 plants in the ground – up from 520,000 in the 2022 season, and believes he is now second among growers nationally.

He has 20ha in production including raspberries, blueberries and blackberries. Strawberry Fields is also lucky in having a reasonably stable workforce based on family groups from different local communities.

Bruce Rapley with a self-designed hot water bath to control cyclamen mite. It operates at a specific temperature of 44.4°C

But Darien says 2018 was the most recent good year for growers.

"In 2019 costs began to increase. The minimum wage went from $16.50 an hour to $22.70. Recognised Seasonal Employer (RSE) staff are paid $23.70. We run pretty lean, but the cost of labour is still about 60 percent of our total costs.

"The three biggest strawberry fruit growers have tapped out. So now we're one of the two largest remaining growers. We've had a couple of hard years, but the green lights are on and we're headed down the home straight."

Darien says all the propagators have experienced trouble in the past season, but NZ Berryfruit Propagators is creating a succession plan which should bring the industry back up to speed in the next three or four years.

POST-GRAD SCHOLARSHIP RESEARCH PIVOTED TO POST-CYCLONE 'LIVING LAB'

NZGrower staff

Presenting at the LandWISE conference at the Carbon Positive trial site

Alex Dickson received the Horticulture New Zealand Postgraduate Scholarship in 2023 to investigate how New Zealand can capture the most environmental and economic benefit from successfully integrating regenerative farming practices into its conventional cropping systems. Based in Hawke's Bay, she shares her experiences during an eventful year. Applications for the 2024 scholarship are now open.

What is your research and what are you currently working on?

A couple of years ago, I decided that I wanted to extend myself and go back to uni, so I started a part-time postgraduate diploma in Environmental Management. Through a change in career direction, I am now studying part-time towards a Master of Environmental Management, while working full-time at LandWISE Inc. in Hastings as the Project Manager – Sustainable Systems. This semester I am taking my final course before I begin my research project next year.

What inspired you to pursue a career in horticulture?

I grew up in the small rural community of Kimbolton, just north of Feilding. I'm not off a farm, but I attended Feilding High School which has a great agricultural programme. I took Ag as a course throughout my secondary schooling, before completing a science degree through Massey University, including a 12-month exchange at Wageningen University in the Netherlands.

Prior to moving to Hawke's Bay my plan was a career in the dairy sector and I started at Ballance Agri-Nutrients as a Nutrient Specialist. I transferred to be the Horticulture and Arable Specialist for the East Coast for 12 months, which really sparked an interest in sustainable vegetable production. My shift to LandWISE in October last year allowed me the opportunity to convert my diploma into a Master of Environmental Management and be directly involved in projects focused on reducing the impact of growing intensive vegetable crops on the environment.

What motivated you to apply for the scholarship last year?

When I applied for the scholarship, my planned research project was to be focused on a study that ran in parallel with the Carbon Positive project, which I am already working on. Carbon Positive is a six-year project funded mostly by MPI, which aims to see if we can build soil carbon under a regenerative cropping system for process vegetable crops. We have three treatments, a conventional treatment (typical of what would normally happen on the Heretaunga Plains), a regenerative treatment (a reimagined farm system where we are working with the principles

and philosophies of regenerative agriculture, modified for horticulture) and a hybrid system (cherry picking management from the two other systems). We work closely with the two big processors here, Heinz-Wattie's and McCain Foods, and directly with growers to determine how we manage each treatment. Considering possible thesis projects with my employer on, this was a logical option, and is a really interesting area of research.

How did the year go compared to your plan?

Cyclone Gabrielle hit about ten days before the start of Semester One. In the wake of the cyclone, my work pivoted. While managing Carbon Positive remains the core purpose of my role, I became heavily involved in a project collecting baseline soil and sediment samples from across impacted parts of the North Island. My involvement has included collecting samples, coordinating sampling in other regions, data analysis and extension, and I have been one of the lead authors writing up the final report. It has been a huge, coordinated effort, and we are hoping we can continue to monitor sites over the next few years. The term 'living lab' has been used quite a lot, and it has been fascinating to work in that 'lab'. Seeing the changes that have happened over the last six months has been quite extraordinary. The work has been incredibly interesting, and I am now working with Massey University to develop a study that will focus on soil recovery after Cyclone Gabrielle, with a focus on highly productive land and elite soils.

How have events changed your research focus?

My current proposed project has the same 'regenerating soils' theme, but responds to an immediate issue for New Zealand food production. A number of flood recovery studies have been undertaken over the last 100 years, but they have predominantly focused on returning to pastoral production, not returning to high value vegetable and fruit crops. I want to collect information to help growers recover from Cyclone Gabrielle, but also to develop tools so the community is better resourced and can respond more effectively next time they are faced with a flood like this. There are many crossovers between Carbon Positive and the Cyclone Gabrielle soil recovery and it is very exciting to be involved in both projects.

> "I want to collect information to help growers recover from Cyclone Gabrielle

This year my coursework has included Sustainable Land and Water Management, Zero Waste Management, and this semester Māori Values and Resource Management. In all these courses I have felt challenged, and while juggling work and study is never that smooth, it has been a very interesting year. My coursework and the projects I have been working on this year have set me up really well for

Alex Dickson sampling a site impacted by Cyclone Gabrielle

completing my research project next year. The big thing that makes it possible to work and study is support. I am very lucky to have great support at home and at work, and I am very thankful to the folks that help make this happen.

Would you recommend applying for the scholarship?

I am immensely grateful for the HortNZ postgraduate scholarship, particularly for the opportunity to attend the Horticulture Conference in August this year. The conference had excellent speakers and some good lessons and insights that are relevant to the projects I am working on. It was also a wonderful chance to connect with other people in the industry. I would encourage people to apply for the scholarship, not only for the financial support, but because there are other great opportunities that come with it.

APPLY FOR 2024 SCHOLARSHIPS

For the 2024 academic year, two postgraduate scholarships are available nationally. Every year Horticulture New Zealand and the New Zealand Fruitgrowers' Charitable Trust each offer one scholarship to a postgraduate student studying in New Zealand. These scholarships are offered to students undertaking postgraduate study because innovation and tackling challenges head-on is critical to the horticulture industry's future success.

Horticulture New Zealand Postgraduate Scholarship

This scholarship is valued at $10,000 and is awarded to a student undertaking postgraduate study in horticulture or a related field.

New Zealand Fruitgrowers' Charitable Trust Postgraduate Scholarship

This scholarship is valued at $10,000 and is awarded to a student undertaking postgraduate study specifically related to the fruit industry.

For questions regarding scholarships, contact **schols@hortnz.co.nz**

WATER WATER ALL AROUND, BUT NOT A DROP WAS STORED

Without reliable access to water, such as the Tukituki river, planting high value crops is risky

The potential for drought this summer raises questions once more about why, after years of discussion, no water storage solution has yet been found for Hawke's Bay. BONNIE FLAWS looks back to see how we got here.

The protracted quest for a water storage solution in Hawke's Bay remains a controversial subject with the public.

The need to increase river flows was recognised more than 20 years ago, and for more than ten years, discussions, consultations and plans about water storage options for the Tukituki catchment have preoccupied the regional council, growers, activists and mana whenua.

When I speak to him, Central Hawke's Bay cropper and Horticulture New Zealand board member Hugh Ritchie puts an obvious question on the table: "Why are we going into a summer now, having had more water than we know what to do with, and none of it is stored?".

The deluge brought by Cyclone Gabrielle wrought incredible damage, with the potential for up to a third of Hawke's Bay's horticultural sector to be wiped out. The region is now in the recovery stage, but it is feared the reset will involve consolidation and exits. A silver lining might have been the ability to store some of that voluminous water for what is now expected to be a long dry summer.

NIWA (National Institute of Water & Atmospheric Research) meteorologist Tristan Meyers says the climate drivers are not indicative of big rain events like they have been these last few years. El Niño is in full swing, and the positive Indian Ocean di-pole is another indicator, working in tandem with El Niño, to bring drying westerly winds to the region's vegetation and soils. There are less sources of moisture available for weather systems to come through and provide rain to the eastern parts of Hawke's Bay, he says.

"If there is a message to come out of all of this, it's that this season is going to be very different from the last few seasons. I don't think you can use the same strategies. This season is different. Different to last year and the one before that, and the one before that."

Community led and for community benefit

One strategy might have been to store water, but there was nowhere to put it. "On a principled basis, everybody is fundamentally agreeing that storing water from peak flows to use in prolonged dry periods is the right thing to do. I don't think anybody argues about that," Hugh says.

In 2018, Hugh and three other Central Hawke's Bay farmers, plus two local businessmen, bought the consents and intellectual property for the Ruataniwha Water Storage Scheme from the Regional Council.

Depending on who you talk to, the farmers are either 'Water Barons', attempting to co-opt the future benefit of a nearly $27 million failed ratepayer investment, or local businessmen trying to secure and hold these assets for the benefit of the region.

> **If there is a message to come out of all of this, it's that this season is going to be very different from the last few seasons**

Hugh says it was watching that investment go down the gurgler that spurred the creation of Water Holdings Hawke's Bay and the attempt to revive plans for the Ruataniwha Dam as a water storage solution. The ongoing public controversy has latterly led to a new approach.

Water Holdings Hawke's Bay, now owned by just Hugh and two other farmers, is in the process of putting the consents into a community trust in an attempt to show they're not just in it for themselves, he says. "We thought, bugger it, we'll give the bloody thing to the community as a trust to remove one more roadblock."

Central Hawke's Bay cropper and HortNZ board member Hugh Ritchie would like to think that leadership and sense will prevail

ROOTSTOCK SURVIVAL

Complicating matters more, this summer orchardists will be replanting after the damage wrought by Cyclone Gabrielle. Rootstock is much more vulnerable to drought than mature trees with deep roots, which begs the question about how rootstocks might survive a long dry summer. There are provisions for rootstock survival water in the two Hawke's Bay catchment plans, but the water remains difficult to take.

Horticultural consultant and Resource Management Act decision maker Charlotte Drury notes they both take different approaches too. In the Tukituki, there is the ability to take some water as a permitted activity below the minimum flow, but this requires consent, with no guarantee it can be obtained.

> **"The problem is going to be this summer with orchard replanting. This could leave growers vulnerable**

The Tūtaekurī, Ahuriri, Ngaruroro and Karamū (TANK) catchment also has a permitted rule that up to 20 cubic metres a day can be taken without consent for rootstock protection, but only if it was already being taken before 2020. If it was after the date the plan change was notified then only up to 5 cubic metres a day can be taken.

"That is a lot less water," Charlotte comments.

HortNZ has appealed the provisions in TANK around survival water because they are not clear, and it wants to make them explicit. Once the plan change process is finalised then there is no way around it. There's a chance this could change with the new regional fresh water planning instrument, but this won't be notified until the end of 2027.

"The problem is going to be this summer with orchard replanting. This could leave growers vulnerable. New rootstock needs water to keep roots down, they are not as resilient."

Charlotte says the regional council might choose to exercise some discretion this summer due to the potentially extreme circumstances. Another option is an Order in Council using recently passed Severe Weather Emergency Recovery legislation, which provided for this possibility.

"But that is just an idea, nothing is being progressed," she says.

Horticultural consultant and RMA decision maker Charlotte Drury says a dry summer could leave orchardists' replanting rootstock vulnerable

Options for this summer

That still leaves growers in a pickle this summer if drought eventuates. Any storage solution has a long time track ahead of it before there is any infrastructure to rely on in dry times.

As it stands, the National Policy Statement for Freshwater Management requires councils to set flow limits within rivers, and also on the amount of water that can be taken from groundwater, to provide for ecosystem health.

In Hawke's Bay and Gisborne, low flow water extractions are fully allocated from an ecosystems perspective, and in some cases over-allocated, which means the stream flows may fall too low in some catchments when it is dry. Flow limits set the volume of water that can be taken from a river or groundwater and the timing of that take, leading to restrictions for irrigators.

HortNZ general manager strategy and policy Michelle Sands says the regional councils have been trying to establish what an acceptable flow limit would be.

"In both these regions there is a need to start to think about how more water could be taken and if there is a better timing of the water taking, and how water can be shared between users so it can be used efficiently and have less environmental effects.

"In both regions, groundwater augmentation has been looked at – storing water in the aquifers or recharging the aquifers with water harvested in higher flows, and using the storage in the aquifers for maintaining stream flows at a higher water level for longer. HortNZ has been involved in supporting those policies. We think that is a good approach because it can provide for more reliable

irrigation water and also support ecosystem health with more resilient stream flows."

But while there are some supportive politics in the Tukituki Plan Change 6, and the TANK (Tūtaekurī, Ahuriri, Ngaruroro and Karamū water catchments) Plan Change 9, they are in the process of being reviewed due to the new National Policy Statement for Freshwater Management (2020), which means there are likely to be more plan changes next year.

So, while there is a possibility that there will be new policies around water storage and augmentation, the process of actually getting a scheme up and running is very slow, uncertain and costly.

"And now we might be coming into this El Niño event, and while the aquifers are quite full, we may see low flows this summer which fall below the cease takes levels. That means that if you are an irrigator who takes water from surface water or close to it, you may have to stop."

> **"And now we might be coming into this El Niño event, and while the aquifers are quite full, we may see low flows this summer which fall below the cease takes levels**

The consequences for horticulture are serious with both vegetable and tree crops likely to lose quality or fail without water for prolonged periods. Reduced water reliability can also damage trees with the effect of lower production for several years after – and in severe cases rootstock may not survive, she says.

A recently released water strategy report from the council shows that the region could be up to 60 million cubic metres of water short going forward. Hugh Ritchie believes that is an under-estimation, with the Tukituki river needing 20 million cubic metres for environmental health alone, just to run at its minimum flow.

"The Tukituki has lifted its trigger points again, so those with stream depleting takes will be far more likely to lose access to their takes for longer through the summer."

Without the reliability of access to water, it would be very risky to plant high value crops, he says.

"We're already behind the eight ball and over-allocated in Heretaunga and Central Hawke's Bay. So where is the leadership to say 'how do we solve this?'"

"Part of our plan is that there would be a fifth of the water set aside for environmental flow. We believe that what we are trying to get across the line is still doable and fundamentally required. We'd like to think that leadership and sense will prevail," he says.

HOPES FOR STRONG ASPARAGUS SEASON

Warm days and cold nights on Canterbury asparagus fields under the still snow-capped mountains. Photo courtesy of LeaderBrand

Consumers are being urged to pick up another bunch of asparagus at the markets this season to help growers struggling after several hard years. GEOFF LEWIS talks to growers around the country.

While general labour conditions are easing, growers are either considering automation or have taken the plunge in an effort to balance costs and productivity.

Situated on the sandy country north of Levin, Tendertips is one of the two largest asparagus growers in New Zealand.

The family business has traditionally grown 100ha in Pacific and Jersey Giant varieties over a 100-day season.

General manager Cam Lewis says Tendertips was 'last man standing' when in October last year an unexpected frost event crushed growers in other areas, particularly in the Waikato and Bay of Plenty.

"We had a good season off the back of the frost. We had the market to ourselves. It was abnormal, so for us it was just luck."

So far this season, temperatures have been "pretty average" and prices have returned to the more normal level around $4 a bunch.

"New Zealand is a very price sensitive market. We're growing the most expensive vegetable in the country during a cost-of-living crisis."

At the top of the season, Tendertips employs around 150 people in the field and packhouse, and this year labour hasn't been a problem.

"We're looking okay, better than before Covid-19. All of our harvesting labour are Recognised Seasonal Employer (RSE) workers. In the packhouse it's all locals. Before Covid it had been hard to staff, but this season enquiry is strong."

Cam says the business is watching development in automation overseas with the aim of reducing costs.

> "New Zealand is a very price sensitive market. We're growing the most expensive vegetable in the country during a cost-of-living crisis

"We're just trying to continue to automate in the packhouse, and there's a race on overseas between the United Kingdom and Germany to develop robotic harvesters."

CONSUMER PRIZES FOR QUEEN OF VEGGIES

The New Zealand Asparagus Council has a promotion running where consumers have the chance to win one of five $5,000 travel vouchers. It's simple really, consumers need to purchase two bunches or over 400gm of asparagus and upload a photo of their purchase.

At the Leeston Grocer near Christchurch, the team has made a great effort to nab the New Zealand Asparagus Council's prizes up for best display of its current consumer promotion

Produce retailers have also been asked to get behind the competition, with prizes up for grabs for the best asparagus promotional display. World Travellers Motueka has helped sponsor the campaign.

Retailers should have been contacted about this competition. If you haven't been and you would like to take part, get in touch with: **matt.thorn@hortnz.co.nz**

Consumers won't miss their chance to win one of five $5,000 travel vouchers thanks to this supermarket display of the New Zealand Asparagus Council's promotion

Manager of Mangaweka Asparagus Sam Rainey says the key challenge is matching production with the labour force.

Mangaweka grows 70ha of asparagus in Pacific Challenger varieties.

Rainey described the two Covid years, 2020 and 2021, as "terrible" – the business had to shut as it was impossible to get staff. Last year (2022) was reasonable, and this year 60 RSE workers will be available for three to four months.

Being inland, Mangaweka gets hit by frosts, including early October which put production back about ten days.

"The weather can be fickle. Production is slow and in bits and pieces. But with asparagus you can go from nothing to flat-out within a week.

"The big thing for us is the market and prices. Asparagus is a perishable product. It is important to keep the product fresh and difficult to match supply with demand."

Asparagus makes up a portion of the product of vegetable growers Greenfern / Les Asperges at Hautapu near Cambridge in the Waikato, with the rest being leeks, artichokes, fennel and carrots for the local markets.

> **"The weather can be fickle. Production is slow and in bits and pieces. But with asparagus you can go from nothing to flat-out within a week**

Founder Bill Cummings says the business uses couriers to deliver asparagus to organic wholesalers all over New Zealand.

"Our biggest problem is the cost of freight. We can put up to 14kg in a box, but once it goes over that the couriers will

Colder spring weather so far hasn't helped production. Photo courtesy of LeaderBrand

On warm spring days you can almost see asparagus spears shooting up. Photo courtesy of LeaderBrand

charge for two boxes. I used to just wear it, but now we'll try to fill two boxes.

Greenfern has eight hectares in green asparagus, and a specialty sideline of gourmet white asparagus in six tunnel houses, as Bill explains:

"We were roaring along (with white asparagus) last year, getting 40kg a day, with consumption helped by the resumption of the international tourist trade.

"But this year we're back to 2kg a day. I'm not sure why. It could be fertiliser or over-picking."

Last October's frost event put them out of production for weeks – but was followed by a late season flush.

"All of a sudden it was all on and we couldn't handle it. But by that time it was old and skinny and expensive to pack."

So far this year Greenfern has endured a couple of lighter frost events and Bill's son Hadyn, who has recently taken the business over, says he expects things to get underway properly in the next few weeks (late October).

"It's been wet and a bit cool, but it has begun to take off."

One of New Zealand's largest growers, Boyds Asparagus at Hautapu near Cambridge, has invested in automation this season in a drive to balance costs and productivity. As managing director Andrew Keaney explains:

"We've spent about half a million (dollars) in automation on two of our packing lines, which has reduced our need for labour by about 30 hands. Our business was becoming marginal due to the cost of labour. The aim is to reduce costs by reducing the need for labour."

> **Andrew says labour is less of a problem this season. Increased immigration and the return of working backpackers mean the business has sufficient workers**

Almost exactly a year ago, Boyds took the brunt of the polar blast that hit growers from Pukekohe to Ōpōtiki and was forced to mow the crop frozen in the field.

Andrew says labour is less of a problem this season. Increased immigration and the return of working backpackers mean the business has sufficient workers – although language is an issue with a great mix of nationalities.

"Each of our production lines has a translator."

While general labour conditions are easing, growers are either considering automation or have taken the plunge. Photo by Trefor Ward

BRINGING IN THE BENEFICIALS

LeaderBrand's asparagus site is part of an extensive vegetable cropping operation at its 400 hectare farm at Chertsey. Four hectares of that is now planted in natives, making beneficial use of unirrigated land. The company has just planted a new block, pictured during a visit by the team from A Lighter Touch in late October. LeaderBrand's South Island manager Mike Arnold, pictured, says the natives were proving very effective in attracting pollinators and beneficial insects. Photo courtesy of A Lighter Touch.

However, the rollercoaster ride of the past few seasons can be seen in production levels. In the most recent reasonably 'normal' year – 2018 – Boyds cropped 750 tonnes of asparagus. This had declined to around 550 tonnes during the Covid-19 period, and this year is expected to level out at 450 tonnes.

Crop area has declined from 180ha to 120ha.

"In the past few years you've had to be pretty brave to plant. The season started late this year and we're still not cranking. It's been wet and we had a series of frosts in early September."

All Boyds' production goes out through both the major supermarket chains.

Andrew says the industry needed to look at different types of production systems to improve productivity, but lead times for any major changes are in years.

LeaderBrand has two production sites in Canterbury predominately supplying South Island supermarkets – one in Lincoln which has been harvested for more than 15 years and the other Chertsey for about seven years – totalling about 50 hectares.

> **"It's stop, start. There's no momentum. You can measure production with the mercury in the thermometer. On a warm day, you can see asparagus shooting up to 17 centimetres in a day. With the cold weather it just stops**

The South Island season starts a bit later so some North Island asparagus comes down at early season premium prices. But Mike Arnold, LeaderBrand's South Island Manager says the company's alpine asparagus benefits from the region's cold nights and warm days – the classic formula for locking in flavour.

Speaking in mid-October on a 11°C morning, Mike is looking forward to a bit more consistently warm days as the spring weather so far hasn't helped production.

"It's stop, start. There's no momentum. You can measure production with the mercury in the thermometer. On a warm day, you can see asparagus shooting up to 17 centimetres in a day. With the cold weather it just stops."

At its asparagus sites LeaderBrand operates a mixture of labour – about a third each of returning staff in key roles, RSE harvesting teams from Vanuatu, and backpackers in the packhouse.

"The returning staff in key roles are really important to us and we have all of them back this year. Off season we have

had staff members working in Canada, Australia, Germany. We have a young German here on a 3-year visa, he's specialising in our packhouse grader which we imported from Neubauer Automation in Germany. He has been to the factory and knows the machinery inside-out."

> **LeaderBrand is growing Aspara Pacific varieties and looking closely at new developments offering higher yields**

The Neubauer grader takes a photo of every spear going past and can grade it into perfect sizes, so each bunch you get near the same diameter. "It's a big deal so it cooks evenly," Mike says. "We programme it to remove the white hard bit at the end, the machine can see that from the photo and has a special waterjet to cut it off."

The machine also ensures accurate packing with sixty separate scales and adding the final correct weight spear in the bunch for maximum packout. It has the potential for quality control for bent spears and seedy heads. Like Cam Lewis, Mike is also watching the developing technology for robotic harvesters but says for now the costs are out of hand.

LeaderBrand is growing Aspara Pacific varieties and looking closely at new developments offering higher yields. Its focus remains on the domestic market for now. New Zealand lost export opportunities due to Covid-19 when air freight collapsed, but current prices for air freight are horrendous, Mike says, which makes it difficult to compete.

Boyds Asparagus managing director Andrew Keaney has invested in packhouse automation, aiming to reduce costs by reducing the need for labour. Photo by Trefor Ward

GROWING IN CANTERBURY BRINGS CHANGING FORTUNES

Tony Benny

Canterbury grower Murray Stephens has held a succession of horticulture governance positions

This year Murray Stephens was awarded Life Membership from both Horticulture New Zealand and Process Vegetables NZ. The Canterbury grower has held a succession of governance positions in the vegetable, potato, process vegetable, grain and blackcurrant industries.

Murray Stephens vividly remembers the day Ron Cawood from Wattie's came out to the family farm at Irwell, Canterbury, to discuss growing process vegetables to supply the new factory the company was building in Christchurch.

"Dad was pretty keen and got involved from year one growing peas, and in year two Marilyn and I got married and we bought our own bit of land that we farmed with the home block, and ever since then we've always grown for Wattie's – that's 54 years," Murray says.

The arrival of Wattie's in Canterbury in 1969 offered arable farmers new opportunities, and today Murray and his son Stuart, plus five staff, still grow peas for them as well as broad and green beans.

"It was good cashflow. You harvest the peas for Wattie's and you were paid the next month. With other crops like grain or seed you might have to store them for six months before you sell them.

"And it was a good return. It's not as good now as it used to be, but at least it is a crop that you put in the ground and you can get it out and put something else in behind it."

As well as process vegetables, the Stephens grow blackcurrants and ryegrass seed and fatten lambs, and lease 50ha to Southern Seed Technology each year for growth trials and counter-seasonal seed multiplication for a range of Northern Hemisphere clients, mainly barley but also some wheat and linseed.

> "The arrival of Wattie's in Canterbury in 1969 offered arable farmers new opportunities

That mix of vegetable and arable crops works well for the Stephens' rotation, allowing ample time before a new crop of any species has to be sown in the same ground as a previous one.

"We have to have four or five years between barley crops, so we move that 50-hectares around the farm. We want

seven to eight years between our pea crops because of root diseases, and you want about five years between with your beans."

They use ryegrass as a break crop, finishing bought-in lambs on that as well as harvesting the seed and usually return that to cropping after two years. Some years they also grow green feed for the lambs.

As well as peas and beans, the Stephens have grown other crops for Wattie's including broccoli, which back in the 1970s had to be handpicked, and they grew sweetcorn for McCains when they opened a new factory in Timaru.

> **We might be back to growing sweetcorn shortly, the way climate change is going**

"We did that for three or four years, but they gave up growing sweetcorn in the South Island because it wasn't warm enough," Murray laughs, before adding, "we might be back to growing sweetcorn shortly, the way climate change is going."

As process vegetable growing increased around Christchurch, Murray joined the recently formed local branch of VegFed, going on to become the national chairman of the process sector and travelling regularly to Wellington to represent growers' interests.

"In those days we always met with all the processors round the country and negotiated a price on behalf of the growers, and at the same time we got involved with process growers overseas. I met a lot of growers round the country and made a lot of good friends who sat on the process sector with us."

Murray's last national role was helping to form Horticulture New Zealand, which involved the amalgamation of the New Zealand Vegetable and Potato Growers and the New Zealand Fruitgrowers Federation.

"It was quite an exciting time to be involved with the New Zealand Vegetable and Potato Growers Federation. It was a change from where we'd been to where we were going, and it was far bigger, and that's the organisation we've got today."

While peas and beans have been a constant on the Stephens' farm, Murray's tried other crops over the years as well, including trying to grow tomatoes in the field in the early 1970s.

Murray Stephens has grown for Wattie's for 54 years

"We had large scale paddocks of tomatoes that we'd machine seed but we couldn't harvest them by machine because we didn't have a harvester, and we had to harvest them by hand. We used to grow them for Melhuish's (J J Melhuish Foods) who made tomato sauce in Christchurch, and we had all these ladies out there picking tomatoes.

"But it never went ahead in Canterbury because we got frosted out one year."

One diversification Murray did stick with was blackcurrants, and they were once one of Ribena's New Zealand suppliers. The crop provided more than half of their income, but that suddenly changed in 2017.

"One Friday night we got an email saying, 'we no longer want to source our blackcurrants out of New Zealand', and suddenly overnight we lost our contract. It would have been between 4000 to 5000 tonnes from New Zealand at that stage I think."

The multi-national owners of Ribena decided to source their blackcurrants from Poland, leaving growers here in the lurch.

The Stephens reduced the area they had in blackcurrants and started looking for new markets, one of the first being to supply the fruit for a newly developed 'brain food' drink called Ārepa that contains pine bark extract, blackcurrants, green tea and L-theanine.

Today they supply large quantities to the health food industry in Japan and have invested in infrastructure to individually quick freeze blackcurrants down to -18 deg Celsius. The blackcurrants are sent to Japan in refrigerated containers where they are processed, with 100 tonnes of blackcurrants used to produce 1 tonne of extract.

"One Friday night we got an email saying, 'we no longer want to source our blackcurrants out of New Zealand', and suddenly overnight we lost our contract. It would have been between 4000 to 5000 tonnes

Ironically Ribena are now back on the scene in New Zealand, with their switch to Poland not working out as well as they expected.

With the effects of climate change now quickly increasing, Murray can see both opportunities and challenges on the horizon for process vegetable growers in Canterbury. Warmer temperatures could mean crops like kiwifruit and sweetcorn can be grown in the south, but he worries about the effects of extreme weather events.

"When you get a long spell with no rain and then suddenly you get too much rain, that can be disastrous on our heavy ground at harvest time. We might have peas ready for Wattie's and the next minute we've got a big rain, they come into harvest, they make a real mess of the paddocks and when they leave you've actually got to get your paddock back into good heart by putting some grass or something back in because it's knocked solid structure about.

"Or you might get a period of really hot weather over flowering and peas won't set if it's too hot – it's just these highs and lows."

Murray turns 77 in November, but still leaves for work at 7.30 every morning and stays on the job until five. "I'm just the boy now," he jokes, and his wife Marilyn adds, "You have a really good relationship with Stuart."

"The operation's got so much larger, with four permanent staff and up to 20 casual staff during harvest and when you've got that many people running round you need a couple of people at the top anyway," says Murray, who doesn't seem to have any plans to retire. ●

New Outdoor Crop Production Programmes

Primary ITO | Te Pūkenga is excited to launch the revised New Zealand Certificate in Outdoor Crop Production – Level 3. Learners can complete this programme as the first year of a New Zealand Apprenticeship.

This new work-based learning programme is ideal for learners currently working in the industry with some general work experience and a desire to develop a career in Outdoor Crop Production.

New topics include:

- Apply safe work practices in the workplace
- Describe irrigation filters, and repair and maintain an irrigation system used in horticulture
- Calculate fertiliser requirements, prepare and apply fertiliser, and maintain and store fertiliser equipment
- Describe weather, climate and micro-climate characteristics, and interpret weather maps for a primary industry operation.

Enrolments start 1 December 2023.
Get in touch with your local Training Adviser today on 0800 20 80 20, email info@primaryito.ac.nz or visit www.primaryito.ac.nz/outdoorcrop

PrimaryITO | Te Pūkenga

YOUNG GROWERS SHARE HOPES AND PASSION FOR THE FUTURE

HortNZ general manager of strategy and policy Michelle Sands and HortNZ president Barry O'Neil with Taylor Leabourn, the 2023 Young Grower of the Year

Last month the country's top young horticulturalists showcased their skills in the 2023 Young Grower of the Year competition held in Pukekohe. HELENA O'NEILL chats with the six finalists about horticulture and the industry's future.

Taylor Leabourn, a 28-year-old produce lead, was named the 2023 Young Grower of the Year. As the Pukekohe regional competition winner, he said it was great to be able to compete for the national title in the region.

"It was so nice to be on my home turf, there were a lot of familiar faces, and it was pretty special for it to be in Pukekohe."

Taylor won the innovation, business, practical, and young vegetable grower categories before taking out the national title.

When Taylor won the Pukekohe regional competition in May, he was working as an agronomist at LeaderBrand. Nearly three months ago he started a new job as a produce lead for fruit importer SKU Ltd in Wiri, Auckland.

"It's been great to learn a new skill set and to test myself. I'm really enjoying it and it's been refreshing looking at the coolstore, warehouse, packhouse side of the horticulture business."

> "Taylor won the innovation, business, practical, and young vegetable grower categories before taking out the national title

He says the horticulture industry needs to become better at telling its story to consumers; a view shared by other young growers.

The competition tested the vegetable and fruit-growing knowledge along with the skills needed to be successful growers. Competitors completed practical tests in nutrition and fertigation, tractor operation, integrated pest management, keeping everyone healthy and safe, agrichemical stewardship, and horticulture biosecurity. They also undertook two business activities: innovation and a leadership panel, as well as a speech.

Nelson regional winner Dillon Peterson says the final is great opportunity for contestants to challenge themselves

Jan Buter, 28, from Hawke's Bay, was named runner-up and Young Fruit Grower of the Year; also winning the outstanding leadership and speech categories.

His winning speech was on diversity and development, two things he feels very passionate about.

"Having a diverse staff is a strength of a business. We develop them by giving them a mentor and a clear career pathway. If someone has the right attitude, give them those two and you will unlock the next star in your team. Starting the speech in Dutch was a fun twist."

The best thing about working in horticulture is the people, he says.

"Orcharding needs people, and it's great fun getting to know them. Being part of someone's development journey is about as rewarding as it gets!"

Jan, a supply and continuous improvement technician for T&G Global, says there is lots of opportunity in the industry, but we have to work on how we become more resilient.

"We need to sell our story better. It's a great industry to be part of. There are too many stories of people accidentally getting into the industry. Let's become a preference."

Emily Samuel, 30, the Gisborne regional winner, is an orchard manager for Thompson's Horticulture.

"Working with permanent horticulture is such a great way to keep pushing yourself, there are continuous new technologies to help advance our growing capabilities. I want to be able to create a crop that has higher nutritional value and has helped to improve the land we are growing on."

She says there is a great opportunity for New Zealand to be a leader in horticulture sustainability.

"I believe there is an extremely great opportunity in front of us to be leaders in sustainability. If we want to a be a $12 billion industry, we need to create a space where everyone wants to thrive, whether that be pay, work/life balance, great initiatives or all the above."

Emily says that Horticulture New Zealand has already identified the focus points for the industry's future in the form of its *Aotearoa Horticulture Action Plan*.

"These five areas – grow sustainably, optimise value, Māori are strong in horticulture, underpinned by science and knowledge, and nurture people – are the key to us all succeeding, but people do need to come first. If we can create a more collaborative industry and work together regardless of what we grow, implementing and pitching ideas will be a lot easier and have a higher chance of backing."

Dillon Peterson, 27, of the Nelson region, says he had mixed feelings about taking part in the national competition, with a rush of nerves tampered by the excitement of making it to the finals.

The orchard hand from Hoddys Fruit Co says the biosecurity module was the most challenging, as his role does not expose him to that side of the industry.

> **One of the challenges of the competition and the industry is to get more young people interested**

"The Young Grower competition is a great opportunity to challenge ourselves and put our skills on display. One of the challenges of the competition and the industry is to get more young people interested in what we do and see horticulture as a career.

"What I enjoy about apples and pears as well as the industry as a whole, is the wide range of tasks involved that changes seasonally, so we are always doing something different."

Sydney Hines, 25, of Bay of Plenty, says the finals required a high level of preparation but enjoyed the competition, particularly the FrostBoss® horti-sports and the moon hopper race.

"It got the blood flowing and put a smile on our faces – and more importantly the faces of the spectators. I was hesitant to apply because of the public speaking aspect. However, decided there was nothing to lose and to get out of my comfort zone. I feel it is important for those wanting to develop to have a go at building experience in areas outside of your usual."

Sydney works in an avocado and kiwifruit orchard in Ōpōtiki and loves that the end product puts a healthy, nutritious and convenient snack on tables all around the world. She also enjoys being outside and the challenges the nature of the work brings.

She is positive about the future of horticulture in New Zealand.

"Throughout the years when Covid-19 caused disruption, there were still successes. Now, HortNZ has its goals for the industry and a plan to achieve these to further its success.

"My future in horticulture will be a long one – unless Dad needs my help on the [dairy] farm. In all seriousness though, I aim to be able to make positive differences for the industry big and small, so that generations to come also share the same outlook for the future of horticulture in New Zealand."

Gregoire Durand, of Central Otago, says the final was much harder than the regionals, but he enjoyed it.

"My most challenging module was fertigation and nutrition from Horticentre. My favourite module was the tractor module; it was cool to drive one of these big John Deere tractors; in the orchard we are used to smaller orchard tractors. I enjoyed the speech as well; I was quite nervous beforehand, but when I went on the stage all the pressure went away."

The 30-year-old works for Cherri Global as the Clyde-Roxburgh sector manager, overseeing a 50-ha block of cherries.

"Everyone loves cherries. Central Otago is a beautiful region, with amazing people. I find cherries to be a challenging crop to grow due to their delicate nature, which is exciting."

Gregoire hopes to continue working with cherries and has faith in the horticulture industry.

"In New Zealand, we are growing more than what we consume, and I hope it will stay this way. I want to stay working for Cherri Global, growing cherries. I learned everything I know with this company, and I still have so much to learn."

Bay of Plenty regional winner Sydney Hines during the final

HortNZ president, Barry O'Neil, says the organisation takes great pride in hosting the Young Grower of the Year Competition final in different parts of the country every year and appreciates the support received from local growers.

Each of the six young leaders worked hard to get to the national competition and impressed us with their speeches, he says.

"Four out of six speeches focused on the *Aotearoa Horticulture Action Plan* outcome area of 'nurture people'. And nurture people we must. I encourage you to consider how you can contribute to this outcome area of the action plan to attract, retain and grow great people in horticulture."

HortNZ general manager of strategy and policy Michelle Sands says it is important to highlight the work of regional organisers who host and run the competitions across six regions.

"Their dedication is what drives this fantastic industry-wide programme, and our young growers wouldn't have made it to this national stage without them.

"It is important for us all to support the next generation of horticulture industry leaders. We are so fortunate to have so many passionate and talented young leaders pursuing careers in our industry."

New Indoor Crop Production Programmes

In response to industry, we are excited to launch the revised New Zealand Apprenticeship in Indoor Crop Production. The apprenticeship is made up of the New Zealand Certificate in Indoor Crop Production Level 3 and the New Zealand Certificate in Indoor Crop Production Level 4.

These new work-based learning programmes are ideal for learners currently working in the industry with some general work experience and a desire to develop a career in Indoor Crop Production.

New Level 3 topics include:

- Apply safe work practices in the workplace.
- Identify and describe weeds, and methods of prevention and control.
- Describe weather, climate and micro-climate characteristics, and interpret weather maps for a primary industry operation.

New Level 4 topics include:

- Supervise and provide instruction to staff working in a primary industry operation.
- Use information technology to inform primary industry management decisions.
- Demonstrate and apply knowledge of water conservation and use in a horticulture operation.
- Demonstrate understanding of environmental risk management and minimise negative environmental effects for horticulture.

Enrolments start 1 December 2023.
Get in touch with your local Training Adviser today on 0800 20 80 20, email info@primaryito.ac.nz or visit www.primaryito.ac.nz/indoorcrop

PrimaryITO | Te Pūkenga

RETIREMENT BECKONS FOR WATERCRESS TRAILBLAZERS

Carey and Ernie Wenn operate Awawhiti Cress from their 1.9-hectare property in the Ruapehu District in the central North Island

Nearly two decades ago, Ruapehu couple Carey and Ernie Wenn began looking for a two-year business project. Now in their seventies, the couple are selling their well-established hydroponic watercress operation and planning their retirement. HELENA O'NEILL talks to Carey Wenn about their horticultural journey.

About 17km southeast of Taumarunui sits the Wenn's 1.9-hectare property which is home to their business Awawhiti Cress. Carey says they initially planned to spend just two years growing plants commercially, first looking at flowers before deciding on watercress.

"We looked at hydrangeas, begonias… we wanted something easy and popular. We wanted something accessible for everybody and something good for you. We came across watercress, and we thought it would be easy because it grows everywhere. It wasn't easy!"

They started their hydroponic market gardens with a growing area of a mere ten by twelve metres, but now have around one-third of a hectare planted. The couple also run a small number of sheep and cattle, along with some chickens. They ensure all waste from the market garden is either used to feed plants, composted, or fed to their animals.

Awawhiti Cress grows one variety of watercress, pūhā, microgreens – wasabi mustard, pea feather, coriander, Rambo radish (purple), broccoli shoots – and about nine different edible flowers.

Carey says watercress is a very versatile plant, from fine dining to the classic Kiwi boil-up.

"Our salad cress has even fed Hillary Clinton in Wellington many years ago, and featured on *MasterChef New Zealand*. Watercress, there is so much more than what you see on the side of the road. When I'm joking about it, I call it green gold."

They get three different cuts of watercress: salad (preferred by chefs), chunky, and large. It grows all year round but grows slowly in winter.

"Our nutrient mix recipe was put together specifically for us by Massey University, as we can be very hot in Taumarunui in summer and very cold living under the mountains in winter."

Carey says watercress is growing in popularity, with consumers keen on nutrient-rich foods.

"When we started growing watercress there were (and still are) very few commercial growers, so we had nobody actually in the industry to share their knowledge and ask for support. Quite a few mistakes were made, and it was certainly very challenging. When Mike and Annette Trent

from GreenYard Veges in Southland phoned and asked us, we were happy to jump on board and mentor them and were delighted to read in the *NZGrower* August 2023 of their continued success."

One of the couple's challenges is with their burgeoning seed-growing business, which is currently for their own use, but in time could become another income stream.

> **Growing our own seed is a risk management strategy, it is our insurance as the majority of our seed is purchased through seed merchants in New Zealand**

"Growing our own seed is a risk management strategy, it is our insurance as the majority of our seed is purchased through seed merchants in New Zealand. The seed mostly comes from the Netherlands, but always internationally. At times, the seed can be late arriving or held up at Customs, and we need to seed 1.5kg per week to ensure we have a constant supply for our salad cress that is sold to high-end lodges, restaurants and cafés."

The couple have definite roles Carey says, with Ernie being one hundred percent in charge of growing and maintenance.

"The watercress looking so healthy is totally due to his management."

From the beginning, Carey has been enthusiastic about making sure the business has good compliance and accreditation. From its early days, the operation has been certified by NZGAP (Good Agricultural Practice) and MPI (the Ministry for Primary Industries).

"During the Covid-19 outbreak, our legislation certainly held us in good stead. We only lost our microgreens, which was quite soul-destroying but even those weren't really lost as we gave them to staff who contactlessly delivered them to their neighbours, and the stock ate the rest. We amalgamated our deliveries into two runs and initially sold only boil-up watercress to the supermarkets."

Carey says she started delivery driving duties as their staff had families to support.

"As our butcher shops became more online, we were making contactless deliveries to their back doors with just a toot and a wave through the window. Our income was most certainly affected but the interesting aspect was that initially, we grew watercress for the salads and chunky sizes, but from Covid onward, our emphasis changed more to the larger boil-up cress as cafés and restaurants were all closed.

"Also, during Covid when I would deliver the cress, I would stop outside several houses in Manunui where I knew elderly folk lived, give a toot, and throw them a bag of watercress onto their porch or over their fence. They came to know roughly what time I was going past, and if it was a nice day, would be sitting on their porch," she says.

Awawhiti Cress also received a $90,000 grant from the Provincial Growth Fund.

"It was basically one-third from them, and two-thirds input from us. This was for our last 33m by 36m greenhouse expansion. All the other expansions have been self-funded. We got a lot of support from Ruapehu District Council – in particular Peggy Veen who helped me dot my i's and cross my t's with the application process."

She says the expansion came $1400 under budget and on time.

"As we finished building the tunnel house through Redpath's, we nearly finished the tables and plumbing, cut our first salad cress on the Monday, and went into Covid-19 lockdown on the Thursday. A few tears were shed by me that day!"

Awawhiti Cress has been quite successful working with the Ministry of Social Development (MSD) to attract, train and retain staff.

Mathew McElroy is employed through the Ministry of Social Development's Mana in Mahi scheme

"We have a good relationship with MSD, they pop out and see us and give us good staff."

The Wenns have participated in the Flexi-wage and Mana in Mahi employment schemes run by MSD. They no longer use the Flexi-wage scheme but do still use the Mana in Mahi.

> **"We're 17kms out of Taumarunui so we have to be a bit flexible. Mana in Mahi has been very successful for us**

Taumarunui work broker Briar Hickling organised for Carey and Ernie to take Mathew McElroy on full-time under Mana in Mahi. In a media release by MSD, Briar says it's been great watching Mathew's progress.

"It's been amazing to witness Mathew's passion for horticulture grow and also the follow-on effect, seeing his young family blossom too."

Looking after five children is a full-time job and while he has amazing support from his parents, Mathew says he is also deeply grateful for the support and flexibility of his employers.

"They have been fantastic! Now that I'm working full-time, it's provided me that financial security for myself and my children. It's allowing us opportunities to be able to do things we were never able to do before."

GETTING HELP TO ATTRACT, TRAIN AND RETAIN GOOD STAFF

The Ministry of Social Development (MSD) offers a range of programmes for employers:

Mana in Mahi

Mana in Mahi matches employers with people who are keen to start a career and need extra support to begin and maintain their work and training journey.

Skills for Industry

If candidates need industry specific skills for a job, MSD may be able to offer funding and support to help with short-term pre-employment or in-work training. Training can be delivered by employers to meet your requirements. MSD works with you to develop the best approach.

Flexi-wage

Flexi-wage helps you hire staff and get them the skills needed to do the job. You get a wage contribution, while they get training and ongoing support. The job must continue after the Flexi-wage has finished.

Digital Passport

Digital Passport is a web-based platform offering video tutorials covering real-world digital skills. It's a great resource for employers who want to boost the digital confidence of their staff. Digital Passport is free for all New Zealanders.

For more information, visit: **www.workandincome.govt.nz/employers**

Watercress and microgreens under cover in one of the tunnel houses. Photo courtesy of Bayleys

Carey says Mathew has now been employed by them for six years and is very hardworking. He has also been gaining qualifications in horticulture.

"We're 17kms out of Taumarunui so we have to be a bit flexible. Mana in Mahi has been very successful for us."

Carey has faith in the future of the business but says it's time for a younger pair of hands to take over the reins. There has been international interest in supplying watercress to a company wanting to manufacture it into a powder for health supplements.

"I would love to carry that through to completion, but I need to be 20 years younger," she says.

The Wenn's rural property and business Awawhiti Cress are listed by Bayleys.

ALAN WILCOX CELEBRATES A CENTURY

Glenys Christian

Alan Wilcox brought some early copies of NZGrower, *known then as New Zealand Commercial Grower, to the Pukekohe Vegetable Growers' Association (PVGA) celebration of his 100th birthday*

Alan Wilcox has seen a lot in his 100 years, including being present at the first and last meetings of the Vegetable Growers' Federation (Vegfed). Not only has he served Pukekohe growers on a number of industry groups, he's also seen growing technology advance faster than he ever thought.

"He's got mana, strength and a sharp mind," said his grandson, Simon Wilcox, at a morning tea the Pukekohe Vegetable Growers' Association (PVGA) put on to celebrate Alan's birthday in early October.

"And he's proof that age is just a number."

He was born on 28 September 1923 at Harrisville in the Waikato. With his parents dairy farming he spent his earliest years in a wooden box in the milking shed twice daily.

"That was how childcare was done in those days."

He left school in the days when cultivation was still carried out by horse and plough, with 25 acres worked up in a day by using two horses. With his passion for growing, he and his brother Graham quickly established a reputation for the quality vegetables they produced as well as their integrity. He joined the PVGA in 1943 and remained on its committee until 1987. He had two terms as president, a feat only equalled by one other, Stan Clark.

In 1956 he was lucky to survive an accident while spraying a potato crop when he knocked the clutch of his tractor and it moved forward, dragging him down and pinning him against a tree stump. He was to spend six weeks in hospital during the first stage of his recovery, while his sons Garth and Rob continued to complain about the prickles they got in their feet running to alert their mother. After that he resolved to take a break every year. He and Peg, who passed away four years ago, completed nine cruises in ten years, taking them well into their 90s.

From 1967 to 1970 he was co-opted onto Vegfed's wage negotiations committee. Later in the 1970s he went into growing kiwifruit, seeing it as a suitable semi-retirement project, but realised after a while that with competing exporters his sons were making more money still growing vegetables than he was, so the vines were pulled out.

From 1973 to 1985 he was grower director with Turners and Growers. He travelled to Japan three times in the 1980s representing onion growers. In 1982 he was elected vice-chairman of the Potato Growers Federation and in 1988 was appointed to the NZ Horticulture Export Authority (HEA) for a three-year term. But due to the Labour Government coming to power and its purge of quangos as well as quasi-government entities such as HEA, he had to farewell his fellow members, never to see some of them again.

> **"Alan left school in the days when cultivation was still carried out by horse and plough, with 25 acres worked up in a day by using two horses**

Later, on a pleasant three-year assignment, he and Peg travelled three-quarters of the country searching out the best potato chip as part of a campaign to reduce the fat content of chips. As well as sampling what was on offer in different towns, they sent samples off by courier to be lab tested, providing the hard data required.

A number of past presidents of the PVGA paid tributes to Alan.

THE WILCOX FAMILY TREE

1869 **Henry Wilcox** arrives in New Zealand from Northern Ireland.

1881 Henry settles on 120 acres at Harrisville. He and his wife **Elizabeth** had 13 children, seven boys and six girls.

Four of the boys became farmers, including **Robert (Bob)** and **Syd**.

1920s Syd began vegetable cropping in the 1920s under the company name A.S. Wilcox & Sons Ltd at Mauku and was followed by his three sons, **Lex**, **Henry** and **Ross**. Their sons, **Glen**, **Brent**, **Kevin** and **John** followed, and now another generation including **Blair** and **Scott**.

1950s Bob remained a dairy farmer, but his two sons **Alan** and **Graham** also took up vegetable growing after the Second World War, moving to land in Bombay around 1950.

1970s Graham returned to dairying in 1958, but Alan continued growing vegetables and was joined by his two sons, **Robert** and **Garth** around 1970, trading as Wilcox Bros Ltd.

2000s This business continued until 2000 when Robert retired due to poor health and Garth and his son **Simon** formed a new company, Pinnacle Growers Ltd, which operated until 2007 in close association with A.S. Wilcox & Sons Ltd. Simon then moved to work for A.S. Wilcox & Sons Ltd and is now its operations manager, while Garth also does some part-time consulting to that business.

"If he disagreed, Alan wasn't shy of saying so," said Brian Nicklin.

"But he's spent an amazing amount of time giving service to growers, and for that we thank you."

Grant Ryan said present-day growers appreciated Alan's support in laying the PVGA's foundations, while Bharat Bhana said he had taught its committee members a lot.

"It was a pleasure listening to him talk about the good old days when growers were paid for what they did," he said.

And Keith Vallabh gave heartfelt thanks for the state of the association's minute books which Alan carefully kept during the time of his involvement – "the writing is still all legible".

TECHNICAL

THE LATEST INNOVATIONS AND IMPROVEMENTS

AGRESEARCH'S ALEC MACKAY MEASURING SEDIMENT DEPTH

BUILDING SOILS BACK BETTER

Sally Anderson : Market Access Solutionz Ltd scientific services manager and Vegetable Research & Innovation Board co-ordinator, and Alex Dickson : LandWISE project manager, sustainable systems

Devastated block of sweetcorn where the sediment depth is greater than 20cm

Following the aftermath of Cyclone Gabrielle and the scale of damage to horticultural and arable crops and businesses across Northland, Hawke's Bay, Wairoa, and Tairāwhiti, it was apparent that there were knowledge gaps amongst the sector around just how to respond to the extended wetness, and variety and depths of silt that had been deposited on this highly productive land.

A broad spectrum of questions were raised by growers having to deal with the after-effects of the flooding and the deposited silt; 'do I leave it?'; 'what about working it back in?', 'should I dig it up and remove it?' All valid questions, but there were no easy answers.

There is little or no documented information on best management of sediment impacted sites with high value crops on elite soils. Previous studies have been completed and relate to 1950s research following the 1948 Gisborne floods, then in the 1990s after Cyclone Bola; and studies that followed the 2004 southern North Island major storm event. These focused almost exclusively on re-grassing eroded paddocks, or paddocks with sediment deposition.

While these studies provided some insights on the effects of flooding and silt deposition, the information was not targeted towards highly productive land, producing high-value horticultural crops including apples, grapes and kiwifruit, arable, seeds and vegetables, in addition to integrated livestock.

With financial support from the Ministry for Primary Industries (MPI), a group of organisations came together to capture baseline data on the initial impact on growers and their productive land, and to document the lessons that could be learnt in how to recover from a natural disaster to build future resilience to these extreme weather events. The group included LandWISE, AgResearch, Massey University, Hawke's Bay Regional Council, Gisborne District Council, Plant & Food Research, Vegetable Research & Innovation Board, the Foundation for Arable Research, and Vegetables NZ, alongside the MPI and several of the national producer groups including NZ Apples and Pears, Summerfruit NZ, Citrus NZ, Northland Kūmara Growers, Onions NZ and NZ Buttercup Squash Council.

The sampling took place as soon as possible to build a baseline picture immediately following the cyclone, and before any significant remediation was carried out. Samples were collected from the four most impacted areas; Hawke's Bay, Tairāwhiti, Wairoa, and Northland, in

Example of a Visual Soil Assessment in sediment

the first one to three months after the cyclone. Sampling in some areas was delayed due to poor access, or blocks remaining under water for an extended period. The focus of the sampling was on cropping land, orchards and vineyards, which were the land use types most significantly impacted by sediment deposits.

At the end of August 2023, laboratory analyses of 155 sediment and soil samples from 116 sites were completed as part of the initial baseline testing. The project has involved nearly 70 growers from across the impacted areas. This sampling represents a massive amount of work carried out by many people and organisations under quite difficult conditions. Alex Dickson and Dan Bloomer from LandWISE based in Hastings, have played a key role in the sampling effort, and compiling the data collected from all the groups contributing to the project.

"Seeing the damage first-hand and travelling around the region to visit and talk to growers drives home to me just how important it is to be able to provide growers with sound advice to deal with silt and wet soils," Alex says.

"The sampling that has been completed starts to build that picture, and by continuing to collect samples through this season and beyond, we will be able to measure and monitor how well soils recover and how crops respond."

At a high level, the impact of the cyclone on highly productive land was divided into three main categories:
(i) soil eroded and stripped leaving subsoils exposed
(ii) soil impacted by sediment
(iii) areas inundated with water for an extended period.

The focus of the sampling has been to determine physical, chemical and biological characteristics of soil and new deposits. Samples have been collected across cropping land and orchards where areas have experienced floodwater inundation, silt accumulation, topsoil removal and sediment deposit. Eight key characteristics were captured across all sites, including sediment depth and texture, nutrient status, visual soil assessment, bulk density, earthworm abundance and diversity, eDNA, and contaminant (E. coli) levels (on selected Hawke's Bay sites). All sample locations were GPS (geographical positioning systems) located for integration into GIS (Geographic Information Systems) to enable understanding of wider catchment effects.

> **"Laboratory analyses of 155 sediment and soil samples from 116 sites were completed as part of the initial baseline testing. The project has involved nearly 70 growers from across the impacted areas**

The approach in each region was to look at a catchment level, with grower sites located for sampling within each catchment. Alongside the sampling, a site survey captured information about flooding and land management. Along the way, results have been shared with the individual growers involved.

A report on this sampling has just been released. While the biggest impact of the cyclone on Hawke's Bay and Tairāwhiti has been sediment deposition, extended waterlogging preventing sowing and harvesting has been the main challenge in Northland.

CYCLONE IMPACT ON HAWKE'S BAY AND TAIRĀWHITI

Sediment deposition varied in depth from < 5 cm to > 100 cm

Soil texture was characterised as sand to silty clay loam

Volumetric moisture content (10 – 80%)

Bulk density (0.75 – 1.65 g cm^{-3})

Nutrient fertility including pH (5.5 – 8.5)

Olsen P (2 – 30 µg ml^{-1})

Exchangeable potassium (2 – 16 MAF units)

Sulphate sulphur (2 – > 200 mg/kg)

Biology (12 – 70 earthworms m^{-2})

The physical condition of the sediment as assessed using the Visual Soil Assessment methodology varied from poor to moderate. The pH (acidity/alkalinity) of most sediment samples was elevated above the optimum range for plant growth. This has been raised as an area of concern for nutrient availability in some crops.

Alongside the sampling, the actions growers had taken or were intending to take were documented. Where there was a significant amount of sediment (5 – 20 cm or more), actions taken by cropping farmers varied from leaving sediment bare until the spring, sowing a cover crop, through to mixing 5 – 20 cm of sediment into the soil. Some vegetable growers had mixed and or had removed 20+ cm of sediment from fields. Orchardists had removed up to 50 cm of sediment from within the tree rows.

The work done through this project has provided the first documented records of site impacts, sediments and grower actions immediately following a major storm event on high value crops on elite soils. This baseline study is just the beginning of a planned longitudinal programme that will continue monitoring to collect information about the changes in soil and sediment as growers apply management actions, replant crops and reinvigorate orchards. The aim is to develop information and decision support tools that cover all horticultural and arable land uses so that all growers are empowered to make the best decisions in the face of future extreme weather.

This work was only possible due to the outstanding level of collaboration and support received. The project has been well supported technically by AgResearch, Massey University, and Plant & Food Research, Gisborne District Council and Northland kūmara growers. Funding was received from MPI via Vegetables NZ.

STRONG EL NIÑO FOR SUMMER

Georgina Griffiths : MetService meteorologist

All eyes are on the tropics, and the strong El Niño event that is unfolding there. Sea surface temperatures along the equator are now over 3°C above average in the eastern Pacific, and over 1.5°C above average in the central Pacific (Figure 1). The magnitude of the El Niño 'warm tongue' now meets the thresholds to classify this event as a strong El Niño.

A 'cold horseshoe' either side of the equator is starting to develop (Figure 1). Sea surface temperatures are now sitting slightly below average in the Coral Sea and north Tasman Sea. This will be an important factor for weather systems forming to the north of New Zealand during summer. Warmer seas can add fuel to weather systems – so with the marine heatwave now gone from around the New Zealand coastline, weather systems this summer should (mostly) lack the energy or 'punch' that was seen last summer.

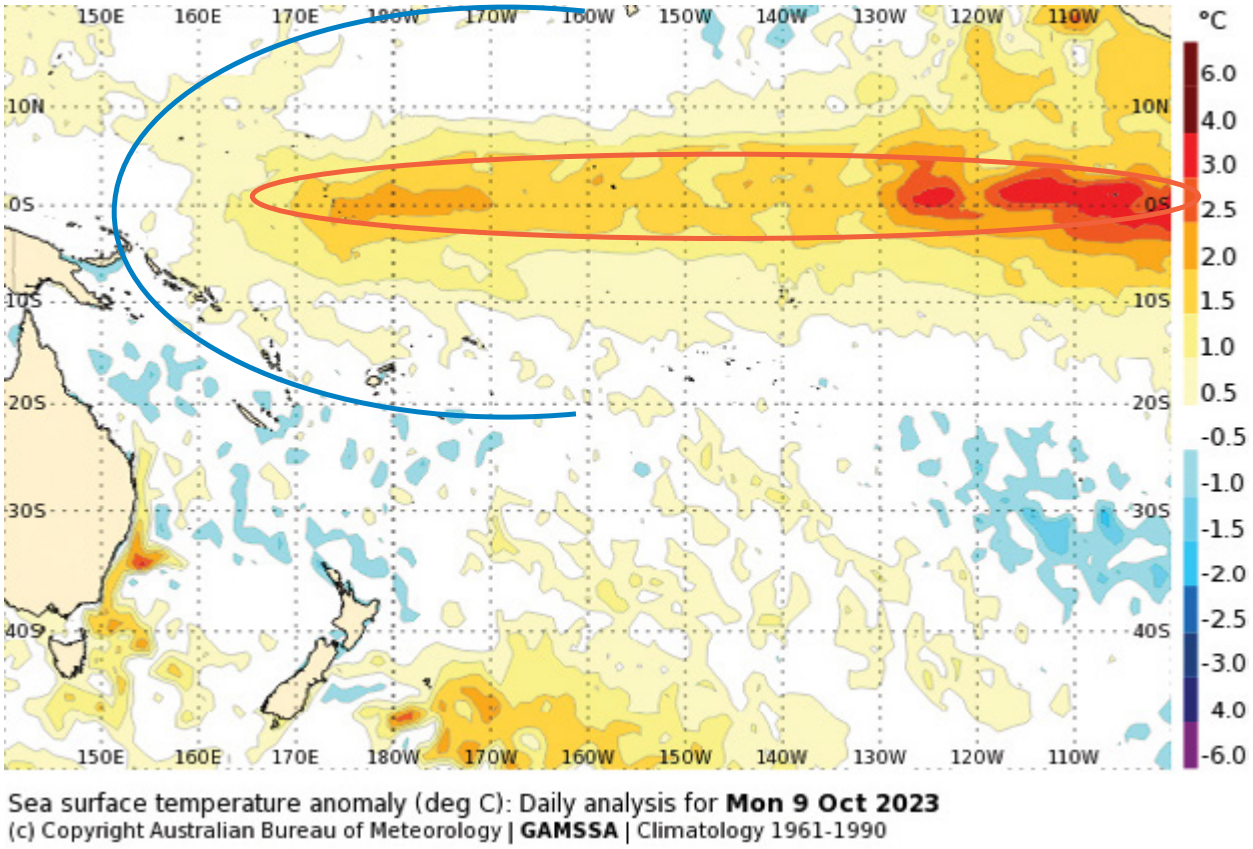


Figure 1: *A snapshot of global sea surface temperature (SST) anomalies on 9 October 2023. Data courtesy of the Bureau of Meteorology. Above average sea surface temperatures are shown in red colours, below average sea surface temperatures in blue colours. The El Niño 'warm tongue' along the equator is circled in red – this is the typical El Niño ocean response. A 'cold horseshoe' (shown with the blue line) is starting to develop in the ocean either side of the equator*

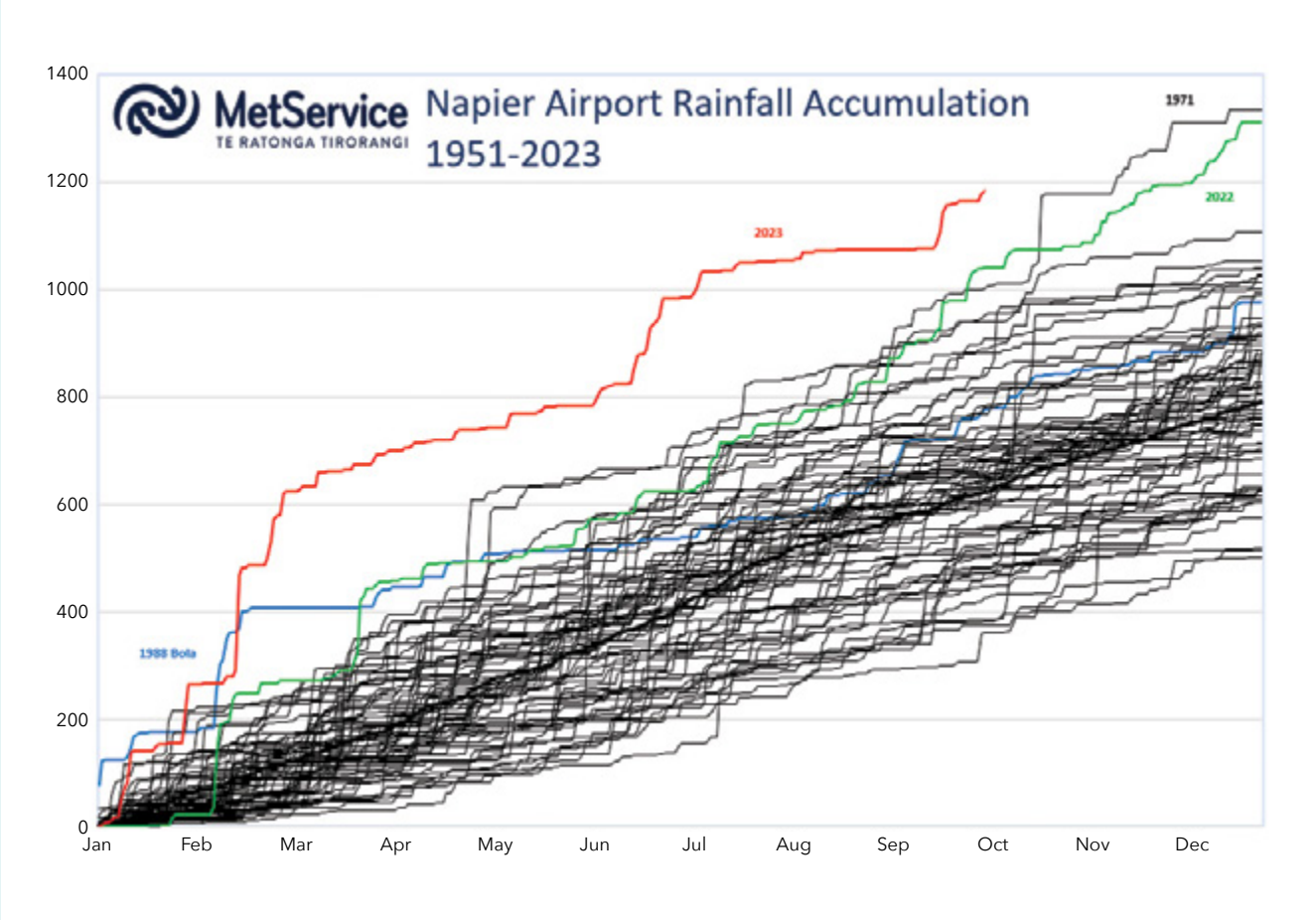


Figure 2: *Napier Airport rainfall accumulation from 1 January to 31 December, for all years since 1951. The red line is the 2023 rainfall accumulation up until 10 October; the green line is the 2022 rainfall total. The blue line is the 1988 rainfall total, comparing extremes recorded during Cyclone Bola in February 1988. The thick black line is the long-term average accumulation*

Note than even in an El Niño summer, MetService forecasters still expect the 'standard' risk of one Tropical Cyclone within 500 km of New Zealand, and still expect thunderstorms, downpours and heavy rainfall that causes flooding. However, the risk of all these things across the northern half of the North Island is **reduced** compared to last summer.

This will be of considerable comfort to communities in the upper North Island that were badly affected by record-breaking rainfall in summer 2023. The Napier accumulated rainfall highlights just how extreme this year has been (Figure 2).

The majority of climate models predict that this El Niño will continue to strengthen between now and Christmas – this is its typical life cycle – and some of the climate models forecast that this El Niño will become an **intense** climate driver in the tropics.

Previous El Niño events since 1990 are shown in Figure 3. The intense El Niño events of 1997–98 and 2015–16 stand out clearly. However, each El Niño is different in how it plays out here in New Zealand. The 1997–98 El Niño produced severe droughts in eastern regions, while the 2015–16 was much wetter (Figure 3). This variation from one El Niño to another occurs because El Niño does not operate in isolation. Other climate drivers, such as the Southern Ocean, can reinforce or limit El Niño effects.

Get some good advice!

While MetService meteorologists have their eyes firmly glued to the El Niño event in the tropics, we are also keeping an eye on our active (stormy) Southern Ocean (Figure 4). This is expected to remain a major player for us for the remainder of spring and through summer, adding in volatile westerlies across the South Island. The bottom line is that MetService is forecasting much, much stronger than usual westerly winds across the country this summer, due to a combination of **both** El Niño and a stormy Southern Ocean.

The long-range rainfall forecasts are therefore fairly complex for the upcoming summer, with the El Niño signal for below normal rainfall in eastern areas battling against an unsettled and wetter signal across much of the South Island.

Another complicating factor is that even if eastern areas of the country do see some decent summer rainfall at times, the predicted extreme heat, and the drying effect of intense westerly winds are likely to strip out soil moisture very quickly.

This is one year where getting reliable long-range forecasts is going to matter.

You can contact MetService long range forecasters via **NZSales@metservice.com**

Figure 3: A comparison of summer rainfall (December – February) for the 1997–98 El Niño, versus the summer rainfall for the 2015–16 El Niño

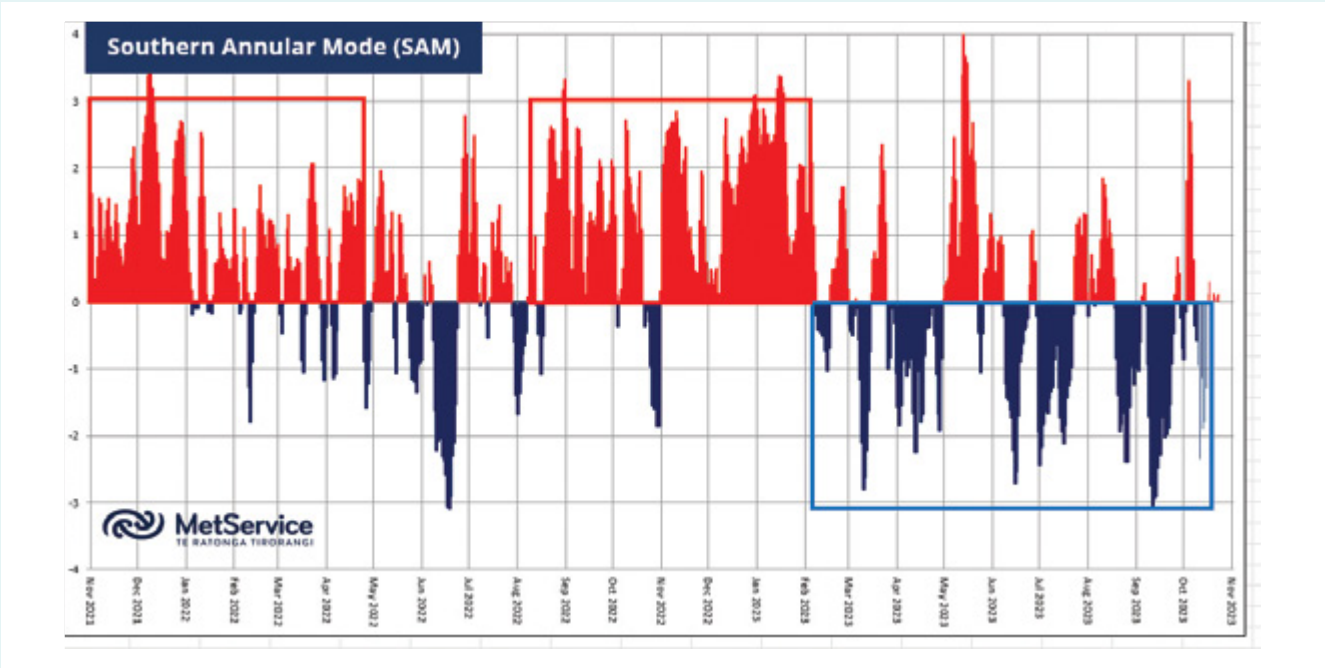
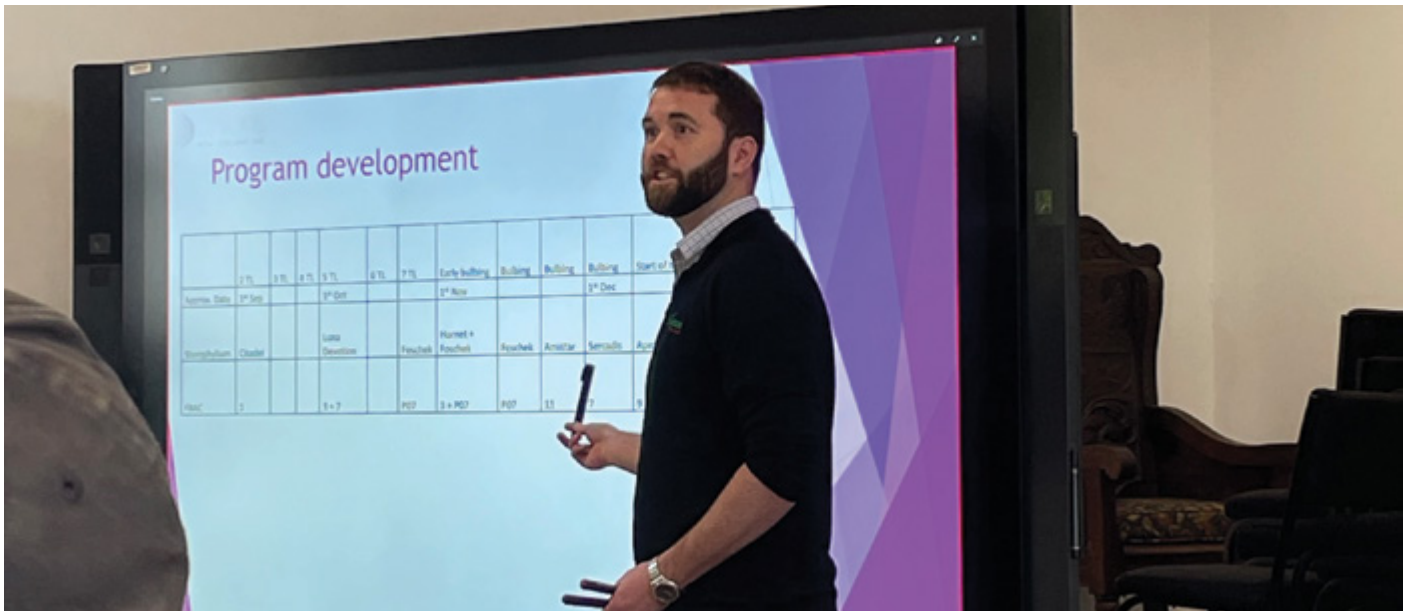


Figure 4: A time series of the last two years of the Southern Annular Mode (SAM) index for the New Zealand region. When the index is negative (blue), an active and stormy Southern Ocean exists in the New Zealand region. This typically brings cooler, wetter and unsettled weather to the South Island. There has been a tendency for a relatively positive SAM (quiet weather for the south of New Zealand) between November 2011 to January 2023, and then a transition to negative SAM (unsettled weather south of, and across, the South Island) after February 2023. The forecast weather patterns for the coming summer continue a negative SAM regime overall

STEMPHYLIUM MANAGEMENT FOR ONION GROWERS

Daniel Sutton : Vegetables New Zealand Inc research, development & extension manager



Daniel Sutton at a presentation for growers by Onions NZ

Stemphylium leaf blight (*Stemphylium vesicarium*) continues to be a significant issue for onions growers. Since the 2017–2018 growing season, onion growers have had varying levels of Stemphylium outbreaks in crops across the country. Last season alone, Pukekohe growers saw impacts of Stemphylium resulting in 25 percent loss of yield and quality in late planted crops.

Stemphylium leaf blight is a foliar disease in allium crops, that can result in complete defoliation of the plant, compromise bulb quality, and can make the plant more susceptible to other diseases that affect bulb quality. If infection occurs early enough in the onion plant's development, then the crop can develop small, unmarketable bulbs, or no bulbs at all. Infection starts as small yellow-tan water-soaked spots, which elongate into light brown lesions, finally turning dark brown or black as the pathogen produces a dense mass of spores. Eventually the entire leaf becomes completely blighted, with rapid necrosis occurring, defoliation and early dying of the crop.

Previously considered a minor issue in onions, Stemphylium symptoms are now seen more often across the country, during most seasons. Management of Stemphylium leaf blight is difficult due to its many pathways of infection. Typically, infection occurs on onion plants that have been subjected to stress or injury. However, direct infection can also occur via stomatal openings. Some common pathways of infection are:

- **Secondary infection on the back of downy mildew (*Peronospora destructor*).** These disease lesions give Stemphylium an easy entry point. Effective management of downy mildew can minimise this path of infection.
- **Infection following thrips damage to leaves.** Onion thrips (*Thrips tabaci*) feed on onion leaves with their rasping mouthparts. This damage to the leaves becomes an infection pathway for Stemphylium.
- **Nutrient stress.** Good crop nutrition means the plant is not lacking in any essential element, so growth is not limited. However, when the crop is lacking an essential nutrient, the plants become stressed which can make the crop more susceptible to infection.
- **Environmental stress.** Extended periods of heat, excess or lack of water, can inflict a significant amount of stress on a plant. This stress factor can then leave the plant susceptible to infection from Stemphylium. A risk model is available on the Onions NZ weather & disease portal to help monitor high temperature conditions that can lead to plants becoming stressed.

Field evaluations taking place this coming season form part of an integrated management approach to Stemphylium leaf blight

- **Physical damage caused by hail can provide entry points for infection.** Similarly side dressings of fertiliser, depending on the set-up from spreaders, can cause a similar amount of damage.
- **Damage caused by herbicide applications can provide pathways for infection.** Herbicide applications are a standard part of onion production, and under most situations these do not cause much damage to onions. However, under certain situations (e.g. during prevailing wet weather), spray intervals are extended, herbicide rates are sometimes increased or applications are carried out when conditions are not suitable, and the resulting herbicide damage provides an easy pathway for Stemphylium infection.

> **Under certain situations, herbicide damage provides an easy pathway for Stemphylium infection**

All these factors need to be carefully managed within an onion crop to reduce the potential for Stemphylium to infect the crop. This is easier said than done due to the multiple factors that need to be managed, the length of production for an onion crop and the range of environmental factors that can change during the course of a season.

Stemphylium leaf blight can also be managed with the use of fungicides. There are currently two fungicides registered for the control of Stemphylium in onions, Foschek and Apex from Arxada NZ. Foschek contains phosphorous acid (FRAC P07) and should be used as a preventive control for Stemphylium. Apex is a co-formulated product containing Pyrimethanil (FRAC 9) with systemic, trans-laminar and fumigant activity, and Fluazinam (FRAC 29), with protective activity, is a true synergy formulation for preventive control, and suited in the window between bulb formation and harvest, as Apex also has a claim for Botrytis neck rot. Both products are also registered for downy mildew control in onions.

> **Infection starts as small yellow-tan water-soaked spots, which elongate into light brown lesions, finally turning dark brown or black**

Due to the range of crop protection products used in onions, Onions NZ commissioned a fungicide sensitivity screening project with Plant & Food Research. The goal of this work was to expose Stemphylium isolates, collected from the field, to a range of different fungicide products as a snapshot to identify any areas of concern and possible resistance. Unfortunately, this screening did highlight some areas of concern. However, due to the relevantly small sample size of the screening, Onions NZ cannot recommend changes to control programmes. Rather, this has highlighted the potential resistance management risks associated with Stemphylium leaf blight which

Onions NZ is looking to support growers with information from several different projects

warrant further investigation. In any situation, resistance management guidelines around crop protection need to be followed, including following label recommendations around maximum application numbers and best practice for fungicides.

Due to the complexity around Stemphylium leaf blight, Onions NZ is looking to support growers with information from several different projects. Work this coming season will include field evaluation of individual fungicides, evaluation of crop protection programmes over the course of the onion crop, and investigation into alternative control options outside of typical synthetic fungicides. All these projects are targeted towards controlling the pathogen. In addition to this we are looking at the role of nitrogen timing and rates, the exclusion of thrips and the resulting damage, and on the demonstration farm at Pukekohe looking to grow a crop that is as stress-free as possible, all with the aim of investigating the subsequent infection of Stemphylium. These projects are the first year in a strategic approach to Stemphylium management, in which the end goal is to be able to provide growers with an integrated management approach to Stemphylium leaf blight.

Further resources are available at:
Onions NZ **www.onionsnz.com**
VR&I **www.vri.org.nz/search**

If you have any questions around Stemphylium leaf blight, please contact:
Daniel Sutton 0274732381
daniel.sutton@freshvegetables.co.nz

KEY STEPS FOR MANAGING STEMPHYLIUM

Effectively manage **other key pests and diseases** such as thrips and downy mildew

Reduce environmental stress where possible through irrigation management etc.

Ensure nutrient supply to crops effectively delivers all key nutrients.

Reduce **herbicide damage** to crops.

Use **fungicides** preventatively and always follow resistance management guidelines.

PRODUCT GROUPS

ALL THE LATEST NEWS FROM YOUR PRODUCT GROUPS

Photo by Tony Benny

WHAT DOES THE NEW GOVERNMENT NEED TO CONSIDER FOR VEGETABLE GROWERS?

Andrew Bristol : Vegetables NZ stakeholder engagement and communications manager
and Antony Heywood : Vegetables NZ general manager

A new government needs to consider how to expand the growing of vegetables in New Zealand, in order to improve the country's food security and people's health and wellbeing, while revitalising regional economies as well as the national economy.

At the same time, our industry is confident that it can further reduce its environmental impact by using Good Agricultural Practice (GAP) schemes to manage environmental effects, and show that our industry is operating within environmental limits.

To expand growing, our industry needs better access to land, water and inputs like nutrients. Current central and local government policy settings and attitudes do not support vegetable growing. Long-term, central government's support for vegetable growing needs to be codified in a National Policy Statement for Commercial Vegetable Production.

In terms of workforce, the vegetable industry needs a viable, skilled New Zealand workforce, with a top-up of Recognised Seasonal Employer (RSE) Scheme workers for key harvest times. We also need workforce development plans that link to immigration and education and training.

Reform of the tertiary education and training system needs to ensure the vegetable industry workforce is skilled and adaptable, particularly as growing techniques are changing in response to climate change adaptation and the application of new technologies.

New Zealand's vegetable industry is proud of its innovation. Sustainable Vegetable Systems research and

the A Lighter Touch agroecological crop protection are ensuring the industry can adapt to changing regulatory requirements and consumer preferences. However, the government needs to speed up regulatory approval of new, more environmentally sustainable crop protection products.

> **The government needs to ensure that New Zealand's biosecurity system is fit for purpose, affordable, and able to respond if there is an incursion**

In addition, the government needs to ensure that New Zealand's biosecurity system is fit for purpose, affordable, and able to respond if there is an incursion.

The industry is working with the Energy Efficiency and Conservation Authority (EECA) to reduce energy demand and switch to renewables. However, further government support is needed to fast-track energy transition plans, and the Emissions Trading Scheme needs to be reviewed to recognise the importance of crops grown in greenhouses, like tomatoes, to New Zealand's food security.

Lastly, the vegetable industry needs the government's ongoing assistance to increase exports to markets such as the European Union, China, Indonesia and Australia through the removal of non-tariff barriers.

Andrew Bristol is the new stakeholder engagement and communications manager. He is working with vegetable industry directors to ensure the vegetable message is heard loud and clear. Please contact Andrew on **andrew.bristol@freshvegetables.co.nz**

HORTICULTURE CANTERBURY HOLDS AGM

Horticulture Canterbury held its Annual General Meeting (AGM) in Lincoln in mid-September. Robin Oakley was re-elected as chair and Rob Lindsay was elected as deputy chair.

At the meeting, Murray Stephens (pictured) was presented with his Horticulture New Zealand Life Membership award by Mike Arnold, who had accepted the award on behalf of Murray at the HortNZ AGM in early August. Mike repeated what he had said when he accepted the award, reiterating Murray's contribution to the development of horticulture in Canterbury over several decades. Read the full interview with Murray on page 22.

During the meeting, Vegetables NZ Board member Allen Lim outlined consultation currently taking place on how vegetable product groups could work more closely together, for the benefit of growers and in the interests of efficiency. Horticulture Canterbury expressed its support for this work.

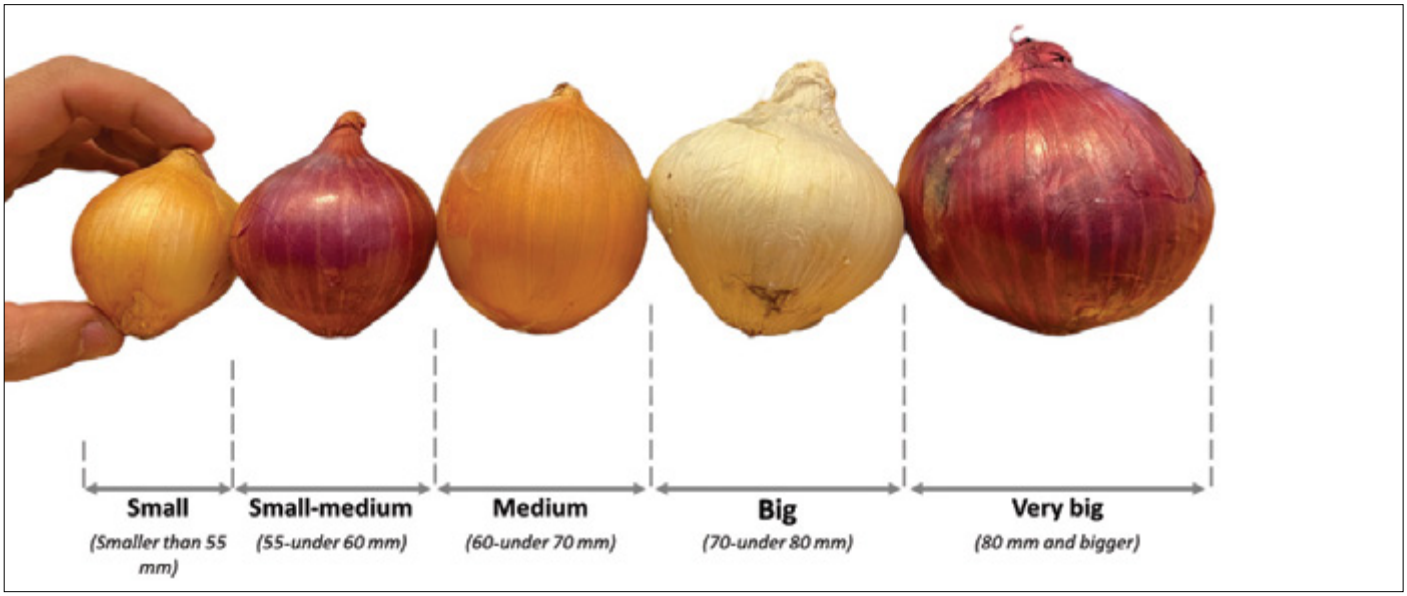
Also at the meeting, members discussed how they would like to see Horticulture Canterbury flourish over the coming year. Against a backdrop of other horticultural organisations reviewing their strategy, it was decided that it was time for Horticulture Canterbury to do the same. In a formal review meeting in November, questions such as "What is our purpose? How will we achieve this? Who will be involved? What are our priorities?" will be discussed, and a course of action agreed upon.

At the same time, Horticulture Canterbury would like to see product groups and HortNZ more involved in their meetings, to explain what's happening in the wider horticulture industry and outline what members need to be aware of.

Vegetables NZ welcomes this development, believing that district associations and crop advisory groups have a key role to play in two-way communications between Wellington-based advocacy and the regions in which vegetables are grown.

UNLOCKING MARKET DEVELOPMENT OPPORTUNITIES FOR NEW ZEALAND ONIONS

Kazi Talaska : Onions NZ market access and development manager



Half of consumers prefer the medium sized onion

Onions NZ has this last season completed two comprehensive market intelligence reports for onions in high potential growth markets in Southeast Asia, Thailand and Vietnam. The scope of the research includes market overview and trends, importer interviews and consumer surveys.

The importance of Southeast Asia

If we look to the future of the onion sector, market diversification is a key driver for growth. Currently the New Zealand onion industry exports approximately 80 percent of production, and onion exports are the fourth highest fresh produce horticultural export earner for New Zealand according to FreshFacts (2021).

Southeast Asia and its member states are still one of the highest value markets on New Zealand's doorstep. An opportunity worth the investment from our horticulture industries. For example, Harvest Fresh is a major exporter of New Zealand onions to the region.

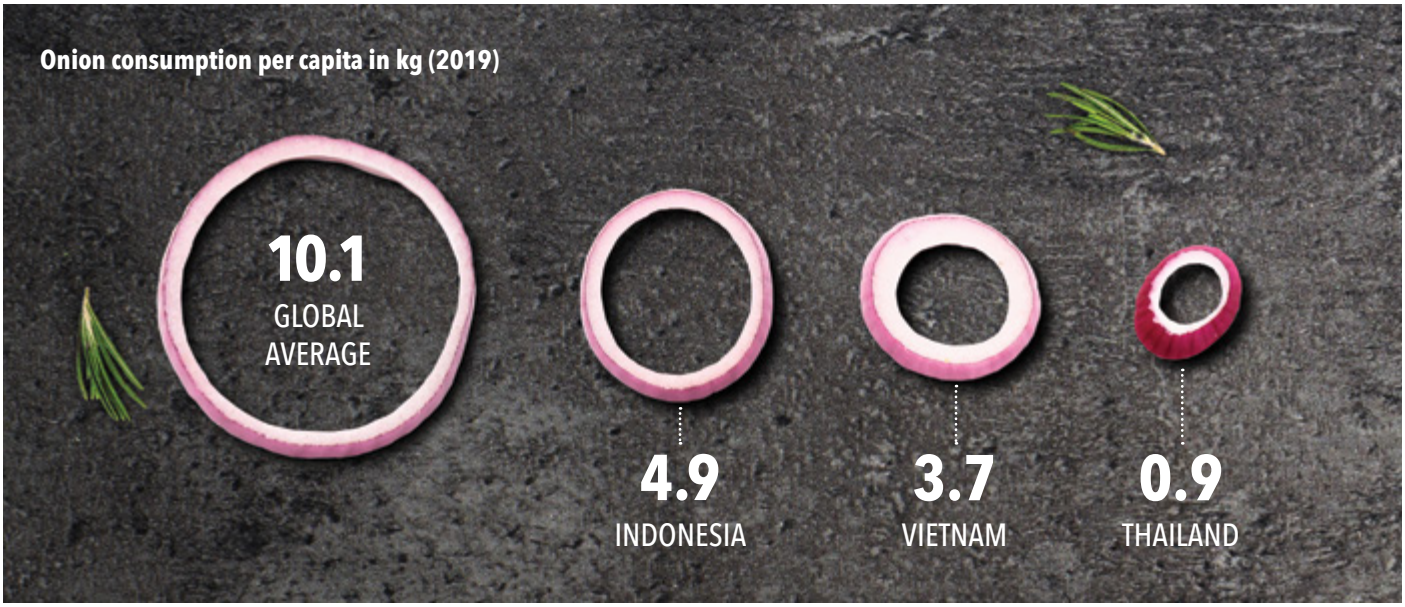
Michael Croft has been the engine room of the Harvest Fresh team since 2007, managing global carrot sales and onion sales into Southeast Asia.

"We continue to invest in the region and see the potential going forward, our main markets are Indonesia, Thailand, Singapore, and we continue to see growth on the back of the AANZFTA (ASEAN-Australia-New Zealand Free Trade Agreement)," says Michael.

"Understanding how importers and consumers interact with our products supports our future investment."

Market access to Thailand and Vietnam

Currently New Zealand has market access to both Thailand and Vietnam. For the Thai market, the removal of a non-tariff



barrier was recently negotiated, opening up the market to commercially meaningful trade for the past couple of export seasons; a great win for trade relationships.

Thailand and Vietnam both operate under zero percent tariff for New Zealand onions under different free trade agreements (FTAs) that operate in the region, effectively making the two markets a high priority for future growth.

Market overview

In the 2022 calendar year, a challenging export season, a total of approximately 1,200 tonnes of onions were sent to Thailand and Vietnam, with a combined FOB value of over NZD $1 million. Although not insignificant, there is room to grow.

Both markets grow onions locally for domestic consumption. This graphic above uses data from a Ministry for Primary Industries (MPI) report on Onion Market Opportunities.

Vietnamese onions are grown in two different regions, the north and the central coast. The planting times during spring are from August to October and they are harvested in January and February the next year. The varieties planted are F1 hybrid varieties with an average productivity of 30 tons per hectare (differing on variety and region). Thai onions have a similar planting schedule and experience a shortage during May through to October.

The Thai onion itself has a short shelf life and is prone to post-harvest diseases.

General imports into the Vietnamese and Thai markets are typically by sea freight. Produce is inspected at the border, and transferred to cool storage to be distributed by wholesalers and retailers through predominantly traditional trade channels.

The New Zealand Image

The New Zealand brand and country of origin is an advantage for fresh onions being exported. Below is an excerpt from the two markets showing the top five attributes that consumers in Thailand and Vietnam relate to the New Zealand onion brand.

In Vietnam, New Zealand's overall ranking sits second to Japan, ahead of the United States, Australia and Germany. In Thailand we see Australian and Chinese onions as a close and comparable competitor.

Note that although they are ranked below, the ratings are very close if not the same.

Vegetable consumption rates

In Thailand the vegetable consumption rate is increasing due to the rise of home cooking since the Covid-19 pandemic because of health concerns. Onions in particular have seen an increase in consumption of up to 40 percent

Top five attributes that consumers in Thailand and Vietnam relate to the New Zealand onion brand

1	Available for sale in leading supermarkets
2	Vegetables sold perceived as organic
3	Is food safe
4	Nice packaging
5	Imported from overseas

1	Natural and organic food
2	Healthy food
3	High quality food
4	Food safety
5	Highly nutritious

over the past three years, and are the most purchased vegetable of a sample size of 300 consumers over the past month.

In Vietnam, we are seeing that similar to Thailand, onions are a large and important aspect of the diet with 20 percent of the total vegetable expenditure in a given month spent on onions. One of the most important vegetables other than chilli, carrots and garlic.

In Vietnamese cuisine, onion is often named in dishes where it delivers the signature taste. Onion is also used to cook stock to enhance smell and sweetness. Coupled with the general trend of increasing western cuisine, it is safe to assume consumption of onion is likely to be stable and grow.

The Health Aspect

Positively, in both Thailand and Vietnam we are seeing a strong emphasis of assumed health benefits for onions from consumers.

For Thai consumers, "wanting to take care of health more" is one of the top reasons to consume onions more often. This metric relates to 55 percent of the consumers. At 34 percent agreeance is the understanding that onions control weight, and 11 percent said it was recommended by their doctor or a health professional. As onions are affordable they are seen as a good way to consume vegetables and gain nutrition.

> "For Thai consumers, "wanting to take care of health more" is one of the top reasons to consume onions more often

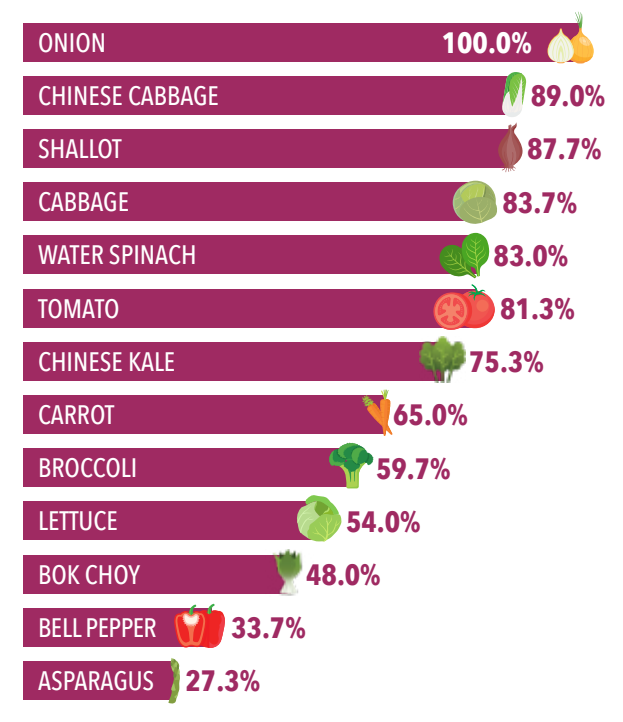
For Vietnamese consumers, onions are appreciated for flavour enhancement when cooking, and the health benefits are most appreciated by the older consumer groups (aged 40–60). There is a significant difference in interest particularly for benefits onions provide for stabilising blood pressure, blood sugar, and for joint health for this group of consumers compared to the 20–39 year olds.

The older consumer group reportedly also chill onion with ice and eat it raw, use onion juice to add vitamin C and boost the immune system, or eat salad with onions in place of a complete meal to lose weight or support a body detox.

Recommendations

In order to be commercially successful in a market, the New Zealand onion brand needs the right price conditions, relationships and value proposition. In concluding the market intelligence there are a few recommendations for exporters to focus on:

Thailand vegetable consumption in the past month
Total (n=300)



Origin awareness

Consumers have limited knowledge when it comes to country of origin and cannot readily identify any brands. In Vietnam only 22 percent of consumers are aware of New Zealand onions.

Communication

Making use of alternate channels including well developed digital channels to reach consumers, taking advantage of New Zealand's well-known image and the perceived health benefits of our products among consumers.

Partnering with a local marketer

The importance of creating a hub and investing in the establishment of a presence in the market to repack, market, and engage with importers year-round.

Research conducted under Humble to Hero

This research has been conducted under the SFFF (Sustainable Food & Fibre Futures) Humble to Hero programme, the Onions NZ partnership project with the Ministry for Primary Industries (MPI). This 6-million-dollar programme is in its third year out of six and is aimed at transforming the onion industry through market access, providing assurances, and adding value. ●

For more information on the research conducted get in touch with Kazi Talaska **kazi.talaska@onionsnz.com**

References: FreshFacts (2021) **https://unitedfresh.co.nz/assets/site/Fresh-Facts-2021.pdf**

UPDATES FROM TOMATOESNZ

Dinah Cohen : TomatoesNZ Inc business manager

TomatoesNZ has engaged charitable trust 5+ A Day in a marketing campaign over the coming months

Important information required by Ministry for the Environment (MfE).

Tomato growers throughout New Zealand are all eligible to claim industrial allocation, whether you grow all year or only for part of the year, if you use recycled oil, wood pellets, coal or gas or no heating. There was an amendment to the Industrial Allocation Act earlier this year and as a result, MfE require **ALL fresh tomato growers** to provide information on certain aspects of their businesses. This COULD impact the free allocation currently given to fresh tomato growers – this happened to cucumber growers who were requested to send in information during a Covid-19 lockdown.

TomatoesNZ has informed MfE that this is the worst time of year to be collecting data from growers due to it being so busy in the greenhouse. Unfortunately, we have no ability to change the timing. The request for information came directly from the Ministry for the Environment on Friday 13 October. This is not a scam! The email subject was 'NZ Emissions Trading Scheme Industrial Allocation – Data Collection'. Please make sure that you complete this information before the due date of 15 December, for the benefit of the whole industry.

The information required is five years' worth of data on production (quantity), revenue and emissions. Please make sure that your emissions take into consideration ALL gas, electricity, coal, recycled oil and diesel that you have used in your operations. Failure to provide the data could mean that the Ministry for the Environment decides that tomato growing isn't an energy intensive activity and will advise the Minister to drastically reduce the free allocation on 60 percent further. What TomatoesNZ would like is to show the Minister that energy use is very much required to ensure a continual plentiful supply of fresh tomatoes available to the consumer, and that in fact the allocation should be increased to 95 percent.

If you haven't already signed up to industrial allocation, now is a great time to start this process. Sign up by 31 December to receive an allocation for this year's production.

For further information on the signing up process in both English and Korean, visit:
www.tomatoesnz.co.nz/hot-topics/industrial-allocation-and-how-to-register

Energy and reducing demand

The Energy Efficiency and Conservation Authority (EECA) has produced a series of short emails designed to give growers bite-sized pieces of information about things you can do to reduce your energy demand. These emails will be short and regular but for a limited period of time, with the focus specifically on growing in greenhouses.

To sign up to the EECA email, visit:
www.eeca.govt.nz/co-funding/sector-decarbonisation/sign-up

Earlier this year, EECA funded a video by TomatoesNZ board member Albert Shih on the benefits of installing thermal screens, so that other growers could learn from his experiences. If you have been wondering about installing screens, check out what Albert has to say: www.youtube.com/watch?v=5N4ueYJ8UGk.

Summer Tomato Promotions

The board has engaged charitable trust 5+ A Day in a marketing campaign over the coming months. This allows TomatoesNZ to leverage off the already huge following and known branding that 5+ A Day has. Look out for a tomato advert being aired on TV3 throughout November promoting the benefits of eating fresh tomatoes. Tomatoes will also feature in recipes championed by Green Kai. If you have your own social media channels, you could follow both Green Kai and 5+ A Day and share their tomato material.

To find their channels, visit:
5aday.co.nz
www.greenkai.co.nz

The Commerce Commission and the Grocery Code of Conduct

The Commerce Commission (ComCom) is an independent regulator whose primary concern is keeping a check on competition and fair trading in many industries, include retail, for the benefit of both consumers and suppliers. In 2022, they reported that New Zealanders were paying what appeared to be inflated prices for their groceries compared to other countries, and that the current duopoly of Foodstuffs and Woolworths controlling around 80 percent of the market was probably the root cause of this. This led to the government bringing in a mandatory Grocery Code of Conduct effective from 28 September, which bans supermarkets from blocking their competitors entering the retail market. Other areas covered by the code are summarised in the broad statement: 'Retailers have to operate in good faith' but this comprises many areas, which include ensuring the fair treatment of suppliers, for example turning away fresh produce claiming it didn't meet the required quality standards but too late for the supplier to sell the produce elsewhere. It also includes using 'plain English' in supplier contracts, paying suppliers on time, and not making retrospective changes to contracts.

Retailers have until 28 March 2024 to make such supplier agreements comply with the new code. If, either as a grower or as a consumer, you believe that any aspect of the code has been breached, you can report this to ComCom anonymously by phoning 0800 943 600. Their advisors will tell you how to make a written report so that it isn't subject to requests under the Official Information Act and will therefore remain anonymous in the public domain.

ComCom have said they will hold webinars to help growers with fair supply contracts, so keep an eye out on the Horticulture New Zealand weekly emails for when these will be.

Read a good summary of the code:
https://comcom.govt.nz/__data/assets/pdf_file/0022/329710/Commerce-Commission-Grocery-supply-code-factsheet-28-September-2023.pdf

or see the full version:
https://www.legislation.govt.nz/regulation/public/2023/0220/latest/LMS881111.html

Dam regulations

If you have a body of water on your property that is:

- 4 metres or higher with a volume of 20,000m^3 (8 Olympic-sized swimming pools) or greater, or
- 1 metre or higher with a volume of 40,000m^3 (16 Olympic-sized swimming pools) or greater

the regulations around the operation and maintenance of these have changed. The new measures will be enforced from 13 May 2024, so you need to be aware of the changes to make sure that you comply.

The new regulations are available on the MBIE (Ministry of Business, Innovation & Employment) website, including forms which you might need to complete for your local council. These forms have also been updated to reflect the removal of the need to provide information on flooding and earthquake performance.

For more information visit:
www.building.govt.nz/managing-buildings/dam-safety/resources

or contact:
building@mbie.govt.nz

ENSURING QUALITY FROM SEED TO TABLE

Renu Ryder : Potatoes NZ communications & engagement officer

Seed certification plays an important role in ensuring that New Zealand remains a strong player in the global potato industry. Despite the many challenges it faces, the New Zealand seed potato industry thrives thanks to its hardworking individuals, growers and companies and the dedication of organisations like Potatoes NZ.

The New Zealand Seed Potato Certification Scheme was established in 1948 and has been running continuously since then. Like many schemes around the world, it was established to improve the quality of seed potatoes and to provide commercial growers assurance that seed lines meet a series of minimum standards for disease freedom and trueness to type. The scheme is administered by the New Zealand Seed Potato Certification Authority which is a sub-committee reporting to the Potatoes NZ Board. In 2021, Potatoes NZ embarked on a significant initiative to enhance the quality and traceability of certified seed. Potatoes NZ has successfully improved the seed industry's efficiency, reliability and quality. In this article, we delve into the important changes that have been made to improve the Seed Potato Certification Scheme and the dedicated team behind it.

Certified seed: The foundation of potato production

Certified seed is the cornerstone of the potato industry, providing the processed, fresh market, and export sectors with the highest quality planting material. It serves as the starting point for all potato production, making it a vital component of the industry's success. Potato NZ's Seed Potato Certification Scheme plays a pivotal role in ensuring that this essential foundation meets rigorous quality standards.

Geographic concentration of seed production

Approximately 95 percent of New Zealand's seed potato production occurs in the Canterbury region. For the remaining five percent, which is grown in the North Island, Potatoes NZ relies on a network of dedicated contractors who report their activities to ensure quality and compliance.

The dedicated Potatoes NZ team

The day-to-day management of the Seed Potato Certification Scheme used to be contracted out, but in 2021 Potatoes NZ took on this role internally, and today it carried out by a team of four dedicated staff members. Among them are Iain Kirkwood who has over 40 years' experience in the global potato industry, who serves as the key contact point for the programme, Tristan Hickman, with 13 years of industry experience, Cyril Hickman with an impressive 27-year industry tenure, and Paula Lleras, an agronomist from Argentina who joined PNZ in 2019, bringing her valuable background in potatoes to the team.

Seed Potato Certification Programme: field and tuber inspections

The Seed Potato Certification Programme covers two main areas: field inspection and tuber inspection. These inspections are conducted meticulously to maintain the highest standards throughout the seed production process.

Field inspections are carried out annually from November to March and consist of two inspections per crop per season. Field inspectors focus on ensuring that the cultivar is true to type, checking for signs of disease, maintaining crop hygiene, and ensuring crop segregation.

Tuber inspections, on the other hand, take place from April to October and culminate in the issuance of certification labels, marking the completion of the certification process for each line of seed.

Role of the Seed Potato Certification Authority

The NZ Seed Potato Certification Authority is a pivotal regulatory body responsible for overseeing and managing the Seed Potato Certification Scheme. Established in 1948, this authority plays a crucial role in upholding the highest quality and disease-free standards in the nation's seed potato production. It ensures that certified seed potatoes meet stringent criteria for trueness to type and disease freedom, assuring commercial growers of the quality of the planting material. Under the guidance of the Potatoes NZ Board, the Seed Potato Certification Authority has taken on the responsibility of administering and continuously improving the programme. This includes in-house management, dedicated data management, and the Potatoes NZ Seed Team conducting rigorous field and tuber inspections.

Unique in-house approach

The move to handle the Seed Potato Certification Scheme in-house is unique within the primary sector. Previously contracted out, this shift has enabled Potatoes NZ to enhance traceability and data management while improving overall programme efficiency.

Also, in 2021 Potatoes NZ established a dedicated database in order to improve the recording of seed potato certification activities and as well as improving the traceability of seed lines.

Challenges faced by the industry

The potato industry, like many others, faces various challenges. These include the continuous need for vigilance against new diseases and emergent biosecurity risks, rising seed prices, increased production costs, and heightened end-user expectations.

Establishing a new potato variety in New Zealand is a patient process spanning multiple plant generations, taking years before it is market-ready. This journey involves planting seeds, selecting the best performers, and maintaining quality standards.

Many new potato varieties are introduced from around the world, and evaluating their suitability for the local climate and market is a trial-and-error process. This process has for many years been carried out by the seed merchants, and is an often undervalued service provided to the potato industry.

Dedicated team challenges

The Seed Certification team at Potatoes NZ often faces demanding conditions when conducting inspections in the field. Weather conditions, especially during peak times, can put pressure on inspections, but the team remains committed to supporting growers.

The potato cultivation landscape is rapidly changing, with an increasing number of potato cultivars being introduced each year. Cyril recalls a time when there were only a dozen potato cultivars to work with. Today, the team faces the daunting task of managing up to 110 different varieties, presenting unique challenges.

One significant challenge is comprehending the nuances of each potato variety. Some are bred to combat scab or potato cyst nematode (PCN), while others serve different purposes. Staying updated on these traits is crucial for growers' success.

Despite its challenges, Cyril emphasises that the seed potato industry is rewarding. The industry's adaptability and commitment to quality reflect its resilience and potential for the future. It is the industry's very ability to navigate these challenges that underscores its strength and promise.

Future endeavours

Looking ahead, the Potatoes NZ team aims to continuously improve its support to the seed industry, and provide additional services to all sectors of the potato industry. They continuously invest in training to stay updated on biosecurity, food safety, and health and safety practices, demonstrating their commitment to industry growth and improvement.

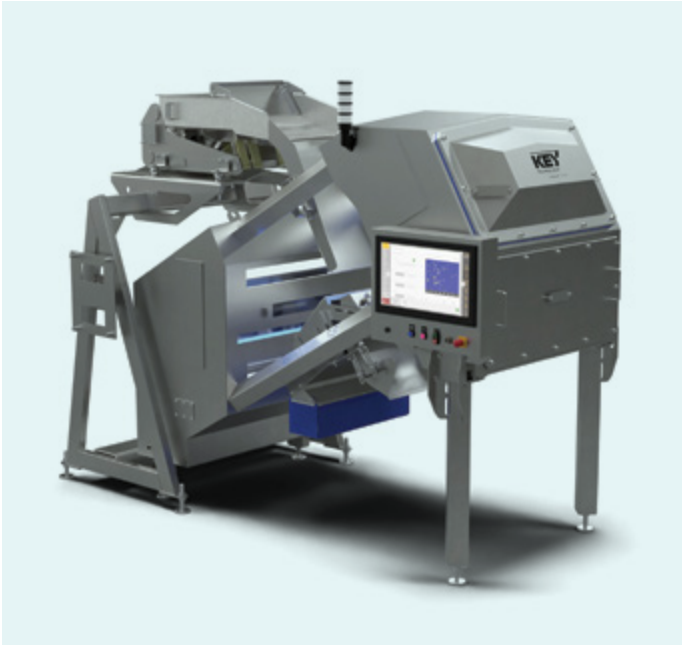
NEW COMPASS® OPTICAL SORTER FROM KEY TECHNOLOGY

Key Technology, a member of the Duravant family of operating companies, introduces the all-new COMPASS® family of food optical sorters. Powered by next-generation inspection technology as well as a new sort engine and ergonomic user interface, COMPASS is the easiest to use optical sorter on the market, achieving consistently accurate foreign material (FM) and product defect removal and simplifying system operation, sanitation and maintenance. COMPASS helps processors automate and improve quality management of their food products, while maximising yield and increasing profitability.

COMPASS is ideal for sorting processed, frozen and pre-processed vegetables and fruits, nuts, leafy greens, potato chips, confections and other food products. Thanks to its advanced sensors and lighting technology, as well as Key's powerful new NEXT sort engine, COMPASS accurately identifies and separates plastic, glass, paper and other organic and inorganic FM from the line, in addition to sorting the specific product defects each processor wants to manage to deliver its customers the product quality grade they expect.

Key designed COMPASS for extreme ease of use. Its highly intuitive user interface mimics the navigation of smart device apps and enables an operator without any technical background to quickly become proficient in using the sorter. Operators can quickly create and edit COMPASS sort recipes to ensure consistent performance on every product run.

COMPASS features Key Discovery™, a powerful data analytics and reporting software that turns the sorter into an IIoT-connected device (Industrial Internet of Things), delivering a wealth of product quality and sort process information that gives food processors valuable insights into the operation of their line.



COMPASS family of food optical sorters from Key Technology

COMPASS is offered in a configurable range of system types and sizes to meet individual customer application and capacity requirements. Key is first introducing chute-fed COMPASS models, to be followed by belt-fed variants of the sorter. COMPASS can be installed in line at the start of the process to sort incoming product, after critical transformational processes on the line, or at the end of the food processing line to ensure final product quality and safety prior to packaging.

> "COMPASS is the easiest to use optical sorter on the market, achieving consistently accurate foreign material (FM) and product defect removal and simplifying system operation, sanitation and maintenance

Key supports its customers worldwide through an extensive sales network and its global SupportPro service team. Key equipment is exclusively sold by Heat and Control in New Zealand and manufactured in Australia and India.

For more information, visit **www.heatandcontrol.com**

HEAT AND CONTROL

PROGRAMMING YOUR CROP PROTECTION TO KEEP POWERING ON

For squash growers, as for other vegie growers, variety isn't just the spice of life. It's also the key to successful agronomy. The more different, effective control options that can be included in your crop protection programme, the better.

Your programme probably already includes a range of management techniques, including non-chemical ones. When and if agrichemical applications are also required, rotating between different mode of action (MoA) groups is key to slowing the development of resistance.

Powdery mildew is the biggest disease threat to the foliage of squash crops. Most growers will use crop rotation, cultivation and weed control to help mitigate it. But once the crop is growing, a regular spray programme is the best defence.

We don't all have a lot of time to investigate the possibilities for extending the rotation. So here's a quick look at four options offered by BASF, a couple of which may be new to you.

You'll probably know the first one. Kumulus® DF (MoA group M02) has been around for decades, which is a testament to its reliability. The spray programme can be built around Kumulus because it can be used from early season through to harvest, alternating with other fungicides from the other MoA groups. As a multisite fungicide, Kumulus is at relatively low risk from resistance.

Fungicides that only act on single sites face a much higher risk of resistance and need to be used more sparingly, so it's important to choose the best compounds within each MoA group.

Colliss® is a very reliable co-formulation of two active ingredients: boscalid (MoA group 7) and kresoxim-methyl (MoA group 11). Like Kumulus, Colliss needs to be applied before infection. For the control of gummy stem blight, Colliss can be applied at early flowering.

When just the Group 7 MoA is needed, Sercadis® is a very efficient solution that can be used anywhere in the programme up to 21 days before harvest. But note that you can't use Sercadis more than twice in each crop. Also, when applied alone, Sercadis should be used in strict alternation with effective fungicides with a different MoA.

With so many fungicides sharing MoAs, Vivando® provides an opportunity to introduce a different one, MoA Group 50, that will add extra robustness to the programme. With a maximum of two applications per crop as part of the resistance management strategy, it's worth pre-planning to make sure you can use those sprays at the most strategic timings.

Incorporating a diversified fungicide programme with robust rotation between the different modes of action, into an integrated approach to crop management is the best way to ensure you can go on growing highly marketable squash for years to come.

ACVM registration numbers: Colliss P007476, Kumulus DF P003493, Sercadis P008977, Vivando P007973

BASF
We create chemistry

MAJOR INVESTMENT DELIVERS MAJOR REWARDS

ST Growers based near the vegetable heartland of Pukekohe has operated for more than 35 years in the area, aiming to grow high quality produce, with special attention to sustainability, longer crop rotations, the use of cover crops and optimal cultivation techniques.

Growing around 200ha of potatoes each year destined for the chipping industry, harvesting was taken care of by two older, two-row trailed machines, with a team of ten employees to harvest 50 tonnes of crop per day. Hiring and retaining good staff had become more difficult, with absenteeism causing many logistical problems in hitting the required outputs.

The recent arrival of a 15-metre long, 4m high and 25 tonne GRIMME Varitron 470 Terra Trac self-propelled harvester from Germany has addressed this issue, with a reduction in labour of around 80 percent and output rocketing to 25 tonnes per hour.

Powered by a Mercedes 460hp engine, the machine has a four-row configuration, is equipped with a 7-tonne non-stop bunker system, built around a CLAAS-sourced Terra Trac system, with the 800mm wide belts only exerting 9 psi ground pressure when the machine is fully laden. Complemented by 270-95R54 tyres up front, the set-up addresses the problem of ground compaction, while a 63-degree steering angle and up to 15 degrees of track steering delivers tight headland turns.

Operations manager, Karl Dempsey, a 25-year potato industry veteran, takes control of the harvester with a multi-function joystick, with real-time performance and adjustment taken care of via a panoramic display and overseen by 15 cameras around the machine.

Particularly unique, the machine is the only example in the world configured with a manual pick-off table, manned by a single operative. Karl explains, "the exceptional lifting and separation quality means we can lift and drop the harvested potatoes directly into one-tonne boxes that go straight to Bluebird for chipping, with the removal of any transshipping and final cleaning at the packhouse, substantially reducing costs. The person up top is only there for final quality control."

Karl comments, "the installation and support by the CLAAS/GRIMME teams on delivery was brilliant. When we set out, we wanted technology that was industry leading and locally supported, so it had to be GRIMME, that is

The GRIMME Varitron 470 Terra Trac self-propelled harvester

Ben Meets, CLAAS Service Specialist

supported by dedicated service specialist Ben Meets, based at the CLAAS Harvest Centre next to Hamilton Airport, that's only a phone call or less than an hour away if we need help."

Roger Nehoff, GRIMME operations manager New Zealand, comments, "the core of our business is supporting the products we sell, so we established a GRIMME Hub at our CLAAS Harvest Centre Waikato location that is ideally placed for the root crop growing regions of Pukekohe and the Central North Island."

For more information, contact Roger Nehoff on **+64 27 438 5661**

NEW TRAINING & APPRENTICESHIPS

Primary ITO | Te Pūkenga are releasing refreshed training programmes for both Indoor Crop Production and Outdoor Crop Production, with enrolments open from 1 December 2023.

Industry was involved in the development of the new programmes, which include new topics, core knowledge, and some optional modules, so the training can be adapted to suit individual operations.

The new indoor crop production training programmes provide essential knowledge on water conservation, weather prediction, and environmental risk management. The new outdoor crop production training programmes focus on irrigation systems and the efficient use of resources throughout the production cycle, and take into account the latest regulatory requirements around water usage.

The New Zealand Certificate in Horticulture Production – Indoor Crop Production Level 3 is suitable for someone with around one year's industry experience and takes 13 months to complete. New topics include weather prediction and micro-climate characteristics for indoor crop production, and weed identification and control.

Other core topics include plant knowledge and care, pest and disease control, knowledge of pruning, and the safe use of agrichemicals.

"The Level 3 programme focuses on core skills and provides a broad understanding of production principles," says Hamish Gordon, Primary ITO Sector Manager for Production Horticulture. "Whether you're involved in plant production or leading a team, it includes a wide range of modules so a learner can gain essential knowledge, plus focus in on a particular area."

The Level 4 programme is the next step for someone with a few years' experience. New topics include using information technology and systems to help with decision making, water conservation, and identifying and managing environmental risks in a horticulture operation. Other core topics include monitoring crop production, managing production goals, and communications skills for supervising a team.

"The Level 4 programme provides more critical thinking about why things are done a certain way, with a focus on knowledge needed for decision making in the indoor crop production space," Hamish says.

The New Zealand Certificate in Horticulture Production – Outdoor Crop Level 3 is ideal for someone with around

one year of industry experience. New topics include maintaining and repairing irrigation systems, preparation and use of fertiliser, and weather prediction and micro-climate characteristics. Other core topics include monitoring crop health for pests and disease, packing and storage of produce, and the safe use of agrichemicals.

"This programme provides a really good knowledge base for outdoor production," says Hamish. "It covers lots of key areas, with knowledge for people working in field planning, managing people and systems, and considering compliance and market access requirements."

Much like the indoor version, the New Zealand Certificate in Horticulture Production – Outdoor Crop Level 4 is the next step for someone with a few years' industry experience. New topics include essential communications skills for people leading teams and supervising staff, and knowledge of water conservation in a horticulture operation.

"The Level 4 programme provides a more in-depth understanding of production processes and how it relates to the learner's individual production site. They get to apply the learning to their own systems to gain a better understanding," Hamish says.

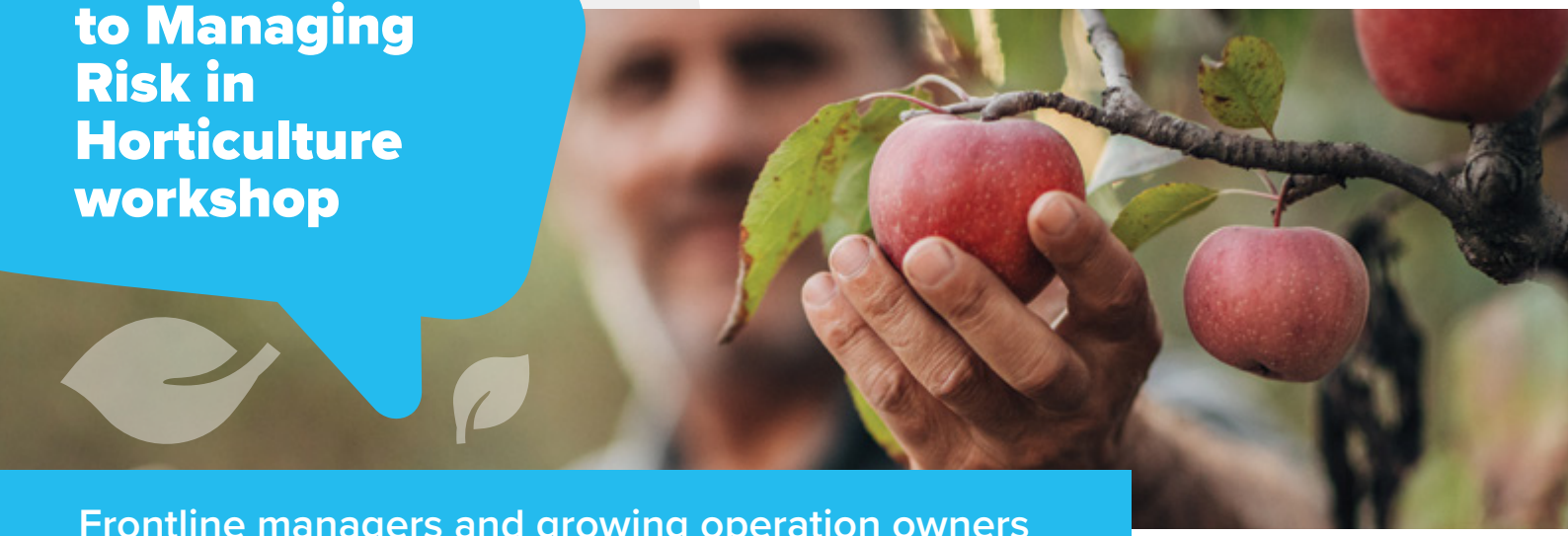
For both indoor and outdoor crop production, the Level 3 and Level 4 certificates can be combined and completed as apprenticeships.

"Our Training Advisers are happy to come and discuss these programmes with you, to give you a full understanding of how they work and what's involved."

For more information on these programmes, get in touch with your local Training Adviser on 0800 20 80 20 or email **info@primaryito.ac.nz.**

Grow Home Safe

Introduction to Managing Risk in Horticulture workshop



Frontline managers and growing operation owners register now for this health and safety workshop

Learn how to proactively identify and control risks. This workshop will focus on managing risks following severe weather events and related hazards.

Developed in response to research undertaken by the Grow Home Safe project, we have partnered with health and safety specialists at +IMPAC to provide horticultural training sessions to help reduce harm in the sector.

This workshop helps growers meet their legal duties under the Health and Safety at Work Act 2015, meet GAP requirements and provide useful tools and knowledge that can be utilised to create safe systems of work for their teams.

Workshop outcomes:

- Understand the legal requirements for risk assessment
- Define the key terms including hazard, harm, risk (including critical risks) and controls
- Explain the steps within the risk assessment process
- Apply three specific tools to identify hazards
- Get help with meeting GAP health and safety requirements
- Understand what a safe system of work is, and its importance.

Workshops are being held in weather affected regions in the North Island.

To find out more about this workshop including locations, dates and times go to **www.growhomesafe.co.nz**.
To register email **info@growhomesafe.co.nz**.
Through the support of the Ministry for Primary Industries (MPI) and its North Island Weather Events fund, tickets are at a subsidised cost of $75+GST per person. Each workshop is limited to 16 people (only one person per growing operation can attend).

Don't miss this invaluable opportunity to enhance your risk management skills and ensure the safety of you and your team.

Horticulture New Zealand Ahumāra Kai Aotearoa

Ministry for Primary Industries Manatū Ahu Matua

+IMPAC

Altair

Late Autumn, Winter to Spring harvest cauliflower.

Reliable, uniform and predictable harvest.
Well protected clean curds. Flexible winter variety with a very wide harvest time slot.

ENZA ZADEN

www.enzazaden.com
email: sales@enzazaden.co.nz • Phone +64 9 963 0122