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Back to the future

New Zealand is famous (infamous maybe!) for the radical reform period it went through from the mid-1980s when – due to the country being bankrupt – numerous government support systems were removed basically overnight, and the country became one of the most liberal in the world when it came to trade policy. Unfortunately, the speed of these reforms was brutal for many and rural communities took years to recover.

By Barry O'Neil
President : HortNZ

Thinking back, it's amazing how interventionist New Zealand was leading up to these reforms. Trade in manufactured goods was restricted, exchange and interest rates were fixed, businesses were heavily regulated, and the state sector was large, very large.

In 1984, the public service employed more than 66,000 people. By the end of the 1990s, that number had fallen to 30,000. But it has grown again, and last year was just over 57,000.

In the case of agriculture, government subsidies made up an average of 32% of farm income in the early 1980s, which equates to about 4% of the then total Gross Domestic Product (GDP).

I've always been amused by one piece of legislation, The Margarine Act of 1908, which showed how powerful the agriculture sector was even back then, as the act prohibited the manufacture of margarine in New Zealand due to it being seen as a direct threat to our dairy industry. Motor vehicles were another area that government heavily controlled via import licences and foreign exchange controls. In 1984, before controls were lifted, New Zealand had 14 car assembly plants, and even its own, albeit very inferior, version of a Land Rover called the Trekka!

In 1950, New Zealand ranked eleventh in GDP per capita among Organisation for Economic Co-operation and Development (OECD) countries. Growth was strong through to the 1960s and things seemed to be going well. And yet, although the economy was growing, it was growing much faster in other countries. By 1969, New Zealand had slipped to twentieth place, and we are now fifty-second.



There were also significant events that led to the reforms in the 1980s, including in 1973 when Britain, which was then taking 30% of our exports, entered the Common Market. Around the same time, the first Organisation of the Petroleum Exporting Countries (OPEC) oil shock hit, tripling the price of oil.

Collectively, this resulted in annual inflation of up to 17%, rising unemployment, and to make things even worse, a very large debt, servicing of which took 15% of the government's total expenditure.

Agricultural subsidies accounted for nearly 40% of the budget deficit in 1985. Between 1982 and 1985 the government, through the Ministry of Agriculture and Fisheries (MAF), paid out \$1.7 billion in Supplementary Minimum Payments (SMPs), mainly to sheep farmers.

“

When Lange's government decided to cut agriculture assistance, they estimated that 20% of farmers would lose their farms

Something had to change. New Zealand just couldn't afford to continue down the slippery slope that it was on as there was nothing left in the piggy bank. Also, due to delays in embracing necessary reforms over the previous decades, change had to happen fast if the country was to survive economically.

David Lange's Labour Party swept National from power in the 1984 election, and despite its socialist roots, the new government introduced radical free-market reforms. These reforms became known as 'Rogernomics', after controversial Finance Minister, Roger Douglas.

New Zealand's agricultural reforms were part of a larger wave of reforms that totally changed the country between 1984 and 1993. I have read that a way to describe these reforms is to say that they ended the 'informal welfare state' - the excessive and complex web of interventions that had shielded firms and workers from the market for the previous 40 years. Shielded farmers and growers from the market, a great descriptor!

The reality was these were really tough times for New Zealand and New Zealand farming, not helped by the stock market crash in 1987. When Lange's government decided to cut agriculture assistance, they estimated that 20% of farmers would lose their farms.

Land use change and the growth of horticulture

One of the biggest changes in the reforms was land use change from sheep to dairy, and the growth of the deer, forestry, horticulture and wine industries. Total pastoral land declined from 14 million hectares in 1983 - when subsidies allowed farmers to develop marginal land into pasture - to 12 million in 2004.

“

We have entered a period of reforms in New Zealand agriculture that are as significant as what happened during the 1980s. They will ultimately result in major land use change, and cause significant changes to the way we farm and grow

Without subsidies, and to survive, New Zealand needed to produce what consumers were prepared to pay for. This situation resulted in significant change to what we farmed and grew, which also and not surprisingly, resulted in economic prosperity greater than had been available under subsidies.

New Zealand's 20th century history has taught us many things. That changes in farming and growing are constant. That when governments intervene they often get it wrong, and that if reforms are needed, the longer we delay implementing them the more painful it is going to be.

Fast forward to 2021. We have entered a period of reforms in New Zealand agriculture that are as significant as what happened during the 1980s. They will ultimately result in major land use change, and cause significant changes to the way we farm and grow. But if we get the reforms right,



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Farmers and growers are resilient, adaptable, innovative and responsive to consumer signals

they will also result in the country being even more successful, as was the case after the 1980s' reforms.

The reforms I am talking about are manyfold. 🌱 Climate change, and how we can continue to farm and grow in a very different climate. 🌱 The need to become carbon neutral to stop global warming. 🌱 Freshwater reforms and the need to return our environment to a healthier state. 🌱 Labour reforms and moving to a more highly skilled and permanent workforce. 🌱 Resource Management Act (RMA) reforms to allow growth without major negative impacts. 🌱 And an honest partnership with Māori to address major inequities and resolve long-standing Treaty issues.

Farmers and growers are resilient, adaptable, innovative and responsive to consumer signals. The more affluent consumers we sell to – and need to keep selling to – are signalling very clearly what they want and expect from us. **Let's act**

The longer we delay embracing and changing how we grow and farm to address the current reform imperative, the harder it will become and the more sticks government will use to try and get us to change to what they believe are the needed results.

We know from history that using sticks to make change rarely works, and that governments when they do use them, often get it wrong. So as an industry, let's not hold off and wait until we are being forced to do something. Let's as growers and farmers get on and do the right thing to make the needed changes.

Today's reforms don't need to be as brutal as those of the 1980s. But they will, if we get it right, put New Zealand on the best path for the future well-being of our children, and our children's children. ●

Creating value

As New Zealand and the world recovers and moves on from Covid-19, anyone in the business of selling anything will need to re-evaluate their business model.

By Mike Chapman
Chief Executive : HortNZ

They will also need to assess how they can create premium returns so that they can stay in business. What worked before Covid-19 struck will not necessarily work in the post-Covid world. It will be necessary to reassess what is being offered and how it is being offered to the purchasers of the product.

This reassessment applies equally to horticulture. Fruit and vegetables have four significant advantages over other products:

1 Healthy food

Covid-19 has taught the world the importance of healthy food. Consumers will need to be reminded of the importance of healthy food, but this is a head start over other products.

2 Tiny environmental footprint

In New Zealand we grow all our fruit and vegetables on less than 100,000 hectares. Fruit is climate and water quality positive, and where this is not the case this situation is being progressively reversed. Balancing the small footprint against the rapid environmental improvements and the need for healthy food, the outcome is on the plus side of the ledger.

3 Sustaining rural communities

The fruit and vegetable industry employs a large number of people and although there is increasing mechanisation, we will always employ many people. There are many skilled jobs in our sector and as mechanisation increases, the number of skilled jobs is increasing. Across the country around 60,000 people are employed in horticulture. This helps sustain our rural communities.

4 Provenance

Being grown in New Zealand with the combination of the first three factors above is an enormous marketing advantage. New Zealand has stood out in the world through our Covid-19 response and New Zealand has the reputation as one of the best places to grow high quality healthy food.

These four factors, and they are not the only ones, drive a value equation for consumers. The challenge is how do we

get consumers worldwide to recognise this value and in turn pay for it? This is the question that Horticulture New Zealand is grappling with at present. How to create that value proposition that empowers the status of our product in the eyes of consumers?

There is one other issue and that is how do we ensure that the grower of the produce gets a fair return? Everyone involved in the supply chain needs to be fairly remunerated and that includes the grower.

This is in part because the issue of equity is equally important for consumers. As all of New Zealand makes changes to mitigate climate change and improve the quality of freshwater, the prices we pay for everything will increase. The Climate Change Commission's recently released draft report notes that climate adaptation will result in a 1% reduction in GDP (Gross Domestic Product) over the next 15 years, costing New Zealand \$4 billion a year. Added to that are the costs of changes to the minimum wage rate, increases to sick leave entitlement and a new public holiday, estimated to cost \$2 billion a year. And then there are freshwater changes estimated conservatively at \$6 billion. Consumers and ratepayers are going to have to pay all these costs. Some of the costs may be taken up by suppliers, but even if they are, the majority of the costs will fall to the public of New Zealand and the world.

Consumers are increasingly wanting food that meets the four significant advantages set out above. As the price rises, consumers will also want to know what they are paying for, and will want to know how much everyone in the supply chain is making. This is where transparency comes in. It is possible in this digital age to have complete transparency and fully inform the consumer about everything they are buying – how healthy it is, its environmental footprint, its support for rural communities, its provenance, and how much everyone in the supply chain is making off the product. The question HortNZ is working on is creating the value that both the consumer and the grower are looking for, and transparency is one of the key value creation drivers. ●



YOUR LEVY AT WORK

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Natural resources and environment



Water

Otago Plan Change 7

Otago PC7 is an interim plan change to roll over expiring water consents and deemed permits. The short-term plan change is required to give Otago Regional Council the time to undertake scientific research and work with iwi and the community on the vision, values and freshwater outcomes for the Otago catchments, required by the National Policy Statement for Freshwater Management (NPSFM).

Horticulture New Zealand appeared at the Environment Court Hearing in Cromwell in April. HortNZ presented legal, planning and economics expert evidence and were supported by two growers. The growers provided detailed evidence on their growing systems, water use and the history and application of the deemed water permits, some of which date back to the gold mining era, and are due to expire this year.

HortNZ understands the transitional nature of the plan. We are weary of the Council continuing to over-allocate water in catchments, where users will be faced with claw-backs in the future. With this in mind, for most people a short-term rollover will be acceptable, on the understanding that a robust and comprehensive Freshwater Plan is developed by 2024. In our view, it is critical that a pathway exists within PC7 for growers to seek longer consents or larger irrigated areas, provided they can demonstrate they can use water in a manner that has minor environmental effects and aligns with achieving the objective of PC7, which is to transition towards the long-term sustainable management of water resources.

Horizons Plan Change 2 Decision

Horizons Regional Council have adopted the PC2 decision. HortNZ presented legal, planning, economic and water quality evidence at the hearing, and a number of growers explained their operations. Through our submission and evidence, we were able to explain the importance of crop rotation, the importance of vegetables grown in the Horizons region within New Zealand's food system, and the commitment most growers have made to implementing freshwater farm plans.

The provisions will be tough for many growers, but the plan change is a significant improvement on the One Plan and the notified PC2. The decision version of PC2 includes a definition of crop rotation, updates the controlled activity leaching maximums, and provides a consenting pathway for existing growers who cannot meet the controlled activity leaching maximums. The opportunity to expand vegetable growing is limited to those rotations that can meet the updated leaching maximums.

The provisions for existing growers within target catchments will require significant reductions in leaching for some growers. Existing growers who cannot achieve the reductions have a discretionary consenting pathway where an argument about domestic food supply can be made. Consent duration is a matter that the Council will consider on all consent applications.

PC2 is designed to be interim. Horizons need to develop another plan change before 2024. PC2 may be appealed to the Environment Court.



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Climate Change

He Waka Eke Noa

He Waka Eke Noa is a partnership between iwi, government and the primary sector to manage agricultural emissions. Agricultural greenhouse gas emissions include emissions from animals and those from fertiliser.

He Waka Eke Noa milestones require that all farms larger than 80ha know the amount of agricultural greenhouse emissions they produce by the end of 2022, and all farms larger than 80ha have a plan to manage and measure emissions by the end of 2025. ●



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Signatories to the pledge

Biosecurity Business Pledge gathers momentum

Will you commit to playing your part?

By Anna Rathé : Biosecurity Manager, HortNZ

The Biosecurity Business Pledge is a partnership that aims to help all New Zealand businesses take a proactive approach to their biosecurity practices. The pledge was launched in October 2019 and has continued to gain momentum - there are now more than 80 businesses who have signed up and publicly demonstrate their commitment to biosecurity. Companies taking part range from ports and airports to primary producers, distributors, freight companies, research organisations and more. It's great to see so many diverse businesses taking biosecurity seriously and implementing steps that ultimately protect growers and farmers from biosecurity risks.

The pledge was developed by industry organisations in partnership with Biosecurity New Zealand to provide a framework for managing the risk of unwanted pests and diseases (plant or animal) disrupting individual

businesses or even whole sectors. This framework for action makes biosecurity a core part of operational activity and assists businesses to meet their corporate and social responsibilities. Businesses commit to being an active part of New Zealand's biosecurity team of all New Zealanders by integrating proactive biosecurity practices into their operations and supply chains. Taking a proactive approach to biosecurity is not only good for an individual business or sector but helps protect our economy, unique natural environment and our way of life.

When a business signs up to the pledge they are committing to:

- ✓ actively seek to understand and manage the biosecurity considerations associated with their business activities;
- ✓ promote a culture of proactive biosecurity management within their operations, across their business, around their board tables, and across their teams;

- ✓ incorporate biosecurity into their procurement policies that guide the selection of goods, travel, logistics, and service providers;
- ✓ take opportunities to support their customers, staff, suppliers and stakeholders to understand the importance of biosecurity and what good biosecurity practice looks like;
- ✓ approach biosecurity with the view that it is everyone's responsibility, that risk is best managed offshore, and that it will actively engage with Biosecurity New Zealand to support better biosecurity outcomes for New Zealand.

“

there are now more than 80 businesses who have signed up and publicly demonstrate their commitment to biosecurity

Any business can sign up to the pledge, including horticultural operations. Joining the pledge demonstrates that your business is committed to protecting our industry from biosecurity threats. Becoming a participating business

also provides you with access to members forums and online seminars where senior members of the Biosecurity New Zealand team share the latest insights in the pre-border, border and post-border working environment. Sign up to the pledge and play a part in protecting your assets, your industry, and New Zealand's natural environment, lifestyle and livelihoods. ●



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Robyn Patterson (far right) from GoHort talks with students about careers in horticulture

Fantastic Futures

The diversity of careers on offer in the horticulture industry was on show at the Fantastic Futures micro expo in Nelson last month (April) where about 100 secondary school students contemplated their next step.

By Anne Hardie

Fantastic future career options covered infrastructure, farming, fishing, food, forestry, fruit and fun (tourism) to give students some insight into what careers are possible and what those careers entail. Local schools were invited to select year 11 and 12 students to spend the day at the micro expo which was run like a small conference with an opening keynote speaker, some breakout sessions and a closing speaker. The breakout sessions included young people working in key industries who shared their career journey with the students.

Part of the day involved students rotating around businesses representing each sector, with each adding an interactive element into their session. Each business or group talked to groups of students for 10 to 15 minutes

about the jobs involved within their organisation so young people had the opportunity to see 'behind the curtain' of each industry.

The micro expo was organised by Nelson Tasman Chamber of Commerce, Careers and Transition Education Association NZ, Ministry of Education and the Nelson Regional Development Agency.

GoHort Nelson Tasman careers progression manager Robyn Patterson says the day targeted students interested in those sectors and described the interest from students as "fantastic." At the GoHort stand, the student-created card game 'Pathways to Primary' which depicts the various careers available within the horticulture industry, was a way of showing the diversity. The card game was created by

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Each card outlines a career with its salary potential, length of training, hands-on level, and rates its job opportunities

five Waimea College business studies students last year after they discovered there was a lack of information about careers in primary industries. Each card outlines a career with its salary potential, length of training, hands-on level, and rates its job opportunities.

“

Part of the day involved students rotating around businesses representing each sector, with each adding an interactive element into their session

The cards provided the opportunity for students at Fantastic Futures to discuss some of those career possibilities, and they also got to win a bag of dried kiwifruit snacks if they guessed the number of apples in a bowl. ●



“

I LIKE TO BE
CONSIDERED
EVERY BIT A
HORTICULTURALIST
AS MY HUSBAND

Robyn Wickenden at work on the Mya Enterprises tamarillo orchard in Northland

Tamarillo grower's lifestyle 'lane change'

Each of the 2,200 trees on the Mya Enterprises tamarillo orchard are identified by a number and letter code, and during weekly checks their health and productivity is recorded on an app.

By Elaine Fisher

Those details are transferred to a spreadsheet enabling owners Robyn Wickenden and Aaron Davies to quickly identify pests and disease or other issues occurring on the orchard.

The methodical and IT approach to orchard management is unsurprising given that Robyn has 29 years of experience in corporate accounting and Aaron 32 years in IT.

“We bring a different approach to traditional horticultural management, but I think skills from the business world are really helpful in the horticultural industry,” says Robyn, who is chair of the



New Zealand Tamarillo Growers Association and a member of Women in Horticulture.

The couple made what Robyn calls “a lane change rather than a sea change” in 2016 when they decided to leave corporate life and Auckland’s North Shore with its sea views, for a rural location inland from Whangarei.

“We both wanted something different that we could do together. We had always had a well producing vegetable garden so decided to look at horticulture.”



The couple investigated avocados, olives, growing grapes for wine, and market gardening. "We looked at a market gardening property which had a few spindly tamarillo trees and decided to find out more about growing them."

That research revealed that tamarillos are a tricky crop to grow, and that not a lot of information about their management is available. However, undaunted, Robyn and Aaron decided they were up for the challenge. "In November 2016 we bought a four-year-old tamarillo orchard."

The catch phrase the couple have posted on the NZ Tamarillo Growers Association webpage, "*tamarillos are easy to grow and hard to keep alive*" sums up what has become a truism for the industry since the tomato potato psyllid and the disease liberibacter which it carries, began infecting trees in New Zealand in 2008.

"One of the reasons there is not much information about growing tamarillos is because they used to be really easy to grow. That's not the case now, and the only way to control the psyllid is to spray every two weeks."

With the advice and guidance of their horticultural advisor Rhod Mitchell from Horticulture, and extensive reading of management and scientific papers, Robyn and Aaron are constantly upskilling to meet their aim to grow premium quality fruit.

That's something they are achieving season on season, with their export quality fruit being sent to the United States by Fresh Produce Group, which is licensed under the NZ Horticulture Export Authority to export tamarillos. "Last season Fresh Produce Group was only able to secure one export flight a week. In previous years we could have fruit in market three days after picking. There is uncertainty around the availability of flights this season."

“

Tamarillos are easy to grow and hard to keep alive

Local market fruit is distributed mainly to Palmerston North and Wellington, by the cooperative MG Marketing.

The NZ Tamarillo Growers Association has about 35 to 40 commercial grower members spread from Northland to the top of the South Island. Because of temperature variations, harvest begins at different times in each region, so there's a supply of tamarillos from late March to November.

Last year Robyn was appointed as an associate director of MG Marketing, a non-voting position on the board for those who have an interest in corporate governance and aspire to director level roles. She is also about to undertake a Cooperative Business New Zealand corporate governance course.

Robyn says there's still a perception that men do all the work on orchards. "I like to be considered every bit a horticulturalist as my husband. I'm right there beside him doing virtually every job on the orchard." ●



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YOUR INDUSTRY

ACROSS THE SECTOR — ACROSS THE COUNTRY

Summerfruit
review

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Twins Grant (L) and Brent (R) Tennet

Tauranga twins

Brothers' lifetime in citrus and plum trees

By Geoff Lewis. Photos by Trefor Ward

Deep among the shelterbelt canyons of Te Puna near Tauranga is a tale of two brothers who provide many New Zealand gardens with citrus and plum varieties.

Grant and Brent Tennet are identical twins. Born in Feilding, the boys had come north with the family in the early 1970s, and after high school both took up four-year, 8,000-hour apprenticeships in horticulture with the Tauranga City Council's parks and reserves department before establishing their own horticultural enterprise.

Brent had spent more time working in a citrus nursery while Grant had a more general background. They bought a 5ha block on Snodgrass Road which had been a dairy farm – all pasture and not a tree in sight – and established what is now Copperfield Nurseries Ltd which was first registered with the Ministry of Agriculture and Fisheries (now the Ministry for Primary Industries) in 1975.

The operation grew trees for other people, garden centres and orchardists, and took about five years to get off the



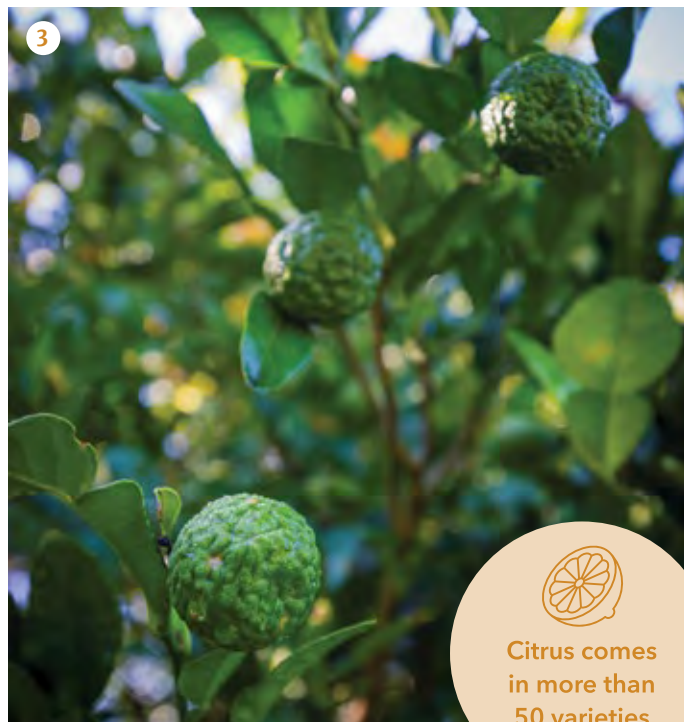
ground. Initially it focused on shelterbelt trees before building up its stocks of fruit trees and moving to specialise in citrus. Back in the 1970s citrus was an important industry in the Western Bay before the take-over of kiwifruit, and more recently, avocados.

It was a tough job for a couple of young guys to get into the market selling to existing orchardists and garden centres, and a matter of building up contacts and credibility.

Citrus comes in more than 50 varieties. Grant and his wife Sharon at Copperfield produce seven varieties of lemons, six varieties of grapefruit, two of tangors and tangelos, 12 varieties of oranges, 18 of mandarins and seven varieties of limes. There are the popular sorts – about 7,000 Meyer lemons a year along with easy-peel mandarins and early fruiting Satsuma. But there are also more rare varieties which have developed popularity as New Zealand's culinary tastes have become more sophisticated.



1 Calamondin citrus, 2 Poncirus Trifoliata



3 Kaffir Lime

Photos by Trefor Ward

Citrus comes
in more than
50 varieties

Grapefruit comes in the New Zealand Golden fruit variety, which is popular as a breakfast fruit and in the manufacture of juices and marmalades. Grapefruits include the Morrison Seedless and Star Ruby which are popular in commercial plantings around Gisborne.

In oranges the most popular remains the navel and the oval-shaped Navelina which comes on a month earlier, and Seminole tangelos.

Limes, Grant explains, are a bit of a story. For years growers had been pulling them out, but more recently demand has been burgeoning.

"We can't grow enough, the Bearrs variety go yellow but are picked when green and growers are supplying The Limery at Wairoa (Hawke's Bay), which is a factory juicing limes.

"We also grow the Key lime which is very popular with garden centres, and kaffir limes - the leaves are used in cooking."

Then there's finger limes, which look more like gherkins. Native to Queensland and New South Wales these are tricky to grow but are regarded as the 'caviar' of citrus by chefs for their tangy 'beads' and are a favourite with foodies.

Along one side of the nursery block is a line of oddities including Etrog or rough lemon - used in Jewish religious practice, the variegated calamondin citrus, bergamot which is the flavouring in Earl Grey tea, pomelo or Hawaiian grapefruit, blood and Seville oranges.

At one corner of the block is a small forest of *Poncirus trifoliata* orange trees, planted about 40 years ago, which is the source of the business from which Copperfield harvest,

treat with fungicide, bag and refrigerate around 60kgs of citrus seed a year.

The core of the business is growing rootstock and this is where *trifoliata*, a prolific seeder, comes into play. Propagation to the saleable stage is a three-year process. Seeds are broadcast into beds and once sprouted, raked over and thinned out.

“

seedlings are planted out in rows of 550 to 600 and can grow one metre in under 12 months

In September the seedlings are planted out in rows of 550 to 600 and can grow one metre in under 12 months. A contract 'budder' arrives in January. Working 12 hours a day, seven days a week for a month, the budder grafts budwood from the desired varieties into the rootstocks. These are then left to grow for another year before being graded and selected to the requirements of the garden centres and then 'wrenched' or 'lifted' with a special blade which severs the tap root.

Every year Copperfield Nurseries employs six workers in the potting shed who work in pairs and pot about 300 trees a day. They get through 300 cubic metres of Daltons potting mix in a season. Transport of the bagged trees around New Zealand is handled by Murray Gallagher at Tranzplants Ltd, based at Gate Pa.

Today, Copperfield Nurseries is one of the two largest growers of citrus trees in New Zealand with about 60,000 trees going out annually to garden centres and orchardists through most North Island towns and as far south as Christchurch.

The Covid-19 pandemic has been a boon, as Grant says "the market is going bizarre, Covid has meant people are staying and spending at home, all growers are experiencing the same thing, especially if they are growing food crops."

Grant and Brent worked together in citrus for 20 years before Brent decided to go his own way – but not far away. Just across the road to a 3.6 ha block, where he established the Te Puna Plum Nursery, which grows plums, peaches, nectarines and avocados. He plans to export his fruit next season.

While a relatively small operation in comparison with Copperfield Nurseries, Brent grows 13 varieties of plums including the popular Black Doris, Billington, Satsuma, Sultan, Luisa, Santa Rosa, Wilson's Early and Duff's Early Jewel. He grows Golden Queen and Blackboy peaches, and Goldmine nectarines.

"The older varieties are making a bit of a come-back. I have been in plums for 15 years. Grant was growing them but he wanted to specialise in citrus," Brent says.

A one-man band, Brent raises about 4,000 plants from rootstock annually. These are bagged at Copperfield Nurseries. Covid-19 has had a similar effect on the demand for plums, peaches and nectarines, as people spend more time and money on their home gardens.

“

Grant and Brent worked together in citrus for 20 years before Brent decided to go his own way – but not far away

"I can turn around plum trees in quite a short time. Once they are budded in spring they can grow up to 3 metres by the following winter."

Some plums need a pollinator tree nearby, while others are self-pollinators which are better for small sections. Unlike evergreen citrus, plums are deciduous and can also grow happily in a wide range of soil types and climates. Spray requirements are minimal.

Brent advises home gardeners to prune to keep the trees open. This helps with fruiting, makes picking easier and reduces fungal infections. ●

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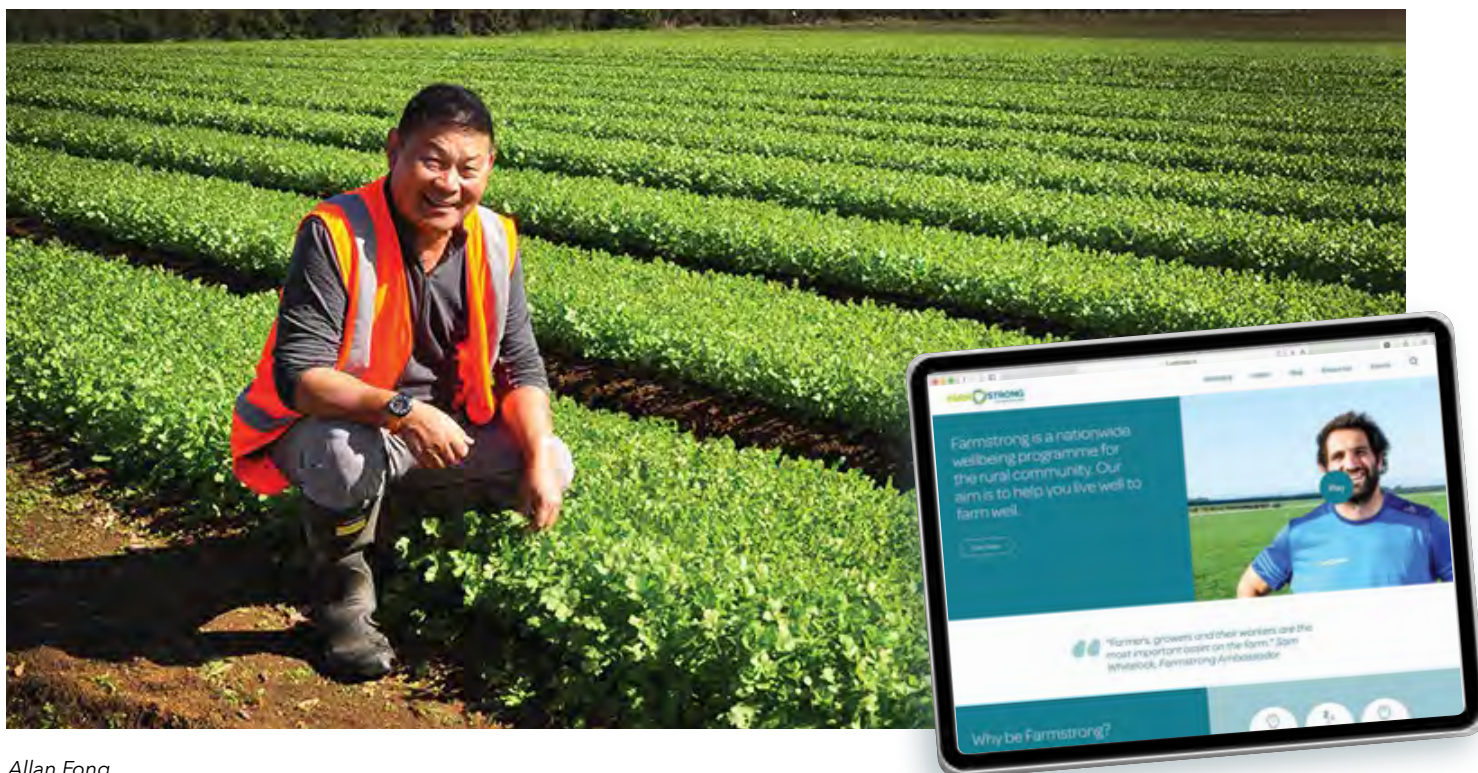
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Allan Fong

Slowing down and family time key

If Pukekohe market gardener and chief executive of The Fresh Grower Allan Fong could dish out one piece of advice to his younger self, it would be to slow down and spend more time with his family.

By Maggie McNaughton

The 65-year-old has recently stepped back from the job that has consumed his life since he was a youngster.

"My parents were from China and they started their own vegetable growing business in Pukekohe in 1950 and us kids would help out before school and after school every day," Allan says.

Allan and his younger brother Colin eventually took over the farm and recently Colin's three sons have taken up the reins.

"In the last 18 months I've stepped down a bit and am letting the young ones coming through take over a lot of the operational activities."

Being a business owner is very high pressure and takes a toll on your health if you're not careful, says New Zealand-born Allan.

"It's not a 9am to 5pm job and there is constant pressure. When I was younger, I used to work crazy hours. I was working 100 hours a week, seven days a week and then about 20 years ago I had a stroke. I had to learn to

quieten down a bit and take it easy," he says.

“

I was working 100 hours a week, seven days a week and then about 20 years ago I had a stroke

"I make sure I tell the young ones starting out to take breaks and have time off for holidays, take Sunday off, so they have more balance in their lives."

Vegetable growing challenges

Allan says vegetable growing doesn't have a high profile in New Zealand like pastoral farming or the kiwifruit industry does, however, it provides healthy, affordable food all year round.

"Our industry doesn't receive government subsidies or grants and we aren't part of a cooperative, so we very much have to stand on our own two feet."

He says the vegetable growing sector is very competitive and as a result many growers have left the industry.

"For example, thirty odd years ago there were approximately 33 Chinese families vegetable farming in the area, now there are less than a handful. High compliance requirements and costs also contribute to the reduction of farms."

And Covid-19 has been particularly challenging.

"One-third of our staff are usually backpackers, and with the borders closed it's very challenging to find people who like working in this industry, which in turn has a negative effect on our productivity," Allan says.

"Hospitality businesses, such as restaurants, hotels and tourist resorts, represent 30% of our revenue. When lockdown happens and they close, it results in crops being unharvested and therefore a loss of income and jobs."

Getting resource consent is another challenge.

"We've been trying to build a new vege packing shed for the last four years and only have three out of four consents ticked so it's very challenging and slow."

Having a break and delegating

Allan, who won a prestigious Australasian agribusiness award in 2016 acknowledging him as an outstanding innovator and leader, says he's learnt that having breaks and delegating are important.

He managed to get away to the family bach at Waiwera at the end of the first lockdown.

"I hadn't been there in 20 years. I did some work on it, but I was doing something different from my usual work, so it was a good change," he says.

"I've cut back on the 3am to 4am starts and I can now delegate work to other people, which helps. I'm an old dog and my life was unbalanced with the amount of work I did," he says.

Allan, who has two children, says there's a big generational difference in the amount of hours people are expected to work.

“

We know now that people need time off and to take a break to look after their well-being

"It's okay to not work ridiculous hours. We know now that people need time off and to take a break to look after their well-being," he says.

"Time goes so fast and before you know it your kids are grown up, so it's important to slow down and enjoy the moment." ●



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Brix employees

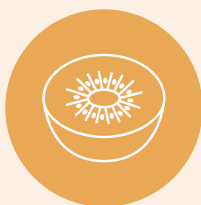
Brix fill bins throughout the Bay of Plenty

Brix was started in 2018 with a Subaru Legacy and a Bunnings chainsaw.

By Claire Ashton

Kieran Thomas and his business manager Luke Aldersley want the business to speak for itself and refer to whatever they do as what Brix does, rather than staking any personal claims, and their reputation seems to be growing as fast as the kiwifruit bins they fill.

Brix saw an opportunity in the HR space to provide reliable quality pickers at harvest time throughout the Bay of Plenty. Kieran has been brought up in the kiwifruit industry, but Luke originally trained as an oceanographer. What makes Brix stand out is their door-to-door service – they run buses and vans to pick up the workers so they arrive on time, at the right time and at the right location. If pickers self-drive there is sometimes the chance that they may not show up, or get the time or location wrong. This historically cavalier attitude in the kiwifruit industry can cost growers precious picking time within their defined harvest window. Brix says that



“orchardists expect you to turn up and don't want to hear any backstory or problems – they just want you to get on with the job at hand.” Having the workers delivered all together on-site at the same time has many advantages – one of which is that they can all be briefed at the beginning of the day on the Health and Safety protocols on each orchard.

They hire a diverse range of workers, and some of their best workers are women. Brix refers to their team as 'the guys', which indicates they don't delineate gender roles as such, on the picking team everyone is just working together through the season for the best outcomes. “We have a mutual respect and value for what our staff does and they value what we do, so by valuing each other this enables us all to do the best job.” Brix also has a good social media presence and aims to understand their staff and more of what they value so that they can keep improving.

BRIX HAS UP TO FIVE CORE STAFF, AND THEN UP TO 60 SEASONAL WORKERS



“

Brix also has a good social media presence and aims to understand their staff and more of what they value so that they can keep improving

Contrary to some outsider viewpoints, they are actually bringing efficiency to the HR side of things, streamlining the business and reducing costs by supplying transport to and from work. The first year in business, Brix had the usual teething problems of a start-up business as they felt their way into the industry. Brix did own their own vehicles at first, but now lease them according to seasonal and worker requirements. The first year was challenging as they built up key clients but it just kept evolving as they went on, as they started proving that the way they were running the pickers had its definite advantages.

And the second year, well that was actually pretty good for them, which was reflected in the 1.2 million trays picked. They were in a very good position going into Covid-19 too, and the demands it placed on the way the industry could operate. Brix re-employed staff in bubbles and had three bubbles with between 10 to

17 pickers in each. The pickers were primarily backpackers, foreigners stranded here because of Covid-19, so were generally living at the same location, and while they may have been isolated from home, they weren't isolated from each other, and could live and work together as a team. They proved to be good

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Brix in action

workers too, despite many never having picked before. Word of mouth travelled amongst them in New Zealand as well as worldwide, with workers recommending Brix to friends. And the foreigners needed the work too, as due to certain regulations they weren't eligible for a wage subsidy or support. Other workers had lost their hospitality or forestry jobs.

In their third year of business, they are coming to grips with some of the quirks of the industry, the clients, and the harvest operations, and there is quite a bit of work put into relationship management, which is a continuous learning curve. "It is up to us to create efficiencies – at the end of the day we are there to pick the bin," says Kieran, and their success is measured in numbers.

They will be on an orchard for perhaps two days maximum, depending on the size of the orchard and any delays.

Sometimes they do work seven days a week, but everyone gets at least one day off a week, as they have a good pool of pickers to call on. Some smaller orchards are a half-day job, so they may knock off in the afternoon so it all evens out. Or sometimes they can pick two small orchards within the same day. April is peak harvest time, so they expect to be busy. Rain in late March delayed some days, and during that time, Brix focuses on other aspects of their business. Brix operates on a first-come, first-served basis with clients, whoever gets hold of them first and books in gets priority, it is not about the biggest orchard or the easiest location. Certainly, there are some logistics involved. Brix has up to five core staff, and then up to 60 seasonal workers from March through to mid-June. In winter Brix focuses on structural repair, orchard development and protective windbreaks and canopies.

“

In their third year of business, they are coming to grips with some of the quirks of the industry, the clients, and the harvest operations

Part of the Brix service is going to an orchard site for a bit of a reconnaissance first thing. They are so good to work for that they generally have a waiting list of around 30 pickers. From what started as a two-man-band, they are going from strength to strength with their integrity and added value in the HR space. ●

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Miniature fruit making major leaps forward at Rockit™

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The first shipment of New Zealand grown Rockit™ apples is currently being stacked onto shelves in China, marking the end of another successful harvest for the Hawke's Bay-headquartered miniature fruit company.

But despite record sales and global growth continuing along a steep upwards trajectory, chief executive Mark O'Donnell, who joined the business in January, says the team has experienced a more difficult season than usual, marred by Covid-related challenges and labour shortages.

"While harvest is always a thrill for Rockit, I think the delight at producing record volumes of apples for local and global consumer markets was accompanied by a collective sigh of relief," he begins.

"It's both comforting and exciting to see our apples being unpacked into stores in China, which is a major market for us - we've just kicked off a new marketing campaign there that will help spread the word about our unique miniature apple variety and that should drive sales further."

Mark says on orchard, Rockit enjoyed very good growing conditions this year which, combined with significant improvements to its technology, has helped set the company up for a bumper season. "We're up 65% on 2020 volume and the quality is excellent - great flavour and sweetness, with dry matter content and brix very close to what we saw last season."

But, he says, Rockit has certainly been not immune to the pressures the sector is facing. "We know the industry has struggled to cope with a variety of challenges, staffing being the most pressing. This season has been a challenging one for picking at Rockit too. We've had to think on our feet and launch marketing campaigns that reach new audiences, and while these have definitely helped to attract new workers to pick with Rockit, it's been a struggle."

Platforms have helped Rockit to diversify its workforce, with a wider demographic able to join the team on orchard to pick using the self-drive technology. Mark says

he sees an exciting future for the platforms and a gradual phasing out of ladders, "and this should help cushion us from any impending issues with employing overseas workers during our critical harvest period."

Despite the challenges with staffing numbers faced by every grower this year, sales have been solid. "Rockit has sold extremely well offshore, and 2021 is set to be our best year yet," Mark says. "Our markets in greater China, Vietnam and South East Asia are expanding, with the Middle East also in growth. This year we plan to extend our reach into the sub-continent, with increased distribution through India and a launch into Sri Lanka."

At a time when food safety, secure supply chain management and family health and wellness are front and centre in people's minds, Mark believes there is a growing appetite for fresh fruit and vegetables right across the globe, and that this puts all New Zealand food producers at a distinct advantage. "Our produce is already of an outstanding quality, and added to that, our country is virtually free of Covid-19. If New Zealand companies' health and safety protocols and supply chain processes are well-documented, this stands to ensure an additional layer of confidence for those that choose our wonderful New Zealand grown products."

Rockit is currently in the final stages of preparations for opening its new state of the art global headquarters, packhouse and coolstore in Hastings. The investment has been major, says Mark, but it's one that will help in the management of environmental impacts through leading digital innovation. Additionally, the purchase of new equipment will enable the company to trial some non-PET (polyethylene terephthalate) packaging alternatives later in the year.

"Our new season fruit is already being packed at the new building, and it's been exciting to see the efficiencies that are being made at the new plant. There's a buzz in the air, attendance is excellent, and - importantly - the tech is working well."



2021 is set to be our best year yet

Rockit welcomed new investors on board earlier in 2021, following a successful capital raise. Ngāi Tahu Holdings has taken a 6% stake in Rockit, and Punchbowl Investments-led group PB Rock has lifted its combined Punchbowl and PB Rock stake to 15%.

Mark points to the investment as further evidence that Rockit remains buoyant and prosperous. "Given we have so much more growing to do, innovations to roll out and new markets to tackle, we see great strategic alignment in these relationships. Yes, 2021 has been a tough one for our industry, but we're excited to look ahead, think big, and continue to inspire people to take on the world one bite at a time." ●



Jim Walker

SCIENTIST
FEATURE

Dr Jim Walker: Taking New Zealand apples places

The United Nations designated 2021 as the International Year of Fruits and Vegetables, but fruit and vegetables have always been the heart of Plant & Food Research's business.

By Nickkita Lau : Plant & Food Research

Its innovation and science help growers improve production systems, breed better healthier fruit and vegetables, protect produce from pests and diseases and deliver quality produce to consumers around the world. This article is part of a series to introduce some of the scientists who are working to make that happen.

To Dr Jim Walker and the apple growers that he has been working closely with for the last 40 years, growing nothing short of the best will suffice.

"Everyone in the industry is motivated to grow the perfect fruit and give people what they want. There's no point growing something substandard, it costs twice as much to pack, ship and market the fruit as it does to grow it."

Perfection means more than the perfect ratio of sweetness to acidity or the perfect crunch. Perfection is grown in one of the most sustainable apple orchard production systems

in the world. Other countries have tried, but New Zealand is the only country that has a two-decade long record of successfully exporting apples to Japan, a highly exclusive, premium market with one of the strictest biosecurity requirements for imported apples.

While Japan has a zero tolerance policy for the apple pest codling moth, Europe demands negligible chemical residues in contrast. Over the last two decades, the Plant & Food Research team has played a significant role in helping the industry satisfy strict quarantine inspection requirements, and the preferences of different markets with different varieties grown in a production system with the lowest possible agrichemical inputs.

Dr Walker is one of a team of scientists at Plant & Food Research mentored by esteemed integrated pest management 'guru' Dr Howard Wearing before they all become experts in their own right.

Their research, struggles and experiences that ultimately led to the industry-wide adoption of their low-input, sustainable pest management programme are documented in Dr Wearing's book, *Farewell Silent Spring – The New Zealand Apple Story*.

The drive to reduce, maybe even eliminate, all pesticide use is continuous, and the team's latest work is the development and implementation of the Sterile Insect Technique (SIT) for codling moth, the apple sector's key pest. Every week they release thousands of sterilised codling moths above apple orchards in Hawke's Bay using drones and hexacopters. The sterilised moths flood the local populations of wild moths. It means that any eggs from these sterile-wild moth matings are also sterile. The outcome is no viable offspring, which causes the wild moth population to crash over time.

The SIT technique is an excellent alternative to pesticides for the control of codling moth. Elimination over large areas is possible, which could negate any justification for chemical fumigation to achieve 'zero' risk of codling moth in export consignments. So far it has reduced the wild codling moth population in Central Hawke's Bay by more than 90%. Already, 60% of New Zealand grown apples are insecticide residue free, while residues on the rest contain less than 10% of the legal limit. The level of residues is so low it is almost equivalent to organic apples.

Besides innovations developed by his team, Dr Walker attributes the success in controlling apple pests to the growers who are very willing to adopt new ideas. New Zealand Apples and Pears and the Ministry of Business, Innovation and Employment's support for research, along with the Ministry for Primary Industries, has also provided an important platform for implementation throughout the sector.

“

Dr Walker attributes the success in controlling apple pests to the growers who are very willing to adopt new ideas

“We have had great cooperation from the growers participating in the SIT project, initially releasing sterile moths through their orchards from mountain bikes, now we are using GPS guided drones and hexacopters to deliver the moths. The SIT programme has continued to expand and now covers approximately 500 hectares of Hawke's Bay orchards. For an industry of 10,000 hectares, expansion of the programme is the next challenge. Hopefully we can turn it into a national programme one day.” ●

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Ripe and ripening Queen pinapples

Pineapple harvest in Northland

Owen and Linda Schafli have started harvesting New Zealand's first commercial scale pineapple crop.

By Wendy Laurenson

This year they hope to pick between 5,000 and 10,000 pineapples from their 22,000 plants, and expect to increase their harvest to 50,000 pineapples a year as younger plants come into production in the next few years.

Owen Schafli grew tropical fruit in South Africa before moving to New Zealand with his wife Linda in 2008. "After a few years in Hamilton," he says, "we bought this property near Whangarei to grow mainly bananas and pineapples. We initially planted several banana varieties and they've been our cash crop while we've built up our pineapple plant numbers and prepared the land. By the end of this year we plan to have 30,000 pineapple plants in the ground."

They decided to focus on pineapples to make the best use of their sloping property. "When we bought this 6.8

**22,000
PINEAPPLE
PLANTS**

hectare block it was mostly in re-growth bush and gorse around a river basin. Nearly half of it is QEII National Trust Reserve and we've gradually cleared and planted pockets on the rest of it for the bananas, but we don't have enough plantable land for them to be commercially viable long-term. We'll continue with the bananas, but growing pineapples makes better economic use of our smallholding and we've proven that they consistently grow well here."

The variety they have chosen is Queen, a small gourmet pineapple that is super-sweet, is deep golden yellow inside and out, has an edible core, and multiplies faster than some varieties. It's an old cultivar still grown in Australia, India and South Africa for fresh fruit rather than canning. It also has a better tolerance of cold, disease and stress than Cayenne, the main pineapple variety imported here.

“

Pineapples like warmth, protection from frost, rich slightly acid soil, and free-draining ground

“Cayenne is a major commercial pineapple variety worldwide,” Linda explains, “and is well suited for large scale harvesting and processing because the big fruit fits the cans with little waste. The plants are usually sprayed to induce uniform flowering and harvest times, and are picked unripe then gas ripened for fresh fruit export. We chose Queen to give New Zealanders the option of a super-sweet locally grown pineapple that is spray free and available nearly year-round.”

It has taken seven years for Owen and Linda to build up numbers of their Queen pineapples. “We bought the first ones from a friend who was growing them in a glasshouse,” Owen says, “trialled them in mounds on our higher ground here, and when we knew they would grow and fruit well we started taking suckers to build up plant numbers.”

Pineapples like warmth, protection from frost, rich slightly acid soil, and free-draining ground. “They’re in the bromeliad family so they like humidity and are slightly more cold-hardy than bananas, but they hate wet cold ground, so I’ve hand rotavated our sloping lower blocks then made mounds for planting. We don’t have a tractor partly because of the sloping ground and partly lack of space. We plant the suckers straight into the mounds in October when the ground has warmed up, and we’ve now realised we can plant four rows in one mound for optimal land use without crowding the plants. We also protect some of the lower blocks with frost-cover during the cooler months.”

When the Schafelis were making use of every small sucker, the plants took two to four years to flower, but that has now halved because they’re able to start with larger suckers. It takes a further few months from flowering to pineapple harvest. Plants can also be grown from the pineapple tops, but this is slower.

While people think of pineapples as a desert plant, they do need enough moisture for the developing fruit to fill out and mature. “Ideally pineapples love a hot wet summer,” Owen says, “but so far we’ve managed to get away without irrigation despite Northland’s recent dry summers. We usually have the advantage of humidity and our crop is year-round so we’re not dependent on one season’s weather.”

Linda and Owen have specific roles in the project and have recently been joined by their son Colin. “I was teaching to support our income,” Linda says, “but had to give that up a couple of years ago when I had a health issue, so Colin came home to help out. Owen is the grower and on-the-ground man, I do the admin, and Colin’s strength is IT and management. We’re hoping that as our pineapple numbers get into five figures, we’ll still be able to handle it as a family unit.”

At the moment, pineapple harvest is into wheelbarrows and an old small four-wheel-drive car. “Despite their prickly leaves, pineapples are reasonably easy to harvest and handle, and they have a good shelf life” Owen says. “At this time of year we wait until the fruit is fully orange before picking it, but in August and September we pick as soon as there is a bit of orange (to prevent the core going brown) then it colours up in about a week.”

The Schafelis are known locally because they regularly sell bananas at the Whangarei Growers’ Market. “We’re now adding pineapples to our stall and we’re already investigating supplying selected local restaurants and cafés. Later, we’ll explore other selling options around the country.” ●

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The Kiwifruit Industry Invitational Team and Parliamentary Rugby Team face each other before the start of their charity match at Whakatāne

Photo by Jamie Troughton, Dscribe Media Services

Charity match raises \$50,000 for community

A community day and challenge rugby match organised by the kiwifruit industry at Whakatāne in March raised \$50,000 for the Eastern Bay Community Foundation's Whakaari Fund.

By Elaine Fisher

"We were really proud to make a significant contribution to those affected by the Whakaari/White Island tragedy. We wanted to offer our support to those affected as well as the wider Eastern Bay community," says Zespri director of external relations, Michael Fox.

To raise funds for the victims, their families and the first responders affected by the 2019 Whakaari/White Island tragedy, a Kiwifruit Industry Invitational Team took on the Parliamentary Rugby Team in a charity rugby match on Saturday 27 March. The score was 39-17 to the Parliamentary Rugby Team.

"Alongside generous individuals, businesses and Whakatāne locals, our charity rugby match and auction raised over \$50,000.

"We're a proud member of the wider Bay community and the fundraiser was a great opportunity to honour those

no longer with us, their families and the first responders," Michael says.

The event at Whakatāne's rugby Park included activities for children and the community, and a curtain-raiser rugby match between Whakatāne Marist and Ōpōtiki.

“

...a great opportunity to honour those no longer with us, their families and the first responders

The focus for the day was to bring the Eastern Bay community together and honour those affected by the Whakaari/White Island tragedy, and it involved a strong turnout from the kiwifruit industry and wider community. ●

Send us your nominations for the

2021 Horticulture Industry Awards

HortNZ is calling for nominations for its 2021 Awards to be presented at the Horticulture Conference Gala Dinner.

HortNZ will present up to one award in each of the following categories each year.

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To recognise people with long and dedicated service in a supplier or service role (not a grower) that have worked beyond the call of duty for the betterment of the horticulture industry.

ENVIRONMENTAL AWARD

To recognise a person, or organisation, that has developed and implemented a sustainable environmental project, with identifiable benefits.

HORTNZ LIFE MEMBER

To recognise growers with long and dedicated service as office holders of HortNZ and/or an affiliated Product Group or affiliated Grower Association.

Full criteria for the above awards are available on the Horticulture New Zealand website or can be requested from the Board Secretary.

Who can make nominations?

- Any grower member of HortNZ, an affiliated Product Group or an affiliated Grower Association can make nominations.

How do I nominate someone?

- Complete a nomination form. These are available on our website www.hortnz.co.nz or by contacting HortNZ by calling 04 494 9983 or emailing Board Secretary, Kerry Norman (Kerry.Norman@hortnz.co.nz)

When will the awards be presented?

- At the 2021 Horticulture Conference Gala Dinner on Thursday 5 August at Mystery Creek, Hamilton.

When do nominations close?

- Nominations must be sent to the HortNZ Board Secretary, Kerry Norman (Kerry.Norman@hortnz.co.nz) or PO Box 10232, The Terrace, Wellington 6143 and must be received by **5.00pm on Tuesday, 8 June 2021.**

**Send us your
nominations now!**



View from the Cider Factorie

Traditional uses for apples at Tauranga venture

Simon and Rowena Pearce at Tauranga's The Cider Factorie Restaurant and Cellar Door are adding to the ways of turning traditional horticultural crops into value-added products, and making a business out of it.

By Geoff Lewis. Photos by Trefor Ward

Cider was consumed in the Roman Empire, ancient Greece and the Middle East, and the name itself probably derives from the Hebrew *shekar* or Greek *sikera* meaning 'strong drink'. Today Britain and France have long traditions in cider-making.

A husband and wife team, Simon and Rowena met in the wine industry in Western Australia where Simon worked as a winemaker around Margaret River in cabernet, chardonnay and Bordeaux-style wines. They then decided to go and explore the world. While they were out there, they discovered cider.

"We saw this surge in interest in cider, but there were not many craft ciderys. The skills needed to make wine and cider are similar. The market for cider in New Zealand is



growing, but at the moment it is dominated by cider which is mass-produced from apple concentrate and there are only about a dozen craft cider-makers like us.

"We have about 100 apple trees representing 10 varieties. Different ciders require different apples.

We use varieties including Kingston Black because it has a higher tannin content, an astringent, which gives cider more body. We also buy in eating and dessert apples from other growers, which are sweeter. What you get in cider comes down to the apple variety."

The Kingston Black, also known as Black Taunton, is a cultivar of apple originating from the United Kingdom and used in making cider. The name of the cultivar refers to the apples' dark red or purplish skin.



Simon checking the Cider

Simon and Rowena started in a shed on a patch of gravel at the end of Oikimoke Road in Te Puna with a small press and a couple of little tanks. They moved to a larger water press about five years later, and recently bought the equipment from the Mills Reef Winery when it sold up in Tauranga and moved to Katikati in 2019. Simon and Rowena had worked for Mills Reef when they returned to New Zealand, and worked for the winemaker while they set up The Cider Factorie.

“

What you get in cider comes down to the apple variety

Simon says the cider industry in New Zealand is where the wine industry was about 40 years ago, and there is an urgent need for a greater range of apple varieties. To make up the difference, The Cider Factorie also produces a range of ciders flavoured with other fruits and berries including feijoa and plums.

“We are constantly working up new ideas. Potentially there is a really good supply of blueberries, people love berry ciders.”

Four years ago the couple built a restaurant attached on the front of the cider-making operation, with a covered and outdoor seating area which overlooks one of Tauranga Harbour's attractive bays.

“The idea was to set up a 'cellar door' experience, which is kind of lacking in this part of the country. They are everywhere in Margaret River. Here we had the premises about half set up so it wasn't too much of a stretch. As we were serving alcohol we were obliged to serve food, and we have created a menu to compliment the ciders.”

The cider-making process takes about four months to let the flavours develop. Fruit supply is seasonal with an emphasis on using the product of local growers.

The Cider Factorie produces about 20,000 litres a year, with most going out on-tap and in retail sales. Its range includes

a Feijoa and Apple cider, Classic Apple Cider, Lemony Pickett (an old-fashioned lemon cider), green-apple Mama Pucker, The Hop, Classic Pear, The Tripel and Oikimoke Rd.

Simon prefers a straight apple-cider, and his favourite from The Cider Factorie is 'Oikimoke Rd' which is a traditional English-styled cider. They also make Yenben, an old-fashioned lemonade. He also enjoys a cider infused with Nelson hops which gives an aromatic flavour and is developing a cult following.

The next project, Simon says, is to collaborate with Wellington's Denizen Distillery to produce an apple brandy, continue to develop the restaurant menu, and get The Cider Factorie's range into the supermarkets. ●

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James Brown and Jordan Cheadle were offered nine jobs on orchards

Horticulture just one option for WHV backpackers

Backpackers James Brown and Jordan Cheadle were offered nine jobs the day they advertised for work on social media.

By Anne Hardie

The English couple have been in the country since September 2019 with Working Holiday Visas (WHV) and since February they have been working on Willisbrook Orchards in Tasman which grows apples and kiwifruit. They chose the job because it had platforms that would make it easier for them to pick fruit than climbing ladders all day, and they were sent photos of the accommodation. It meant they knew what was entailed with the job before they travelled hundreds of kilometres to commit to it.

Their New Zealand adventure follows a year-long working holiday in Australia where between them they separately worked on a banana farm, cattle station and sheep farm. When they headed to New Zealand, they had no plans and little knowledge of the country. The two worrying things they did know about New Zealand was that the pay rates were lower than Australia and the living costs were higher.

They could get work in Australia for about A\$25 per hour compared with about NZ\$18 per hour in New Zealand.

Initially they stayed in Auckland where James was a truck driver and Jordan worked in recruitment, and they had plans to head to Queenstown for the ski season for work. Then Covid-19 and lockdown came along so they stayed in Auckland until November, when they belatedly headed in their camper to Queenstown. At \$50 a night to sleep in their camper in a campground, it was too expensive to stay there long and after a brief period working in Kaikoura, they looked for orchard jobs through harvest. That's when they were immediately offered nine jobs.

"You can tell they're struggling to find workers," Jordan says. "Most backpackers have left - there was a bit of a panic to get on the government organised flights after lockdown."

The jobs they were offered were much the same, but some didn't offer accommodation and James says some employers were very vague about their accommodation. They have learnt that most of the accommodation offered to horticulture workers is very basic and expensive for what it is. Typically, they say shared accommodation costs about \$100 each a week, whereas in Auckland they paid a fraction of that when they were each getting paid about \$1,000 a week before tax – compared with about \$600 in horticulture. Some of the orchard employers offering work had no accommodation and expected them to start straight away. That didn't appeal to them when they had nowhere organised to stay. One employer wouldn't show them the accommodation until they had done a full day's work.

"We were always dubious about what you were going to get for accommodation. A lot were very vague. In Australia it was the same. Companies try to reel you in and they know you can't just up and leave.

"Backpackers are in a vulnerable position; you have to earn the money back for travelling to the job and most jobs get paid two weeks in arrears, so you have to stay for two weeks to get the money."

They see the benefits of open days like those held on some North Island orchards for backpackers to get an idea about the job and accommodation.

Platforms were the deciding factor when they chose an orchard, and they have enjoyed picking apples while listening to podcasts. The thought of climbing ladders all day with a load of apples on their fronts was daunting when they compared themselves with burly Recognised Seasonal Employer (RSE) scheme workers doing the job. They hope to work through the kiwifruit harvest as well and plan to head back to the United Kingdom in June or July.

If Covid-19 hadn't come along, they probably would have stayed in Queenstown if they had work. Most of the backpackers they met in Queenstown did not want to do horticulture work.

"We like doing these sorts of jobs. But there's not as much incentive as there should be

"We like doing these sorts of jobs," James says. "But there's not as much incentive as there should be."

One of the hurdles was extending their visas. Dates on their visas fell between the extensions offered by the government post lockdown, and they had to apply to Immigration New Zealand for an extension. They discovered there wasn't an online option to do that, which they found backward in today's online world. Their application was completely paper-based, which they had to post along with

their passports and that made them nervous. The process cost each of them about \$400 and there was no email confirmation from Immigration New Zealand.

"On the website we have a visa, but there was nothing sent to us to present to employers," James says. It means the only way they can prove to employers they have a visa is to show them a screenshot on their phone of their names on the website.

The couple are two of eight WHV employees on the orchard. Caty Zornow from Germany has been in the country since October 2019 and was going to leave in May last year until Covid-19 changed her plans. Since she has been in the country, she has worked on a kiwifruit orchard, in a laundry, a vineyard and a flower bulb business before taking up a job at Willisbrook Orchards last October in time for apple thinning. She plans to stay through to the end of the kiwifruit harvest and perhaps longer, because it's easier to find work here than back home in Germany. She picked up the job via the BackpackerBoard website, with plenty of options to choose between.

Julian Vargas from Colombia arrived in the country in January 2020 to study English and then couldn't get back home due to Covid-19. He has since picked cherries in the rain in Central Otago and picked apples in Tasman, where he will stay through to the end of the kiwifruit harvest and save money for further study. ●

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Bryce Matuschka

Helicopters and picnics lead Tauranga avocado orchardist to go coastal

Bryce Matuschka owns three avocado orchards.

By Claire Ashton

The first is a fully established 22-hectare orchard in Pyes Pa, Tauranga, and the other two are in different stages of maturity in Hot Water Beach, Hahei.

Across his orchards, he has three to four full-time staff with around ten hydraulic ladder pickers and eight ground pickers come harvest time. Picking is staggered, with the Orua Lane beach orchard picked in September, Purangi Road orchard in October, and Pyes Pa in November. It is the Purangi Road orchard I visit first, which Bryce bought around three years ago, consisting of 48 hectares in total, with 15 hectares in avocados and the rest being milled pine and grazing.

Bryce spotted it when he was recruited by a friend to scout for an orchard to purchase. When they went up in his friend's helicopter he spotted two with potential – one



in Flaxmill Bay and the other in Purangi Road. His friend opted for the Flaxmill Bay property, and Bryce bought Purangi Road. He loves the privacy and position of the house up a long winding driveway – and the pool was a definite bonus too.

The property has a two-hectare irrigation lake and good shelterbelts of both pine and cryptomerias to protect against the sou'wester, with a double layer of both species on the boundary as this helps to create warmer temperatures in the orchard.

The Hass tree stock is from Lynwood and Riversun in Gisborne and around the orchard are piles of mulch and chicken manure at strategically placed locations, ready to be used when needed. The previous owner had created a system of colour-coded zones for the overhead irrigation

system which runs off the top of the poles, by nailing painted animal ear tags as markers on the posts. Bryce took this system one step further, as you couldn't always see the tags from vehicles, and ring-painted the poles higher up.

Bryce has a background in dairying, and skills learned in that industry have helped him along the way when he got into the avocado orchard business, especially at his youngest orchard in Orua Lane where he designed and dug a 15ft drain and put in a comprehensive piping system. He discovered the 16-hectare Orua Lane property four years ago whilst out on a picnic and obtained it for a good price, perhaps as most of it was lying under water due to poor drainage.

“

Rainfall storage is future-proofing, especially during last season with the near drought conditions

As we know, avocados hate wet feet, and in planting he creates a base mound of soil and manure to raise the young trees up, then supports them with gates. He has four large rainfall storage tanks on the property, which hold 120,000 litres. Rainfall storage is future-proofing, especially during last season with the near drought conditions. Bryce believes that between the two Hahei orchards they are capable of producing 800 bins, with current production sitting around 430 to 450 bins, but the younger trees need time to grow and mature before they come into full production.

The Orua Lane orchard is the first orchard he has started from scratch, and he relished the opportunity to get everything exactly how he wanted it from the get-go. The orchard is just 500m above sea level and 200m from the beach, but despite that it can still frost. To counteract frost he has a hot water bore and water comes out of the ground at 27 degrees Celsius, so when the temperature drops below 3 degrees, the water is irrigated under the trees from storage tanks at 16 degrees to help protect the young trees.

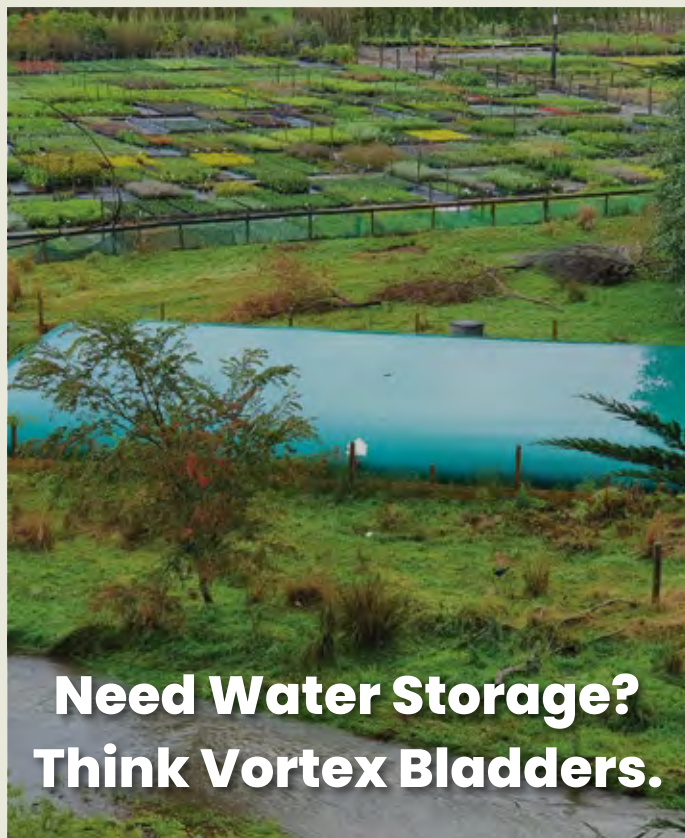
Despite being near the ocean there is minimal salt or sea burn, though some of the leaves can sunburn. The only pest is the occasional bronze beetle. Bryce has planted the orchard in a 10 x 10 spacing which he reckons is ideal and makes for easier mowing. He mows every 21 days. The new shelterbelts have Reed pollinator trees planted intermittently along the rows. Many orchards plant 3 x 6 or 6 x 6, but that can lead to more work and a lot of pruning, so the early gain doesn't always pay off in the longer term.

Bryce believes the necessary ingredients for successful growing are fertiliser, injecting, pruning, rootstock, water, pollination, harvest date, a bit of luck, the lay of the land, and ideal weather. When he took over the Purangi Road orchard, the previous owner hadn't been injecting, so once he started doing that, it greatly improved tree health. Bryce likes the land and being part of something that benefits us all – two avocado trees provide enough oxygen for one

person for a lifetime.

This attitude carries through into local community work. Bryce is part of a group who do volunteer work, primarily cutting and mowing tall grass on roadside verges, notably those corners with low visibility or on one of the many one-lane bridges in the area. Down at the local café, he has a chat with one of the cafe workers and the conversation is about activity on orchard properties – a local grower is extending their orchard. Bryce certainly has his ear to the ground, and his eyes on the orchards. He says "I find the trees easy to read, and usually know what they need just by looking at them." Bryce is interested in holding on orchard discussion groups in the future and likes to share his knowledge by advising and helping people starting out in the business.

On his Purangi Road property he has milled the mature pines on the block and runs over a dozen beefies. From the goings-on in Purangi Road it seems Bryce runs a bit of unwanted stock too. Wild pigs are something of a pest and native 'predator' of the avocados. A bit like truffle pigs they sniff out the ripe avocados – and leave the green ones. Another thing they leave behind is a mess of uprooted earth, which makes it harder to mow. Bryce has pig traps placed between the rows and uses kibbled maize as bait. Once caught he butchers them and gives out packs of the wild pork mince to friends and family, and apparently it tastes pretty good seeing as avocado is part of their staple diet. ●



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The National Horticultural Field Days venue confirmed in Hastings

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Plenty of time to catch up

Hawke's Bay's reputation as a primary sector powerhouse has been further cemented with the announcement that the 12th annual National Horticultural Field Days will be held in Hawke's Bay in June 2021 at the Tomoana Showgrounds.

Proudly organised by the Hawke's Bay A&P Society, the National Horticultural Field Days event is the only event in the country exclusively dedicated to the horticulture sector. For two full days, industry professionals and enthusiasts will gather to network, conduct business, and share the latest trends in education and innovation.

Sally Jackson, General Manager of the Society reported that "Hawke's Bay alone accounts for two-thirds of all apple and pear outputs and this is one of the main reasons Hastings is home to this event, the largest horticulture focussed field days in New Zealand."

New Zealand's wide range of horticulture products are exported to over 120 countries worldwide with an overall industry value estimated in excess of \$8.8 billion. Many of these products and industry leading companies will be on show at the national event.

Event Manager Kahlia Fryer said that New Zealand horticulturalists represent some of the most innovative producers and companies in the country so it will be a great chance to highlight these at the National Horticultural Field Days in the Hort Talks speaker sessions, large machinery demonstration zones and amongst our Trade Exhibitors.

Jackson said they were delighted to be hosting this prestigious event again for 2021. "Members of the horticulture industry travel from all corners of New Zealand to be here which shows how much they value the content of the show and the business opportunities it provides".

Jackson went on to say she was thrilled to be working with key organisations and business partners such as the Hawke's Bay Fruitgrowers' Association, New Zealand Fruitgrower's Charitable Trust, Hawke's Bay Regional Council. Special thanks were made to Ravensdown, Heinz Watties, ECR Equipment, FMG and Yara whose generous sponsorship enabled the A&P Society to deliver this nationally significant event in Hawke's Bay.

“

New Zealand's wide range of horticulture products are exported to over 120 countries worldwide with an overall industry value estimated in excess of \$8.8 billion

Highlighting technology and innovation at the Field Days is the Ravensdown Innovation & Environment Award which will be presented at the 'Innovation in Hort' Ravensdown lunch on day one of the event. Fryer noted that as New Zealand's Horticultural industry grows, advancements in technology and research are essential for the industry's success. She added "The primary purpose of the award

is to provide recognition and a way to celebrate the innovation and world class technology that New Zealand businesses are using to transform and grow their industry”.

Previous winners of this award include Plant Detection Systems, Scionon, Tow and Blow, Rockit Apples, Hydratorq with their BioFume Ozone product, NZ Seaweeds with their bee nutrition product. The 2019 winner was Metris.

The Ravensdown Innovation & Environment Award recipient will receive \$1,000 (incl. GST). Enter the awards via our website www.nationalhort.co.nz.

Key highlights of the National Horticultural Field Days include:

- ★ Hawke's Bay Young Fruitgrower of the Year Competition
- ★ Business to business networking, education and career development programmes and seminars
- ★ Women in Horticulture feature
- ★ Inspirational Secondary School educational programmes
- ★ Innovation Zone
- ★ Large Machinery Demonstration Zone
- ★ Two days of seminar sessions with key-note address
- ★ Featuring over 80 horticulture focused trade exhibits
- ★ Corporate engagement sessions
- ★ Interactive displays of new and innovative machinery
- ★ Ravensdown Innovation and Environment Awards ●



Young Fruitgrower of the Year competition in action



The National Horticultural Field Days will be held over 2 & 3 June 2021 at the Tomoana Showgrounds. Entry is open to the public with tickets just \$10pp, available on the gate.



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Summerfruit NZ has appointed Kate Hellstrom as its new Chief Executive

New Chief Executive joins Summerfruit NZ

Summerfruit NZ has appointed Kate Hellstrom as its new chief executive. Kate began her role in April and spent the first week going through the handover process with interim chief executive, Richard Palmer.

By Victoria Harris, Summerfruit NZ

Chairman of Summerfruit NZ, Tim Jones, said the vacancy attracted a large number of applicants and Kate was appointed after a rigorous selection process. "Kate was an outstanding candidate and brings the energy and enthusiasm to the role that the recruitment panel was seeking," Tim said.

Kate was formerly the acting chief governance officer at ACC (Accident Compensation Corporation) and brings a background in the primary sector from her roles at the Ministry for Primary Industries. Those roles include extensive senior experience in biosecurity, resource policy and adverse events. "Kate's experience in working in

partnership with multiple stakeholders gives her an ideal grounding to further the outcomes from our industry review, as well as deal with the ongoing industry support matters in a collaborative manner," Tim said.

“

Kate was an outstanding candidate and brings the energy and enthusiasm to the role that the recruitment panel was seeking

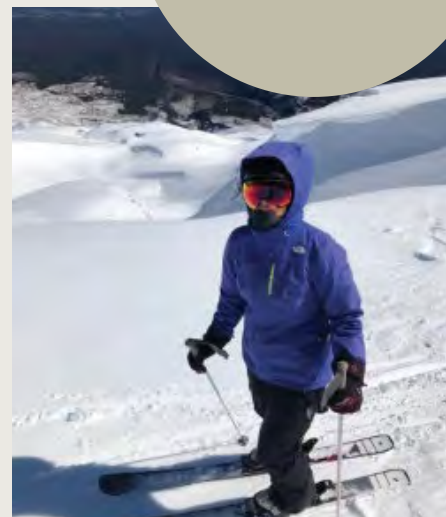
Kate enjoys spending time with family and friends near a beach, tramping, skiing and mountain biking



Kate racing across the river



Kate photographed on the Heaphy Track



Kate enjoying the ski slopes

Kate grew up in Wellington and attended Victoria University where she studied for her Bachelor of Science (Zoology) before gaining her Masters in Resource and Environmental Planning at Massey University. While she will spend the first few weeks learning more about the role and industry, Kate is very keen to visit summerfruit growers. "I am really looking forward to getting out to the regions to meet and hear from growers," Kate said.

When not working Kate enjoys spending time with family and friends near a beach, tramping, skiing and mountain biking.

“

I am really looking forward to getting out to the regions to meet and hear from growers

While welcoming Kate to Summerfruit NZ, Tim expressed his thanks to Richard Palmer for his leadership of the industry over the past 15 months. "Richard's work with the Industry Review, logistics and especially with issues around the Recognised Seasonal Employer (RSE) scheme and seasonal labour, have been hugely appreciated by the Board and all our growers," Tim said. ●



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Fruition Diploma students participating in a taste test during a field trip to AS Wilcox Ltd

Level 6 diploma studies now available online

People working in supervisory or management roles within the horticulture industry can now study for a Level 6 horticultural qualification without attending university.

By Elaine Fisher

The first students for the inaugural Fruition Diploma in Horticulture Production, Level 6, began the two-year largely online course in January this year. However, students can join the course at any stage and the next intake closes on 21 April.

The NZQA-approved course content has been compiled and delivered by Fruition Horticulture, based in Tauranga. Students' fees are funded under Fees Free or the Targeted Training Apprenticeship Fund.

Fruition Horticulture owners and directors Ruth Underwood and Sandy Scarrow say they are excited to be able to offer the course at this level, and already students are seeing the benefits of taking part.

"We have one student who has gained a promotion since being involved in the programme," says Sandy who is tutoring the course in which learners participate

online, or in a classroom, and in a three-day field trip and workshop series where they are introduced to the range of horticultural production systems in New Zealand.

“

Because this course is available online, people can participate from anywhere in New Zealand

Among the 12 students in the first intake are a vegetable grower from Hamilton, a number of people involved in the kiwifruit and avocado industry or support businesses in the Bay of Plenty, one kiwifruit manager from Takaka in the South Island, one from an avocado orchard in Northland and a citrus worker also from Northland.



Fruition Diploma in Horticulture Production students visited Pukekohe vegetable grower AS Wilcox Ltd in February

Students took part in a three-day field trip to Pukekohe in February where they visited large vegetable growers T&G Global and AS Wilcox Ltd and were addressed by a scientist from Plant & Food Research, Mount Albert.

“The idea of the field trip is to take learners out of their own industries to experience other aspects and opportunities in horticulture.”

The workshops which are part of the field trips include presentations from leading growers and processors in New Zealand speaking on the current and future issues and opportunities, and industry norms for data analysis and reporting.

“Because this course is available online, people can participate from anywhere in New Zealand.”

Ideally those joining the course should have at least a Level 4 qualification, but Sandy says there is also the opportunity for students without formal qualifications to participate.

“

We have one student who has gained a promotion since being involved in the programme

In exceptional circumstances an applicant who does not meet the academic entry requirements may be granted entry to the Fruition Diploma where they supply evidence to satisfy the Academic Committee of their ability to succeed on the programme. Students must demonstrate significant workplace experience (e.g. a supervisory and/or management role or equivalent) within the horticulture industry.

The programme is designed to develop the skills and knowledge of those employed within horticulture production, enabling them to contribute at an advanced technical or managerial level. It focuses on the specialist requirements for ‘process improvement’ for the purpose of meeting domestic and international market requirements and emerging opportunities for horticultural products.

Learners who successfully complete the programme will be awarded the New Zealand Diploma in Horticulture Production (Level 6).

Fruition Horticulture in Tauranga and Sandy and Ruth in particular, have a long tradition of offering education and training for people employed at all levels in the industry. “One of the pillars of our business, and something we are very passionate about, is the need to support ongoing professional development of people within the horticultural industry and we do that, and have done so for many years, by offering training and professional development.

“It’s gratifying to see people who have gone through our programmes now in senior management positions within the industry.”

Fruition Horticulture also offers New Zealand Certificates in Primary Industry Skills, the Vakameasina Programme, the Lincoln Diploma and other short industry-based courses.



To find out more about the Fruition Diploma in Horticulture Production, Level 6, or other training opportunities visit the website: www.Fruition.ac.nz



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Picking a good supply chain manager – what are the main attributes to look for?

Supply chain teams across the globe lubricate the economic engines of the world sustaining the populations of large cities and regions where insufficient local resources exist to meet demand.

By Carel Bezuidenhout : Senior Lecturer in Supply Chain Management, Massey University

The horticulture industry employs dozens of supply chain managers who help to move products from farm to market. Entering a career as a supply chain manager tends to happen as part of a pathway of employment in certain industries, rather than being a goal from the beginning.

At a national level, around 20 positions for supply chain practitioners are advertised in New Zealand every week. Supply chain specialists need a deep understanding of the business and tend to be full-time permanent positions. A supply chain manager's workload is inversely proportional to the consistency of product flow through the system. A reduction in supply chain efficiency causes an exponential demand on the supply chain team's time and creativity.

“

Advertised responsibilities range widely and include competencies in leadership, analytics, design, people management, and so on



The overall supply chain efficiency indicator dropped from 68% in March 2020 to 56% twelve months later

“

...around 20 positions for supply chain practitioners are advertised in New Zealand every week

The past 18 months has seen huge disruption in supply chains which could not have been predicted in late 2019. Disruptions caused by Covid-19 lockdowns, insufficient containers and packaging material, issues at ports, and the Ever Given blocking the Suez Canal have supercharged the demands placed on supply chain teams. The overall supply chain efficiency indicator dropped from 68% in March 2020 to 56% twelve months later.

So what makes a good supply chain manager?

Massey University conducts six-monthly supply chain practitioner reviews and liaises with all the large recruitment agencies in the country. One of Massey's postgraduate students analysed all the job advertisements for supply chain practitioners published on Seek in the first half of 2020. Advertised responsibilities range widely and include competencies in leadership, analytics, design, people management, and so on. (See matrix below).

Leadership related competencies were the most sought after, but the same individuals often need good technical skills, business skills and people skills. They can see and manage the big picture, but also pay attention to detail. Supply chain practitioners need to understand a wide range of areas, including transport, computing systems, health and safety, quality control, regulations and also have knowledge of particular products, their business and market channels.

The matrix on the next page shows competency areas for supply chain practitioners that coincide in job advertisements with statistical significance. For example, the yellow

highlighted row shows that if a supply chain practitioner has responsibilities in data analytics, then they also need to know their specific supply chain, be competent in communication, building relationships and general software.

Competency areas for supply chain practitioners	Leadership	Data Analytics	Specialised field Knowledge	Procurement & Sourcing	Warehouse Management	Communication	Sales & Supply Chain planning	Relationships	Transport & Logistics management	Operations	Finance & Commercial	Specialised Software Knowledge	General Software Knowledge	Health & Safety	Shipping & Export-Import	People Management	Quality Management	Resource Management	Risk Management	Knowledge of rules & Laws & Regulation	Supply Chain Design
Leadership	●		●			●		●	●	●	●			●							
Data Analytics		●	●			●	●	●	●	●			●								
Specialised field Knowledge	●					●		●	●		●		●								
Procurement & Sourcing			●			●		●			●				●						
Warehouse Management			●		●	●		●	●	●			●	●	●						
Communication			●			●		●			●		●	●		●					
Sales & Supply Chain planning			●			●		●		●			●								
Relationships			●			●					●		●			●					
Transport & Logistics management			●		●	●		●		●				●	●						
Operations	●		●		●	●	●		●					●			●	●			
Finance & Commercial			●	●		●		●											●		
Specialised Software Knowledge			●			●		●					●								
General Software Knowledge			●			●		●				●									
Health & Safety	●		●		●	●		●	●	●							●	●			
Shipping & Export-Import				●	●	●		●	●	●											
People Management	●		●			●		●			●								●		
Quality Management						●				●				●							●
Resource Management	●								●	●				●					●		
Risk Management						●	●	●			●					●		●			
Knowledge of rules & Laws & Regulation			●			●											●			●	
Supply Chain Design										●							●				

Massey University has found that 60% to 70% of all supply chain practitioners, regardless of their position, hold a Master's degree. The figure below illustrates the opinions of more than 100 professors who teach supply chain management worldwide. Using a score out of ten, the figure below confirms how important different skill areas are within the supply chain profession.



Here are a few tips that may help horticulture businesses appoint a good supply chain manager:

- ✔ Applicants need good negotiation skills and an ability to think on their feet. A good negotiator will probably challenge the salary package that you offer them.
- ✔ Write down all the competencies and skills that you need on flash cards. During the interview ask the candidate to sort these cards according to their own strengths ranging from most competent to least competent. A good candidate knows their own capabilities and can prioritise and organise things, even when they are quite complex and interrelated.
- ✔ Use the matrix above to identify likely coinciding competencies that will be required.
- ✔ Assess leadership and social skills during the interview. Supply chain practitioners often need to cross over the boundaries of company silos and different businesses.
- ✔ Check the candidate's ability to be flexible. This can be done by monitoring how an applicant navigates their way through deliberate interruptions during the interview process.
- ✔ Test the candidate's general knowledge. A good supply chain practitioner is inquisitive and interested in a wide range of topics. ●

NZGAP Environmental Management System (EMS) add-on provides a sensible pathway for growers in Gisborne



New Zealand Good Agricultural Practice (NZGAP) is continuing to roll out the Environmental Management System (EMS) as a pathway for growers to navigate through the environmental compliance minefield.

By Damien Farrelly : NZGAP Manager

In late February, Gisborne District Council formally recognised the EMS add-on as an acceptable pathway for growers to meet their Farm Environment Plan (FEP) requirements in the Tairāwhiti Resource Management Plan (TRMP).

Vegetable and cropping growers (over 1 hectare) in Gisborne are working towards a 1 May 2021 council deadline to develop their FEP. They are also working towards a 1 July 2021 deadline to have a 5-metre cultivation setback in place, or a 1-metre setback with additional appropriate measures (e.g. decanting earth bund). This can also be developed and verified via the EMS as it includes a comprehensive soil management area which helps growers to address issues with soil erosion and sediment control. At the time of writing, over 7,700 hectares of vegetable and cropping growing land in Gisborne has an FEP in place via the EMS.

EMS audits will be undertaken over the winter months to verify that FEPs meet the required standards, thus giving confidence to council and community that growers are good custodians of the land by demonstrating that they have appropriate systems in place, have identified environmental risks, are taking action, have appropriate measures in place and are making progress on key issues.

The benefits for growers are numerous, but the most compelling being the integration of FEPs into their existing GAP system, thus reducing future compliance costs and duplication (e.g. audit). NZGAP also acts as a conduit with the council by reporting FEP and audit outcomes, meaning growers can get on with growing.

Horticulture New Zealand, Vegetables New Zealand Incorporated and Gisborne Produce Growers Association have been integral in supporting growers to develop

FEPs via workshops and one-to-one sessions. They have also acted as a links for growers through to council for collaboration and seeking better outcomes at sector level. A real positive from this process has been the creation of a forum for growers to work together to solve problems while sharing knowledge and insights for mutual benefit.

The Gisborne Produce Growers Association has also established an NZGAP Grower Group to support growers on their FEP journey. The development and implementation of FEPs via the group will be of huge benefit to growers, especially smaller operators who may not have the scale or know-how to comply with council requirements on their own.

Gisborne District Council are the second council after Environment Canterbury to formally recognise the EMS add-on in a trend that we hope to continue across New Zealand. NZGAP is now focused on attaining approval of the EMS as a pathway for the recently amended Resource Management Act which will require growers (over 5 hectares) to have a certified and audited FEP. The draft national regulations for Freshwater Farm Plans are expected to be out for public consultation in the coming months, where NZGAP will support Horticulture New Zealand's submission to attain a pathway for recognition of GAP schemes. NZGAP will also be seeking recognition of the EMS as a pathway for growers in Hawke's Bay's Proposed Plan Change 9 for the Tūtaekurī Ahuriri Ngaruroro Karamū (TANK) catchment area, where public hearings are being held in late June.



For more information on the EMS add-on, visit the NZGAP website:
www.nzgap.co.nz ●

Reduce the risk of hailstorm damage

Supplied

The 2020 Boxing Day hailstorm in Motueka was described by grower Andrew Drummond as the “biggest and most widespread that the area had ever encountered” and “heart-breaking and financially devastating.”

Over a period of around 20 to 30 minutes, large hailstones pelted crops and damaged homes and vehicles, leaving a blanket of hail 6 to 7 inches deep on the ground.

FMG's head of client strategy & advice services, Jason Rolfe, says there were almost 350 claims and that over \$13.5 million has been paid in relation to the storm.

“Claims included damage to apple, pear and kiwifruit crops, with apples making up most of these. We also had claims for damage to buildings and vehicles.

“We're hearing there's an acknowledgement among growers that severe hailstorms like the one we saw on December 26, are likely going to occur more often. And growers are telling us that they're looking at ways to minimise their risk from hail damage in the future,” Jason says.

“

We're hearing there's an acknowledgement among growers that severe hailstorms like the one we saw on December 26, are likely going to occur more often

One of these ways is installing netting to protect crops and reducing the risk of damage to fruit and trees.

“After assessing the damage from the Boxing Day hailstorm, at one orchard we noticed that an area where some apple trees were covered with drape netting, the crop was fine.

“We're also seeing the industry as a whole looking at what went wrong in past storms and how they can improve with stronger designs and structures for netting. We heard from one grower about how a netting structure that allowed for heavy hailstones to fall to the ground from the side of nets, stopped the netting from collapsing,” says Jason.

We also know from growers that where there's the opportunity, dispersing the location of your crops is a good move.



Apple damaged by Boxing Day hailstorm

“This is well-known advice in the horticulture sector and serves growers well, especially when typical hailstorms are short-lived and localised,” Jason adds.

Andrew Drummond says while his entire apple crop and half the gold kiwifruit crop were lost in the Boxing Day hailstorm, luckily their hops were located elsewhere and avoided damage. ●

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From right to left: Dr Solvan (intern), Dr Lawrence Bau (registrars training in endoscopy), Gaston Kalsakau and Julie Warput (registered nurses working in endoscope reprocessing and assisting with procedures), Stephanie Uttley (registered nurse and nurse trainer), Dr Sereana Natuman (head of medicine at Vila Central Hospital) and Dr Adrian Claydon of New Zealand

Fund aims to eradicate Hepatitis B in Vanuatu

A campaign to raise funds to help eradicate a disease that can be a ‘silent killer,’ in Vanuatu is gaining momentum in New Zealand thanks to a raised awareness of the impacts of Hepatitis B on the nation’s population.

By Elaine Fisher

“Hepatitis B affects as many as 14% of the total population of Vanuatu – that’s one of the highest rates in the world,” says Tauranga gastroenterologist Dr Adrian Claydon, who first became aware of how widespread the disease was around 18 months ago.

“Hepatitis B is a chronic health issue in Vanuatu. It’s a disease often contracted in childhood, that hides away from the immune system undetected for years. Over many years, the immune system tries to fight off the infection, leading to chronic liver disease that can ultimately cause liver cirrhosis and liver cancer. At this stage, it is often too late to treat.”

Concerned that the island nation would struggle to identify and treat the 30,000 to 40,000 people who may have the disease, Adrian contacted Nell Dawson, who with her

husband Allan is the former owner of Aongatete Coolstore kiwifruit post-harvest facility.

Nell, who has a clinical background, was a senior manager at Tauranga Hospital when she employed Adrian on his arrival in New Zealand in 2001.

“

Hepatitis B affects as many as 14% of the total population of Vanuatu

“I knew Nell and Allan had employed Ni-Van (Ni-Vanuatu) workers who came here to work in the kiwifruit industry, so I asked if she thought the industry would be interested in helping out, and the project snowballed from there.”

The project, Defeating Hepatitis B in Vanuatu, aims to raise at least \$160,000 to support recruitment and training of medical workers and increase screening through simple blood tests. If the fundraising target is met it will also enable the provision of a new portable Fibroscan machine – a specialised ultrasound machine for the liver – which will help to identify people with more advanced cases of the disease who can then be treated. Adrian will work with local doctors to implement the project, alongside the World Health Organisation and the charity Hepatitis B Free which is led by Associate Professor Alice Lee of Macquarie University in Sydney. She specialises in liver disease and has experience setting up Hepatitis B screening and treatment programmes across South East Asia and the Pacific.

Led by the Kiwifruit Industry Community Support Fund Inc, the fundraiser has a 'Givealittle' page which has received \$10,000 from Zespri, and in late March, close to \$30,000 from private individuals and organisations.

Adrian is grateful for the help of Nell and the wider kiwifruit industry. "They have done a fantastic job. I have no fundraising experience so to have a whole team of people with all sorts of skills helping is amazing."

Adrian's understanding of how serious Hepatitis B is in Vanuatu came during a visit in 2019 with his wife Dr Lorna Claydon who had been involved in a rural clinic there. "Lorna was keen for me to be involved, but my skills as a gastroenterologist were more applicable to a hospital setting rather than a rural clinic."

So Adrian visited the Vila Central Hospital where he asked Dr Serean Natuman how he could help. "She said what she would like me to do was to teach therapeutic endoscopy – looking inside the stomach and bowel to treat issues which may have arisen there. I am a trainer of endoscopy in New Zealand so that fitted perfectly."

In May 2019 Adrian spent a week in Vanuatu teaching therapeutic endoscopy, and among the first patients found four cases of oesophageal varices. These are dilated blood vessels which are at a high risk of bleeding, a symptom of chronic liver damage and scarring of the liver.

"The underlying disease, we discovered was Hepatitis B. When we looked further, we found that around 14% of the population had Hepatitis B, which is a huge figure. In New Zealand the rate is around 1 to 2% in the general population but 6% for Māori and Pacific Islanders."

Concerned at the high rate of infection in Vanuatu, Adrian set out to do something to tackle the problem, which led him to enlist the help of Nell Dawson who did not hesitate to get involved.

"Allan and I have employed Ni-Van workers for 12 years. They absolutely helped us build our business because they are reliable, experienced, and highly skilled workers who

came back year after year, leaving families behind for six months to earn money to pay for their children's education and for housing.

“

...they have given their heart and soul to their work in the horticultural industry...

"They did wonderful work on orchards and loved to see the fruit they had worked on coming through the packhouse. Right across New Zealand, they have given their heart and soul to their work in the horticultural industry, not just kiwifruit. I think as an industry, we underestimate how much they have given, and I believe it is time for the whole horticultural industry to give back to Vanuatu and its people."

Nell says Ni-Vans are widely employed in horticulture, working on kiwifruit, stonefruit and pipfruit, in the wine industry pruning and harvesting grapes and picking asparagus and strawberries.

"It would mean a lot if Hepatitis B could be controlled, as it is a silent killer passed from mother to babies, but it is treatable if caught early."

The disease puts at risk not only the health of Ni-Van people, but also their opportunity to come to New Zealand to work.

"In the scheme of things, the amount of money we are trying to raise is not huge, but the programme will make a significant difference to Vanuatu people," says Nell.

Adrian says it is possible to eliminate Hepatitis B in Vanuatu which has a population of 312,000, living on 65 of the 83 islands which make up the nation.

Steps towards elimination will include training nurses to screen patients for the disease, vaccinating all babies and treating pregnant women to stop new cases. "Pregnant women with a high viral load risk passing on the disease to their babies, so the best thing is to treat the mums and vaccinate the babies.

"Hepatitis B cannot be cured but it can be treated with a daily tablet which stops the virus reproducing." The drugs, which patients must take for the rest of their lives, cost around NZ\$10 a month and Adrian estimates that up to 30,000 people may need the treatment. ●

Defeating Hepatitis B in Vanuatu aims to raise at least \$160,000



To find out more or to donate to the project, Defeating Hepatitis B in Vanuatu, go to <https://givealittle.co.nz/cause/defeating-hepatitis-b-in-vanuatu>



Bruno with young feijoa plants under cover

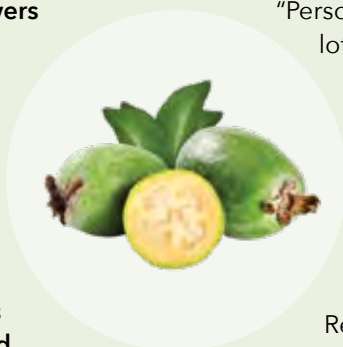
Nursery innovations to solve labour crisis

Waimea Nurseries near Nelson is gearing up for its busy winter period when it lifts trees for customers and it expects to be short of up to 30 seasonal staff.

By Anne Hardie

The nursery which supplies commercial growers around the country, usually employs about 200 staff through winter including up to 140 seasonal staff. But its development manager Bruno Simpson says the business is tracking to be chronically 15 people short and up to 30 this winter. That may mean the nursery's lifting period for trees may go on longer, customers will have to wait longer before they can plant those trees and the next growing season may be delayed.

He says the travel bubble with Australia may actually make the seasonal labour shortage in New Zealand even worse.



"Personally I think the biggest risk is we will lose a lot of Kiwis."

Plus, he says seasonal workers on working holiday visas may decide to head to Australia, and the tourism industry here in New Zealand which is cranking up staff numbers again, is suddenly becoming more competitive for labour. At the same time, there isn't a travel bubble with the islands for Recognised Seasonal Employer (RSE) scheme workers to come and go.

"The challenge for us is we don't know what we are going to end up with," he says. "The mitigating factor for us is our time is less critical (than harvesting fruit)."

The nursery had sufficient seasonal labour to cope through summer when trees were growing and budding, with numbers dwindling as the apple and grape harvest got under way. Winter sees labour requirements climb to lift plants and send them around the country, and the nursery is trying to secure staff, but struggling.

“

...horticulture sits at the heart of the government's post-Covid strategy, but if it wants a strong, growing industry, it needs to give the industry access to a seasonal workforce that matches the demand

RSE workers make up a portion of their workforce to fill the gap, and this year they expect to have about 10, with a number desperate to get home after so long in New Zealand. The rest of their seasonal workforce is usually made up largely of tourists with working holiday visas and Kiwis.

“Covid-19 has compounded the challenges with less people, but we are all aware labour availability in New Zealand is an issue, especially in those harder-working and lower-paid industries.”

He says horticulture sits at the heart of the government's post-Covid strategy, but if it wants a strong, growing industry, it needs to give the industry access to a seasonal workforce that matches the demand.

“At the moment we would absolutely like to see the government have travel arrangements with countries free

of Covid-19 or nearly free, to enable existing RSE workers to return home, and bring back other people to support industries.”

As well as opening the border with countries who have RSE arrangements, he says the government needs to lift the RSE cap to relieve the ongoing seasonal labour shortage.

He says one of the positives that has arisen from the increased labour challenges due to Covid-19 is that the industry has started working together on the labour issue. Though solutions are not just labour-based.

“I see the longer-term solution is automation and mechanical assistance.”

The nursery has trialled platforms where they can be used in the nursery, but much of the work is piece rate, and the feedback from those using them was that most preferred working at their own pace. Not everyone worked at the same pace which meant the platforms made it a struggle for some to keep up, while they held others back from working at a faster pace.

Now the nursery is looking at other ways of making the job less physical and therefore more appealing, to attract seasonal staff. It is also looking at a containerised production system, with a prototype being built later this year. That could enable the nursery to mechanise and automate its system so that it needs less people.

As well as growing trees on the Waimea Plains, the nursery has bought a tissue-culture laboratory in Hawke's Bay where it plans to use the skills at the facility to rapidly develop new apple rootstocks. Instead of 10 years to launch a new rootstock, Bruno says it could be four to five years using tissue culture. ●

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Brooke Madison (L) and Alex Tomkins (R) attended the MobileTech Ag Conference

Dynamic agri-tech industry highlighted

As two young professionals starting our careers in the horticulture industry, attending the MobileTech Ag Conference was a great experience and exposed us to the dynamic agri-tech industry.

By Alex Tomkins : Graduate at Southern Cross Horticulture (Bachelor of AgriCommerce) and
Brooke Maddison : Assistant Innovation Specialist at Zespri International (Bachelor of AgriCommerce)

The conference centred around discussions on the ability of technology to create value within the agri-food supply chain. We are incredibly grateful to Horticulture New Zealand for the opportunity to attend the conference through scholarship tickets.

After attending the conference, we took away three key insights:

- 💡 The potential for New Zealand to leverage more value from agri-tech as an export industry.
- 💡 The significant challenge that the talent pipeline presents for the technology sector.

💡 The opportunity for technology to help solve industry wide problems with data collection and analysis as a tool to help drive more informed decision making.

As an industry currently worth \$1.4 billion in export revenue already, the agri-tech sector is set for yet further growth. The innovative nature of New Zealanders with 'number eight wire' mentality to solve problems, puts the country in a strong position to take our agri-tech products to the world.

New Zealand already has a strong reputation for agri-food products, so why not extend this to agri-tech products?



This puts us in a strong position to help solve global food and horticultural production problems, while generating export returns.

The technology sector in New Zealand faces a significant talent pipeline and people development challenge. This ranges from encouraging technology careers at the school level to addressing declining student numbers in NCEA (National Certificate of Educational Achievement) technology subjects, to developing technology graduates at a university level. A survey asking primary students 'what they want to do when they grow up' found 0.5% of students answered a career in Information Technology (IT) and programming, while being a grower or farmer didn't even feature. As the skillset required of growers is expanding, growers are having to become horticultural technologists. Therefore, developing strong people capability within the agri-tech sector will become increasingly crucial. This starts with inspiring the next generation about agri-tech from a primary school level. The conference highlighted the importance of developing strong talent pipelines within the agri-tech sector to develop future leaders.

“

New Zealand already has a strong reputation for agri-food products, so why not extend this to agri-tech products?

Agri-tech has the ability to solve industry wide problems, and optimisation and analysis of data has the ability to help growers make more informed decisions. There is significant value in systems that allow for amalgamation of data, and are easy and time efficient for the end user. If growers have more oversight over their operations and a clear picture of what is happening on their land in real time, they can begin to make decisions based on this data, resulting in more accurate decision making. This has the potential to save resources, increase productivity and solve succession planning problems. ●

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Fine Pauvule from Tonga in the orchard

Not enough Kiwis to fill labour gap on orchards

A Tasman orchard manager says the horticulture industry has worked tirelessly to get seasonal staff into the country this year and the resulting shortage leaves him with little confidence in resolving the issue going forward.

By Anne Hardie

Rob Holtham manages Willisbrook Orchards on the Waimea Plains and says there are not enough Kiwis to fill the void left by Covid-19 restrictions on workers from overseas. Orchards need workers to be productive and profitable, but though the industry has been hammering that message, he feels it hasn't been taken on board.

Tasman orchards haven't had the same shortage of workers as other regions, but he says that is only because of the reduced crop around Motueka after the Boxing Day hailstorm, and he doesn't think the region would have been able to cope with a full crop.

At Willisbrook Orchards, they have managed to secure enough workers for the apple and kiwifruit harvests largely because they retained most of their Recognised Seasonal



Employer (RSE) scheme workers throughout the year. The orchard usually has 30 RSE workers and five went home at Christmas. RSE workers usually make up about 45% of the orchards' workforce which adds up to about 80 staff, with another 20% employed with Working Holiday Visas and the remainder being Kiwis.

"We're only in the position we're in because our RSE guys stayed through Covid, and during the course of the growing season they've been out on other properties." He says it has "been at some expense" to retain RSE workers through the season, but it was necessary.

When recruiting for kiwifruit, there have been few workers making enquiries about positions on the orchard, and he says it has only been as other crops like grapes and hops

ended that there have been more people around to make sure the orchard got its numbers. Overseas workers with Working Holiday Visas “haven’t been walking down the driveway” because Covid-19 drove them home, and he says there are not enough Kiwis to fill the gap by a long way.

“

If the labour shortage continues for the industry, he says it will turn into a wages fight, which will add more costs at a time when they haven’t got sufficient people to harvest crops

If the labour shortage continues for the industry, he says it will turn into a wages fight, which will add more costs at a time when they haven’t got sufficient people to harvest crops.

“The government has asked us to increase our export receipts and now we find ourselves trying to operate with one hand behind our backs,” he says.

Orchards are businesses that need to be productive and profitable, at a level that gets them through the tough years, because inevitably “you are going to get a hailstorm.”

“Looking forward, from my point of view, there will be no confidence in getting enough labour. They (the industry) have worked tirelessly to get people into the country and all they’ve got is rotten fruit on the ground. It is a national problem.

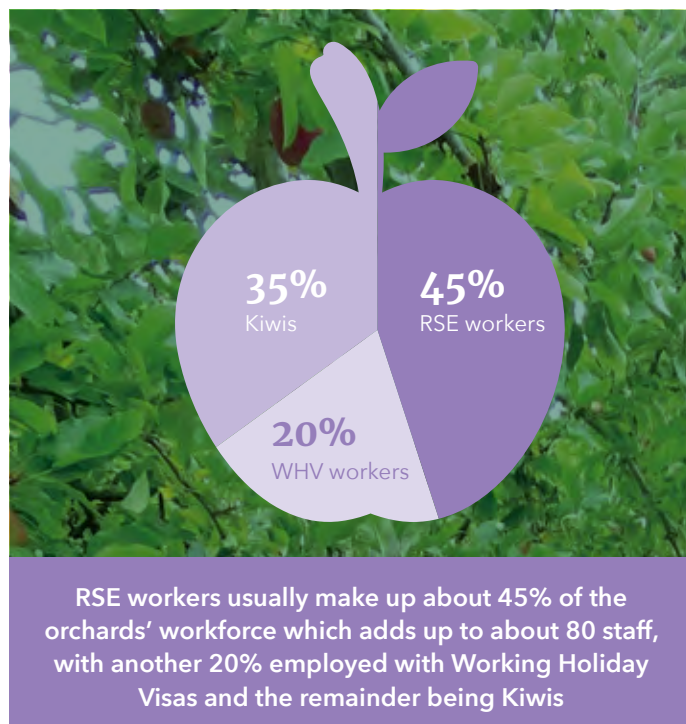
“At the end of the day we’re a little country at the bottom of the world that has to ship product a heck of a long way, so we have to have quality product and we need people to achieve that.

He says there have been comments about more automation in the industry, but that’s a “chicken and egg situation” when there is fruit on the ground.

“There’s a few moving parts to make that work and it takes time for the technology itself,” he says.

One technology project being worked on uses photos to measure the quantity of fruit on trees for thinning. The says the more data they have, the more accurate the outcome. The project is still at the field trial stage and though it won’t reduce the need for labour, it will improve the accuracy of the task.

In the meantime, to reduce some of the labour demand in the short term, the orchard will likely bring forward work on a couple of blocks that need grafting or reworking, which will take that fruit out of the harvest equation. He says growers won’t expand their businesses if they don’t have the guarantee they can harvest the crop. ●



Horticulture New Zealand Notice of the 16th Annual General Meeting

Friday 6 August 2021 at 7.30am , Mystery Creek, Hamilton

Business

- 1 Welcome and Apologies
- 2 Voting and Proxies
- 3 Obituaries
- 4 Approve Minutes of the 15th AGM
- 5 President’s and Chief Executive’s Report on HortNZ’s Activities
- 6 Approve Audited Financial Statements for year ended 31 March 2021
- 7 Levy Rate
- 8 Director Remuneration
- 9 Approve 2021/22 Budget
- 10 Approve Auditors for 2021/22
- 11 Notices of Motion
- 12 General Business

Call for Notices of Motion

Any Board Member, Affiliated Organisation or Active Grower Member wishing to have a matter considered at the AGM must give notice in writing to the Chief Executive of Horticulture New Zealand of the notice of motion no later than Friday, 18 June 2021 at 5.00pm. Notices should include the wording of the motion to be voted on and up to one A4 page of explanatory notes. Notices of motions will be listed on HortNZ’s website www.hortnz.co.nz on 25 June 2021 and will feature in the HortNZ magazines (July issue).



Primary ITO qualifications enhanced

Responding to demand from industry, the Primary Industry Training Organisation has recently enhanced the Level 2 Primary Industry Skills, and Level 3 Operational Skills qualifications. There are new electives – particularly in the areas of vehicle training.

Under the government's free trades training initiative, these programmes and all Horticulture apprenticeships have no fees up until the end of December 2022.

Employers can take advantage of enrolling staff on these courses to get people quickly up and running and using the tools they need to perform their role safely.

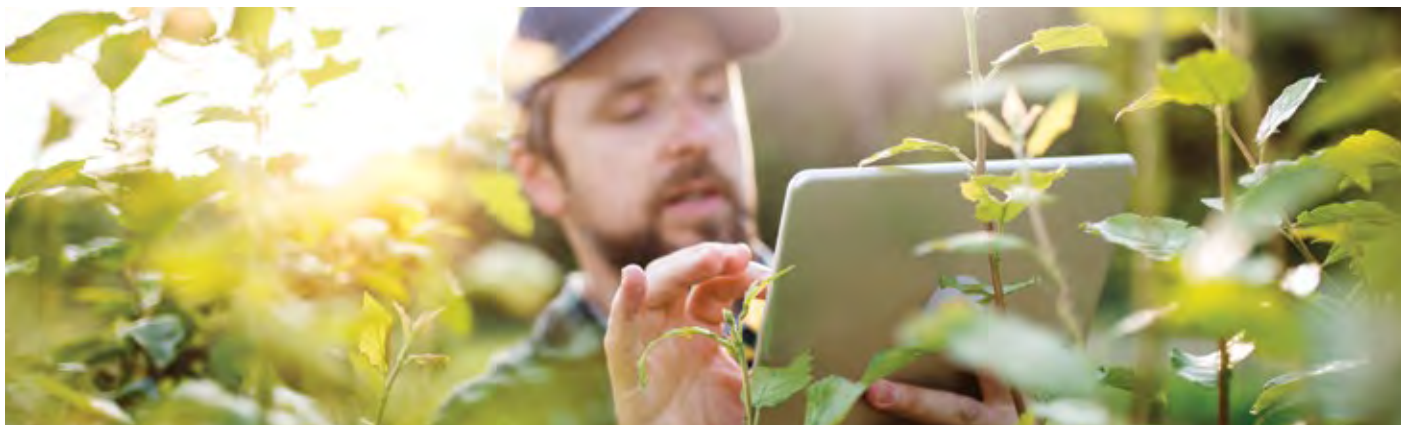


Development opportunities help employers keep good staff and shift the conversation from seasonal labour to a long-term career option

Tractors, quads, motorcycles, light utility vehicles (LUV) and forklifts are included.

Primary ITO has been hearing that these changes have been well received by industry, and employers believe the Level 2 programme is a useful induction tool for new staff.

Development opportunities help employers keep good staff and shift the conversation from seasonal labour to a long-term career option in what is a buoyant sector of the economy.



Chainsaws and agrichemicals



A new addition to Level 2 is the Growsafe unit standard. This enables staff to gain compliance and regulatory qualifications for agrichemicals handling. Chainsaws is another new addition.

Level 3 Operational Skills now includes all vehicle modules as electives. This makes the qualification much more flexible and tailored to your workplace. This replaces the Vehicles, Machinery & Infrastructure (VMI) programme.

Mowers and 4WD



Primary ITO are now offering electives in mowers and four-wheel drives (4WD). New electives also include set up of an irrigation system and fencing.

New vehicle micro-credentials



Primary ITO has developed new short, bite-sized pieces of learning known as micro-credentials - to quickly set people up with the knowledge and skills required to operate vehicles safely and confidently.

The Level 3 micro-credentials include operating quad bikes, motorcycles, LUVs and tractors.

Each micro-credential takes between two to four months to complete, can complement any programme that your team is currently enrolled in, and upskill those who are new or have little experience in the primary industries.

Primary ITO sector manager for horticulture production, Adam Fleck says "These new micro-credentials will be very popular with employers who have employees where driving is their primary role. Including Growsafe and chainsaws in Level 2 Primary Industry Skills means that compliance issues for smaller growers can now be covered in one programme. Upskilling new employees into the sector will now be faster. With fencing and irrigation skills being added to Level 2 the basics are covered off now."

Apprenticeship Boost extended



In March the government announced a four-month extension to what is known as the Apprenticeship Boost. This is the scheme born out of Covid-19 which promises to pay employers up to \$16,000 per apprentice to either employ or retain apprentices until August 2022. Employers apply for an Apprenticeship Boost through the Ministry of Social Development (MSD).



To find out more about how the enhanced qualifications and the new micro-credentials can work for you, please call the Primary ITO on **0800 20 80 20**. Or to find out more information about the Apprenticeship Boost visit **www.letsgrow.co.nz** ●



School leavers from local Hawke's Bay high schools

Recruiting locals to resolve labour shortfall

Supplied

With a severe seasonal labour shortage, T&G Global has pulled out all the stops to attract Kiwis into the sector and build their capability and skills to help harvest its premium export fresh produce.

The company, which has managed to hire more than 800 people across its operations in Nelson, Hawke's Bay and Northland over the past four months, says it still has a shortfall of more than 300 workers. As a result, it will struggle to pick and pack all of its fruit this season.

Gareth Edgecombe, chief executive of T&G Global, says the company is committed to building the capability and skills of its local seasonal workforce, however it will take some years to get its local workforce to the

size required for the long-term.

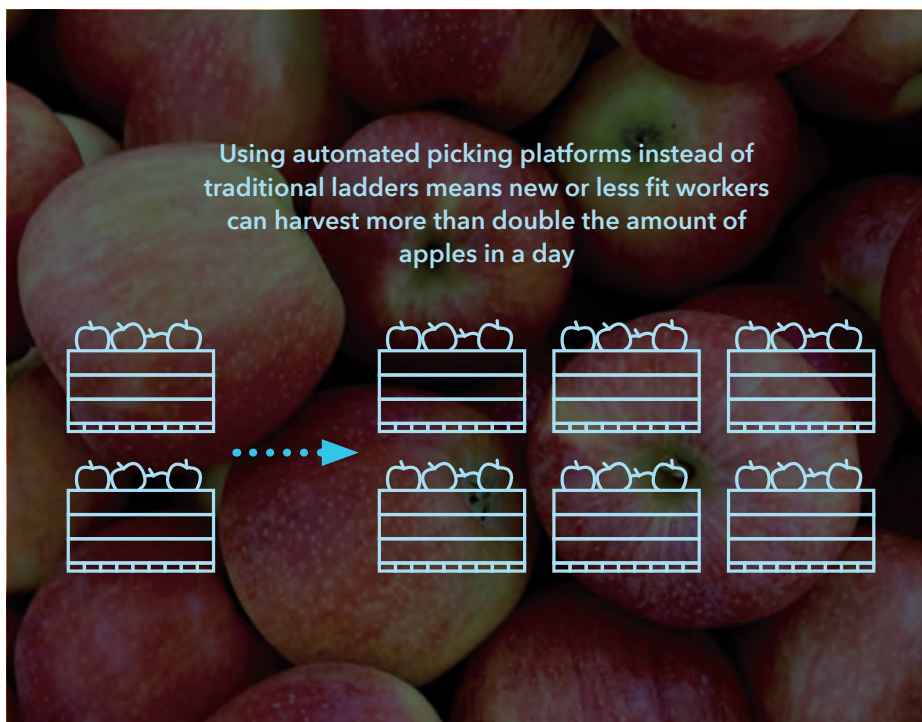
"We're doing everything possible to harvest and pack our premium export apples, however there will be a shortfall this year," says Gareth.

"We've worked incredibly hard to recruit local workers and find innovative ways to support them entering the industry. This included working closely with the Ministry of Social Development, partnering with a forklift cadetship training programme to train people in much needed roles, and working with local community

groups to recruit workers. On top of this, we've implemented flexible working arrangements and offered financial incentives.

“

We've worked incredibly hard to recruit local workers and find innovative ways to support them entering the industry



"We stepped up our recruitment activities before the summer period with the launch of our FRESHWORX recruitment campaign, and had some early success, especially with attracting university students. In the Hawke's Bay, over 20 university students have returned for the April pick of our premium export apple Envy™, which is great news."

Office staff, known as the 'Envy™ Army', are also pitching in, with over 45 staff members, including friends and families, working shifts in its Whakatu packhouses in the Hawke's Bay.

"Our local workforce work alongside our Recognised Seasonal Employer (RSE) scheme workers and their skills complement each other perfectly. The nature of horticultural work is that at times it requires physical strength and endurance, and that's where our RSE team members play a key role. They work alongside their Kiwi colleagues, applying their expertise and experience to help lift our country's export earnings," says Gareth.

T&G is also utilising technology and moving towards automation of its

orchards, including planting more premium export apples in 2D trellis, which is suited for automated picking platforms and robotic harvesters.

The company has brought in eight new automated picking platforms, adding to three already in use, doubling the volume of apples which can be picked each day. This enables its new or less fit workers to harvest around six bins per day. Whereas with traditional techniques using ladders, they would harvest around two to three bins per day.

“

T&G is also utilising technology and moving towards automation of its orchards

High-powered leaf blowers are being trialled, which is assisting with the quality and colour of apples.

T&G will continue its recruitment efforts as the harvest and post-harvest season continues into May. ●



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SUMMERFRUIT UPDATE

2020–21 New Zealand market review



By Richard Mills : NZ Market Support, Summerfruit NZ

Weather influences

As always, a season review for any crop will be influenced by the weather and the peculiarity of the timing of any event. It was not the best winter chilling ever, but the amount of winter chill was more than adequate in all regions if we consider that 800 or more Richardson chill units is needed for a good cherry crop and a bit less for the other summerfruit crops. It was a good start.

Winter chill (Richardson units) 1 May - 30 August 2020

	2017	2018	2019	2020
Bay View	1561	1450	1378	1350
Renwick	1782	1745	1613	1661
Alexandra	1730	1672	1826	1516

A frost of -7°C in Central Otago in August is thought to have had a major impact on the apricot volume. A little further into the year some Central Otago orchards had a little hail and snow in the trees.

Growing degree days, or hours above 10°C, were for most of the season good to very good, and in the case of the Longlands site in Hawke's Bay, quite exceptional. Most of the harvest period was earlier than normal, and it was often a question of by how much. The early Central Otago harvest and big crops from Hawke's Bay created more competition for shelf space than is ideal for the greater summerfruit community.

Growing degree days 1 September 2020 - 30 March 2021

	2016-17	2017-18	2018-19	2019-20	2020-21
Longlands	1362	1491	1425	1458	1509
Renwick	1137	1354	1319	1173	1171
Cromwell	889	1249*	1069	977	1015

*unusually hot year in Central Otago that caused fruit quality issues

Crop loads

Fruit set was generally good apart from the Central Otago apricots mentioned earlier. Hawke's Bay was always on for a bigger crop after last year's hailstorm. Nectarines, peaches and plums countrywide set up well, as did cherries in Hawke's Bay and Marlborough. We were looking at potentially the biggest cherry crop ever out of Central Otago, taking into account new plantings and a full crop load.

Sundrop apricots in Hawke's Bay did shed more flowers than ideal and as harvest progressed, a few varieties of peach and nectarine were found to be emptier than initially thought.

The biggest influence was rain on cherries, and across all three regions. Sometimes it's not so much the total amount as the timing in relation to fruit maturity, i.e. just before harvest. Hawke's Bay and Marlborough both had a 100mm+ rain in November which affected the pre-Christmas weeks. Central Otago's turn was in early January which had maximum negative impact for export harvest. There are growers across the country that will not have made much money from their cherries this season.

Labour

From the position of sitting in the Summerfruit NZ office, I was able to witness the huge effort that went into finding people to prepare and harvest the crops. A new seasonal labour co-ordinator role was created in the regions and the Central Otago person became part of the Summerfruit NZ team, working for summerfruit, pipfruit and wine crops.

There has been lots of meeting with politicians with some wins, but at orchard level, it has been difficult and expensive. We are fortunate that the harvest of summerfruit mostly coincides with university holidays which, along with other initiatives, managed to see most but not all of the crop picked. From what was seen at retail, the fruit was more often at the eating ripe stage, suggesting that we managed, but just.



1 Peaches in the packhouse 2 Plums awaiting the packhouse 3 Freshly picked nectarines 4 Cartons of fresh apricots

It is unlikely that there would have been enough labour to pick the massive export cherry crop. We are now working on how the next crop will be pruned and prepared! What has been confirmed is how valued the Recognised Seasonal Employer (RSE) scheme workers are.

Variety influences

Despite the weather and labour issues, the new IP-protected varieties were more to the fore this season as trees come into production. We are now seeing better quality fruit at the beginning of the season on early production sites, and large volumes in the middle and end of the season. A good number of the older varieties now look and taste pretty ordinary.

But in a strange twist, there were periods where 'classic' peaches and nectarines were retailing at higher prices than the new sweeter more coloured varieties. Good old supply and demand strikes again.

Market conditions

Growers were generally happy with returns that were being achieved with supply and demand reasonably well balanced up until the first week in the new year. After that the demand was flat across all fruit and vegetable categories. At this point the large volumes of main crop varieties from Hawke's Bay started to bump into the earlier season from Central Otago and the rain damaged cherries arrived in volume to all New Zealand markets.

Plums struggled all season to get reasonable returns. The supply and demand equation is out of balance!

So why was the market in general flatter than normal? The usual influences of post-Christmas credit cards, returning from holidays, short weeks due to anniversary days and back to school expenses are there every year. The one obvious difference is Covid-19, with perhaps a reluctance to spend in general, lockdowns in hospitality and just the lack of tourists moving through the country.

Returns and volume sold

There was lots of summerfruit for sale and lots sold. All marketers reported increased volumes moved through the chain, as did major retailers. So, in what was a difficult second part of the season the system worked well, and the work of the marketers and retailers needs to be recognised.

The quality was very good, which is a reflection of grower skill and mostly favourable growing conditions. The timing of the rain on all cherries was the one big negative, although at the end of the season golden peaches were scruffy.

Personal highlights

While it has been a difficult finish to an interesting season, the conversations I have had while working on the New Zealand market reports are always valuable, especially when there's time for an extended chat. As always, the colour that is provided makes sense of the data.

I have enjoyed the smiles on the faces of growers having a good season and enjoyed getting back to my roots sampling new selections that have yet to come to market.

Summerfruit NZ is a small team and we do play as a team, and I thank them for the mahi on behalf of growers and the wider industry. Now if we could just fix the weather! ●

SUMMERFRUIT UPDATE

2020–21 export market review



By Craig Hall : Chairman of the Summerfruit Exporters Committee

The 2020–21 summerfruit export season was always going to be a challenging one, before it even started.

The challenges of labour for growers, as well as the limited capacity of airfreight, was well known before the season. But what couldn't be predicted was the impact of the weather on the crops reducing the volume of fruit exported, particularly cherries.

Cherries

Unfortunately, Marlborough was affected in early December by rain, which meant there was no fruit available for export this season.

Central Otago's export cherry harvest started in early December. Through December the export volumes of early varieties were very good. Export pricing and returns to growers were above previous years, even with the impact of higher freight costs than previous years.

Sadly, significant rain events on 1 to 2 January, and again on 5 January, changed the season completely. An export crop forecast at 6,500 tonnes was reduced significantly and would end up being a total of 2,508 tonnes. The damage from rain not only reduced the volume, but also significantly affected the general quality of our export fruit. The feeling in most markets was that New Zealand fruit was not in as much demand this year as it has been in previous years. The Chinese New Year holiday demand from Asian markets never picked up, which meant prices for the late season fruit didn't increase either.

The reduced cherry crop volume meant the airfreight capacity wasn't put under the pressure it would have been if the volume had been 6,500 tonnes. But the labour situation would have prevented 6,500 tonnes being harvested this year. The labour situation, and in turn the demand for airfreight capacity, will be continuing issues over the foreseeable future. With the export cherry crop set to double to a forecast 13,000 to 15,000 tonnes in the next five years, these issues will be of concern for exporters.

Apricots

A record low apricot crop of only 115 tonnes was exported this past season. Down from 500 tonnes exported the



Rain-affected cherries

season before, this was mainly again because of adverse weather at flowering, but also rain during the season meant a lot of fruit wasn't up to export standard. Australia continues to be the dominant market with 79% of the volume going to this market.

Nectarines, peaches and plums

The volume of nectarines, peaches and plums exported also reduced this year. This was due to the smaller crop as well as quality and airfreight issues.

Conclusion

In summary, it was a very tough export season. Anyone reading this article could take it as quite a negative outlook. It is not intentional, but reflects the reality of one season in review.

But it also has to be put into context. Our export industry is now dominated by cherries grown in Central Otago, and the rain the region received this year was out of the norm. Growers and exporters deal with rain events nearly every season, but just not the volume in the short period received this year.

New Zealand exports the best cherries in the world, and the market will still be there to demand good quality New Zealand cherries next season.

However, this doesn't take away the challenges that we are facing. Labour and airfreight availability are going to continue to impact the export strategy in the near future. ●

AVO UPDATE



Regen?

By Jen Scoular : Chief Executive, NZ Avocado



I recently attended a hui on regenerative farming practices. A collection of 150 agribusiness stakeholders met to better understand what “regen” means, how it might apply to our sectors and how we might leverage the concepts of regenerative agriculture as New Zealand Inc.

The Ministry for Primary Industries (MPI) has set up a Technical Advisory Group and that group presented a definition of regen to the hui. The next steps were to set out some actions we could collectively or individually take that might better enable New Zealand to leverage a position to attach to our products, to create value with consumers, about the way we farm or grow.

Most of the participants had been attending such workshops for decades, although a few younger people were also in the room. We had facilitators and went through a process of seeking views, debating at tables and feeding back to the larger group.

We finished the first morning with a list of ten priorities that we were told we would spend the afternoon debating at our tables, and coming up with potential actions we might need to take to mitigate issues around water or waste or nitrate leaching.

“

...we needed to recognise that Māori didn't make plans the way this workshop was suggesting

Quietly a very well-spoken member of a table from Taranaki stood up and in fifteen minutes changed the course of the workshop, my own thinking and hopefully the thinking of most in the room.

She suggested that if we as a collective wished to talk about regenerative practices with Māori in the room, we needed to recognise that Māori didn't make plans the way this workshop was suggesting. We can't look at any one environmental impact individually, we need to look at all of them together, she said. We need to start with the values that underpin the very nature of Māori thinking and Māori views on enduring partnerships with the land we live off and live on.

Another speaker talked about a Māori Trust deciding ten years ago not to invest in dairy farming because of the negative impact on the land, land that has value way beyond the twenty-year plan of the dairy enterprise.

Don't get me wrong, we heard too that farmers who have been on the land for three generations have equal respect for the land as Māori, that was not the difference being highlighted. It was the way we think about what needs to happen to support policy and practice change – we perhaps don't recognise how deeply connected many of the issues and therefore solutions are or need to be. Going through a list of issues one by one, and from that setting actions, is not the way to approach finding a way forward in partnership with Māori in the development of Aotearoa Inc.

“

I think I respect Māori culture and values, but do I understand enough to truthfully respect them?

For me at the workshop a penny dropped. I think I respect Māori culture and values, but do I understand enough to truthfully respect them? This very articulate explanation of how differently we think and then act, was a real eye opener for me. I don't know the answer, but I know I want to make sure my eyes stay open, my ears listen more and my mind changes how it hears and how it thinks. I hope there were many like me at the workshop who took a big step in learning, absolutely what we might term a step sideways from conventional thinking, but a fundamental one if we are truly wanting to partner with our Māori colleagues and be a nation of all people thinking and working together. ●

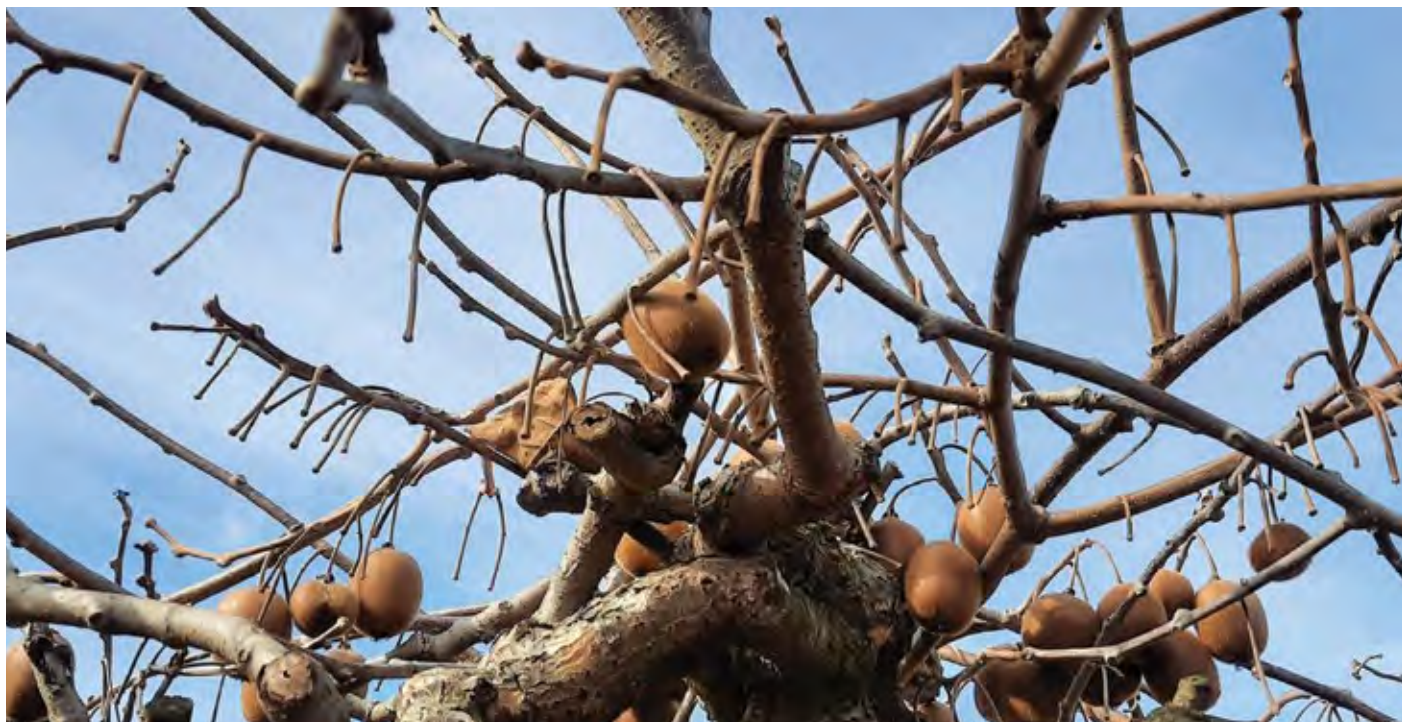


TECHNICAL

THE LATEST INNOVATIONS AND IMPROVEMENTS

Winter pruning
Pages 63–71





Kiwifruit winter pruning

I write this article as I sit at my desk waiting for the weather to clear to allow for the kiwifruit harvest to continue.

By Sandy Scarrow : Horticultural Consultant, Fruition Horticulture (BOP) Ltd

Frustrating times for all involved. Pre-harvest however, is an excellent time to review the fruit hanging on the vines and make decisions about how you might do things differently. For those of you who still have fruit on the vines, take a walk around and make notes about what has worked and what you could have done better. A basic review of the fruit hanging on the vines can tell you loads, but there is technology that can assist in this review.



In this article I cover winter pruning basics, look at some of the tools now available to improve your review of the previous season's canopy management, and then discuss other issues of relevance to the winter pruning task.

Winter Pruning Basics

While your summer canopy management impacts significantly on the wood you have to tie down, your winter pruning decisions form the basis of your result next autumn, and also the cost of carrying the crop through to harvest. Doing the winter prune well will make all the difference.

Money spent doing the winter work well can also pay huge dividends. Recently, a learner in our Fruition Diploma spoke of spending an additional \$1,500 per hectare on winter pruning, focusing on removing old heavy wood from a Hayward kiwifruit canopy. This orchard went from producing 9,000 trays per hectare to producing 15,000 trays per hectare in one year. Obviously, money spent on winter pruning cannot be credited with the entire yield increase, but the increase in grower revenue from another 6,000 trays per hectare is significantly more than \$1,500.

KIWIFRUIT WINTER PRUNING FEATURE

The reason summer canopy management is important is because we know flower buds in Hayward kiwifruit are set down in the previous growing season. We assume the same is true for other varieties, but we have anecdotal evidence that flowers can be produced on later season's growth. This process of floral evocation is represented in the graphic below (1).

Understanding this concept is important. It is the wood produced in spring and carried through, in reasonable sunlight, that is going to produce the best flowering wood for the following spring.

The aim of winter pruning is to get a single layer of the right number of high quality winter buds across the bay. It sounds simple but the reality is, it isn't! Winter pruning

kiwifruit is possibly the most difficult seasonal task, requiring a high level of spacial awareness that people don't appreciate. In order to achieve this, you will have to specify to the pruners things such as cane spacing, cane quality, winter bud number and other special instructions. Special instructions may include removing heavy or high wood, leader redevelopment, young vine training and winter male management among other things.

On the matter of gaining pruning skills, New Zealand Kiwifruit Growers Inc. (NZKGI) have been funded to train people in the basics of kiwifruit winter pruning. They have subcontracted Fruition Horticulture and others to deliver this training. Keep an eye out for the courses to be advertised shortly.

Achieving the single layer of high quality buds can be a challenge. On the opposite page are before and after photos of Gold3 and Hayward vines pruned by a well experienced pruner, Dave Roberston (2, 3, 4, 5). The pruner worked to tame what looks like a mess of wood into a sensible arrangement of quality buds in a short time.

“

It is the wood produced in spring and carried through, in reasonable sunlight, that is going to produce the best flowering wood for the following spring

1



YEAR 1

Making buds

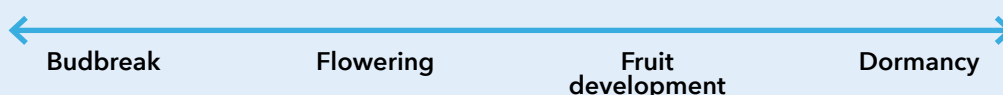
Storing reserves

Dormant



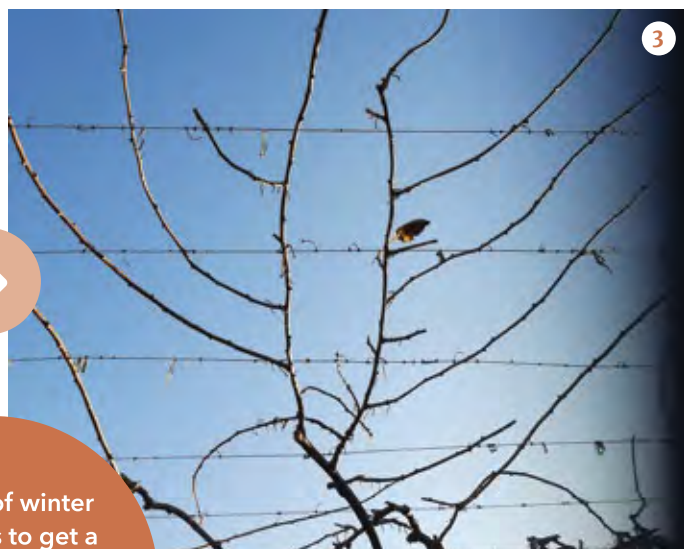
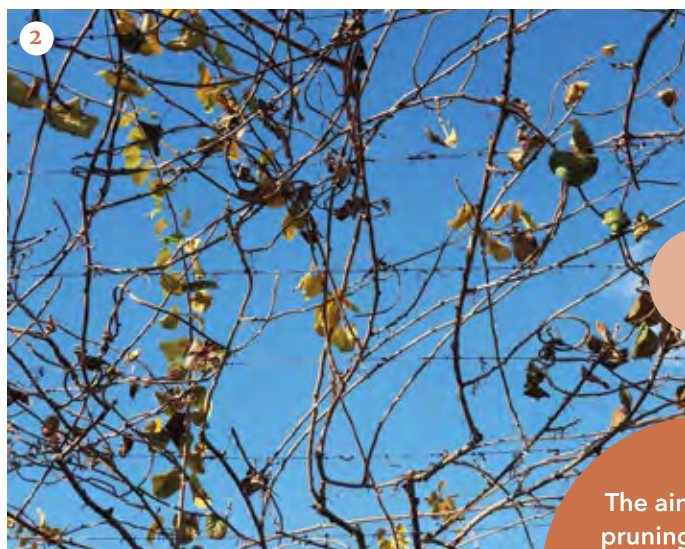
YEAR 2

Making flowers

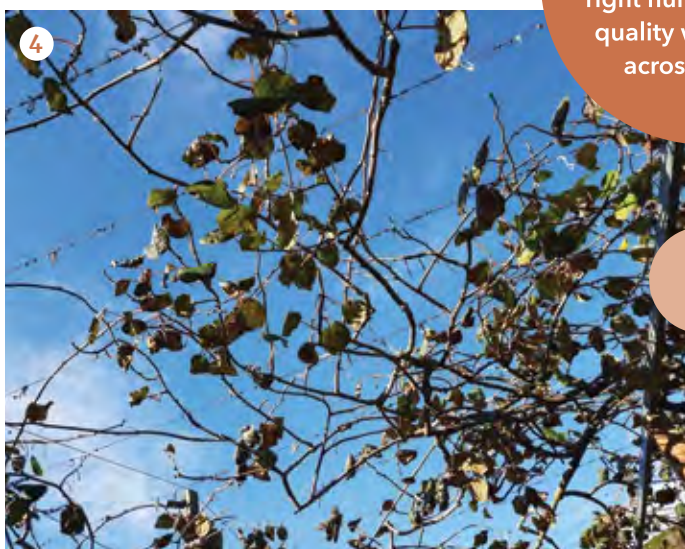


1 Kiwifruit flower bud formation. (Source: Annette Richardson, Plant & Food Research)

KIWIFRUIT WINTER PRUNING FEATURE



2, 3 Before and after winter pruning on a Gold3 vine



4, 5 Before and after winter pruning on a Hayward vine

The aim of winter pruning is to get a single layer of the right number of high quality winter buds across the bay

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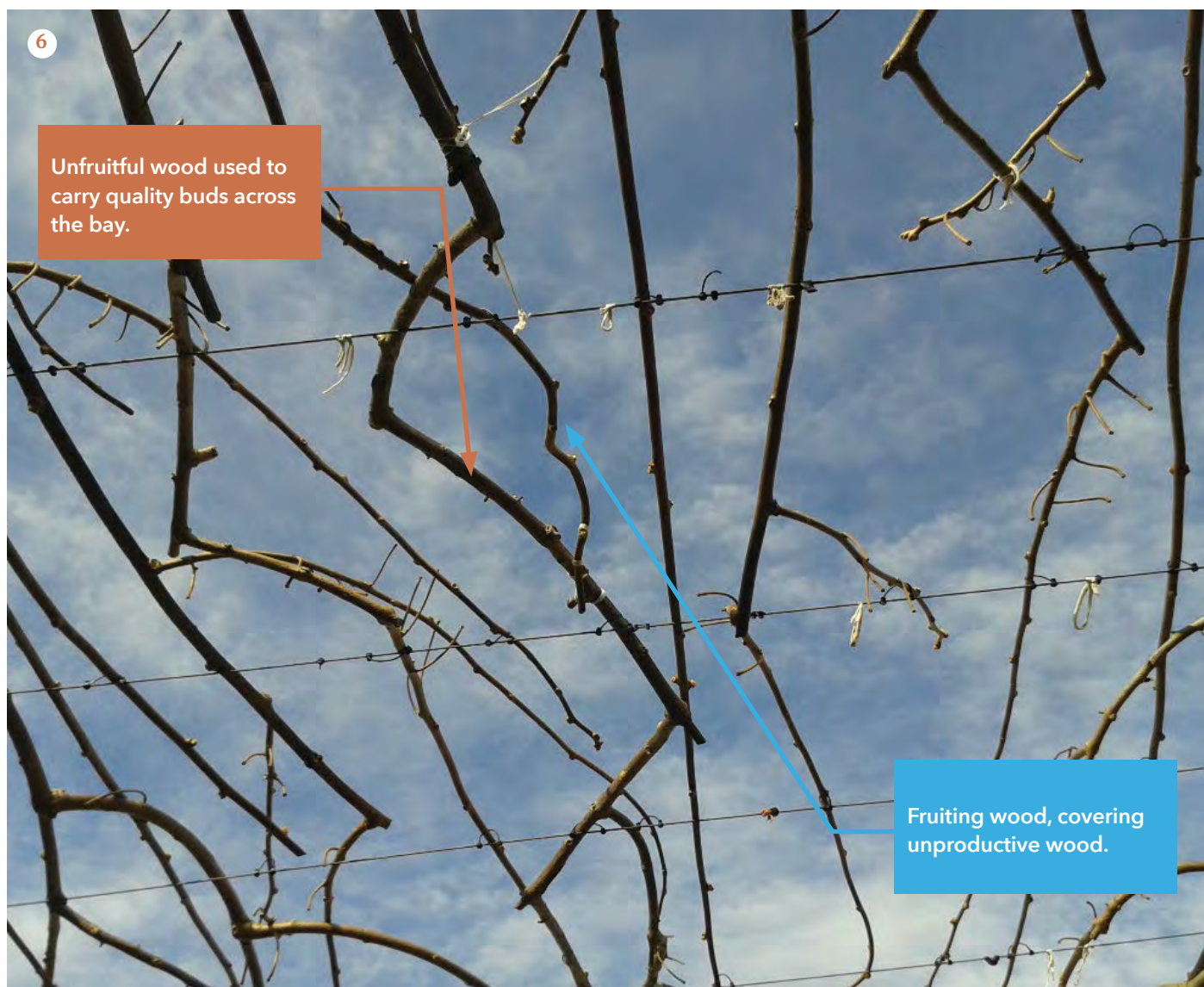
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KIWIFRUIT WINTER PRUNING FEATURE



6 A mix of fruiting and non-fruiting wood ensures a full canopy of quality buds

While many people think this is unskilled work, there are numerous decisions to be made prior to making pruning cuts. Each vine needs to be considered individually. The questions the pruner needs to consider include:

- Is there any heavy or diseased wood that needs to be cut out?
- Does the leader need to be renewed?
- Are there gaps in the canopy (maybe in a neighbouring bay) that need to be filled?

Once these questions are answered, the pruner can begin. It needs to be understood that the high quality fruiting bud can actually be carried on much older wood. The old wood can be used as a 'carrier' to get the quality wood out to the desired gap. The non-fruiting wood used to carry these buds out across the bay can be 'covered' by other fruiting cane. The photo above shows an example of this (6).

QUESTIONS FOR PRUNERS TO CONSIDER



Is there any heavy or diseased wood that needs to be cut out?

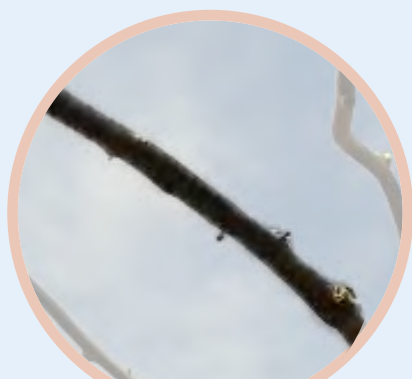


Does the leader need to be renewed?



Are there gaps in the canopy (maybe in a neighbouring bay) that need to be filled?

KIWIFRUIT WINTER PRUNING FEATURE



Unfruitful wood



Fruiting wood

“

While many people think this is unskilled work, there are numerous decisions to be made prior to making pruning cuts

Tools Useful in Reviewing Canopy Management

Two tools that have become available to growers over the past few years are drones and the orchard scanning services offered by various suppliers (such as Fruitometry and Fruition Horticulture (HB) Ltd). The photos on the next page (7, 8) show images from both of these technologies. The drone image has been further enhanced to record vine health, green representing healthy canopy and the red representing gaps in the canopy, including roadways and so on. The scan is of fruit in late January showing the density of fruit across the canopy in different colours.

Both images provide the grower with a picture of where the canopy density or fruit numbers are too high or too low. Based on these images, further investigation may result in doing things differently in future.

The drone image on the next page (7) shows areas directly along the male strip where there is no fruit. On further investigation, it was found that the first wire from the male was around 800mm out. Pruners had in the past, tied down wood to this wire leaving a sizeable gap. A simple solution to ensure fruiting wood is tied down all the



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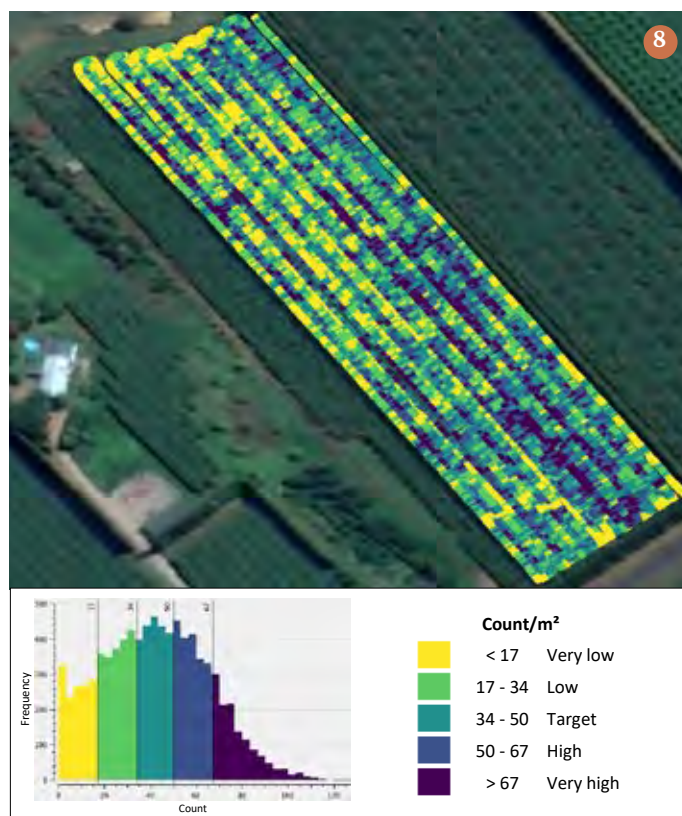
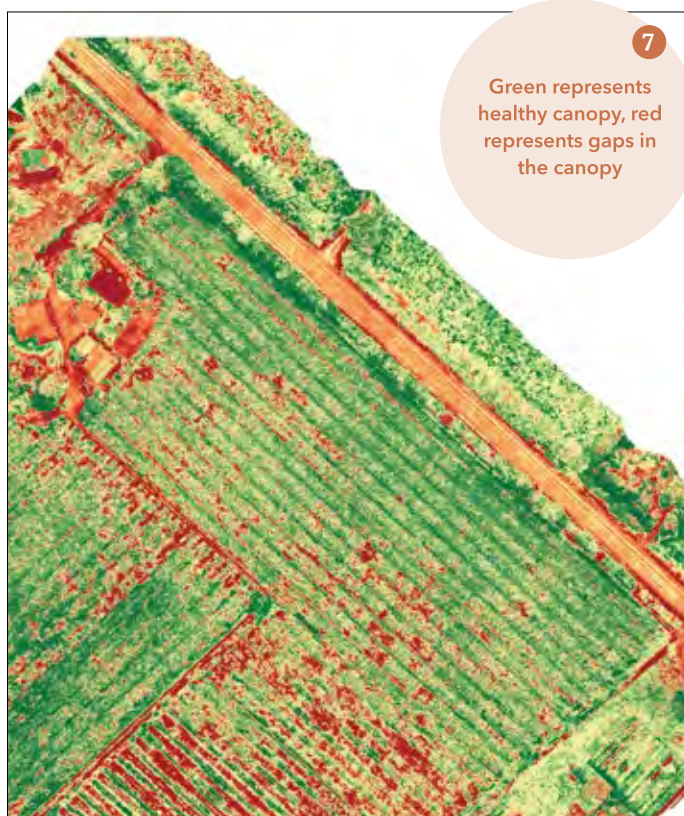
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KIWIFRUIT WINTER PRUNING FEATURE



7 Drone image, 8 Scan of fruit in Gold3 block

way towards the male is to either shift the wire or add another wire prior to winter pruning. The random patches of red were investigated and showed two separate causes. The first, a patch of *Armillaria* and the second, an area of light soil where the vines had not had enough water. Each of these issues, while not winter pruning related, are able to be managed during the winter period.

The scan (8) shows that on average the orchard is carrying a reasonable, though slightly light, crop load. It does show a large range however, with crop load ranging from < 37 fruit/m² through to > 67 fruit per m². The patches of yellow where too few fruit are hanging, typically were areas where the female vine training, and specifically their extension out to the males, has been poor. The strategy for this year to rectify this issue is to focus on young vine training, working from the male vines in towards the female leader, making sure that there is fruiting wood right out to the males.

Other Winter Pruning Matters

Over my years in consultancy I have seen a number of issues that are not attended to in winter pruning that ultimately result in orchard performance dropping. I discuss some of these below.

Young Vine Training

Unless otherwise instructed, a contract pruner may walk past a vine that is not typical, that requires more thought or is not able to be pruned to the specifications they have been given. Missed grafts and young vines are examples of this. As a result, I have seen rootstock fruiting and young vines that haven't been pruned or trained at all, resulting in them not contributing to the orchard performance.

“It is my recommendation that pruners are given specific instructions regarding vines that are different - even if it is just to ask their supervisor what they should do with them

It is my recommendation that pruners are given specific instructions regarding vines that are different - even if it is just to ask their supervisor what they should do with them. I have also recommended that some large organisations set up a specific team to manage these young vines. Technology now allows for these vines to be 'geotagged' so that they are easily found as the team moves through the orchard or between orchards.

KIWIFRUIT WINTER PRUNING FEATURE



9 Young vines introduced to replace dying plants



10 Young vines well pruned about to contribute to yield



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KIWIFRUIT WINTER PRUNING FEATURE



11 High wood in the canopy

Remove High Wood

All too often high, gnarly wood is left in the canopy. If this isn't attended to, this wood shades out the leader, is a site to harbour pests and carries fruit that is impossible to pick. If your orchard has this type of wood, you need a strategy to get rid of it. I recommend that someone moves through the orchard prior to the contract gang and removes at least one piece of heavy wood per bay. In two to three years, the leader will be back under control.

The photo above (11) shows an example of this type of wood that needs to be removed prior to winter pruning beginning.

“

There is a lot to consider with winter pruning, but sometimes you have to look backwards before you move forwards

Plant Health

The incursion of Psa has all growers now thinking about biosecurity and making sure that Psa is not moved between vines or between orchards. Tool hygiene and cutting out what can be cut out is an important part of the winter pruning work.

There are some resources now available on the

Kiwifruit Vine Health website that review the best practice in this regard. If you have access to this section of the website, have a look at this video series (<https://www.youtube.com/watch?v=sOgIMyM3LJY>).

Worst case scenario, you may have to replace an entire vine or trunk due to Psa infection. This process might require several years while you allow the replacement trunk and leader to grow. Take time to plan this with your team. Ultimately, a diseased trunk like that in the photo on the next page (12) will not be able to support the crop the vine carries. It is best replaced.



Cut It Out video #1
from Kiwifruit Vine Health

Other aspects of vine health also require attention. In the other photo on the next page (13), the remains of an old trunk has not been cleaned off and is now supporting fungal growth. It is best to remove these pieces of wood by cutting back to wood that is alive and applying a protectant paste.

In summary, there is a lot to consider with winter pruning, but sometimes you have to look backwards before you move forwards. Take the time to review what has worked in previous growing seasons to inform your plans

KIWIFRUIT WINTER PRUNING FEATURE



12, 13 Examples of diseased kiwifruit trunks that need to be cleaned up during winter pruning

for this season. Be sure not to be too influenced by what happened last year – it may be an aberration. Think of the typical season and plan for that. Use the technology available to you, for example drone footage or scans, to undertake the review.

Ensure your planning considers the detail of what needs to be done, and ensure that the timing is lined up to allow all things to be done in the right order. You may need to get the cut out done to allow for wires to be shifted, or get someone to insert a new wire prior to tying down. You certainly want any heavy cut out to be done prior to the detailed winter prune and tie down.

It is also recommended that you detail exactly what you want done during winter pruning and have it written down so the contractor knows exactly what you are after. Detail in this what you want done that differs from the norm, for

example, training young vines. Where English is not the contractor's first language, it may be useful to include photos in the document detailing pruning specifications.

“

Remember that the winter prune is setting the foundation for the harvest next year and the canopy for years to come

Most importantly, remember that the winter prune is setting the foundation for the harvest next year and the canopy for years to come. Spending some time thinking about the job, and paying well for the work to be done, will bear fruit. ●

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METSERVICE UPDATE

Dryness in the eastern North Island



By Georgina Griffiths : Meteorologist, MetService

2021 year-to-date rainfall

Soil moisture deficits continue across the eastern North Island (Gisborne, Hawke's Bay and the Wairarapa), even at the halfway point of autumn. This in part reflects a much drier than normal, and much warmer than normal autumn so far (at the time of writing, halfway through April). And in part reflects well below normal rainfall across both January and February 2021 in the east of the North Island.

Year-to-date rainfall accumulations in the Hawke's Bay so far in 2021 are currently sitting **under half** of the long-term average. At Napier Airport (Figure 1), year-to-date rainfall totals are only 42% of year-to-date normal.

In Gisborne, year-to-date rainfall totals so far in 2021 are 57% of year-to-date normal (not shown). Year-to-date rainfall accumulations in Masterton at the time of writing (mid-April) are currently sitting at 70% of year-to-date normal (Figure 3).

2021 year-to-date temperatures

Daily temperature anomalies for Napier and Gisborne are shown in Figures 3 and 4 respectively, across the first quarter of 2021. These plots show a considerably warmer than usual January in the eastern North Island, as well as a run of unusual heat to start and end the month of March.

Temperatures at both Napier and Gisborne were more of a 'mixed bag' during February 2021.

Temperatures across the first half of April at both Napier and Gisborne (note: not shown in Figure 3 or 4), have run **almost 2 degrees above the average** for the time of year. This is a **very significant** deviation from normal - in some locations, this will be close to record-breaking for April if the unusual warmth continues.

Soil Moisture Status

The combination of drier and warmer than normal weather across much of the eastern North Island has resulted in reduced soil moisture, compared to typical autumn levels, at the time of writing. The Napier soil moisture levels are shown in Figure 5.

Extreme soil moisture deficit is shown with the orange shading, when soil moisture levels are between 130 and 150mm of deficit. What is noticeable in 2021, is the prolonged period of extreme deficit that extends well into April, similar to the last two years (2019 and 2020).

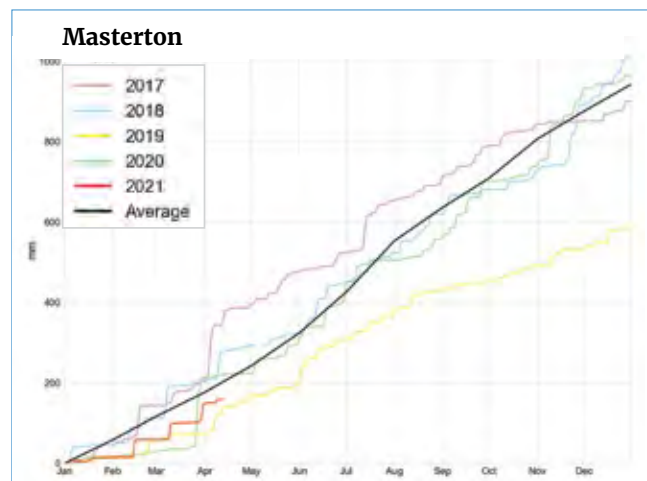
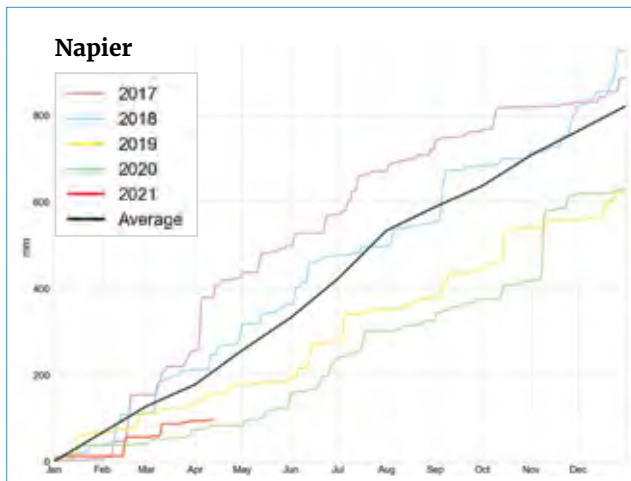
Normally, on average, some decent autumn rainfall during April would usually reduce soil moisture deficits rapidly at this time of year. (In Figure 3 the black line shows the long-term average soil moisture deficit.)

Looking ahead

Due to the currently 'neutral' El Niño Southern Oscillation (ENSO) status in the Pacific Ocean, the primary drivers of our winter weather patterns will be the Tasman Sea and the Southern Ocean. Both have been very active lately, producing some heavy rain for western and northern areas of both Islands. The Tasman Sea has recently been producing wetter northerly flows, while the Southern Ocean has recently produced an unsettled westerly regime. However, the eastern North Island has largely missed out on April rainfall from both of these drivers so far.

Figures 1 & 2: Rainfall accumulation

Annual rainfall accumulations (mm) for the following areas for the last five years. The annual average rainfall accumulation is shown in black.



Figures 3 & 4: Temperature anomaly

Daily temperature anomaly (departure from average) for the period 1 January - 31 March 2021 (degrees Celsius). The anomaly is calculated as a daily deviation from the long-term (1981-2010) monthly mean temperature.

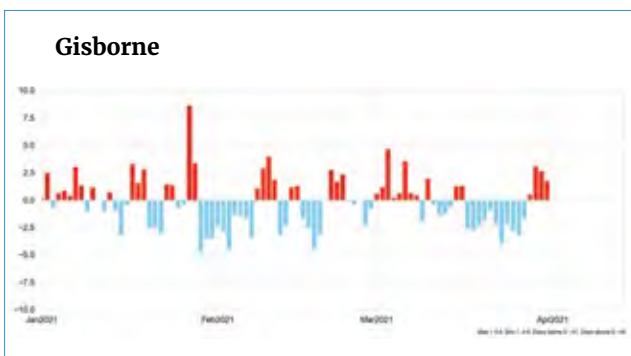
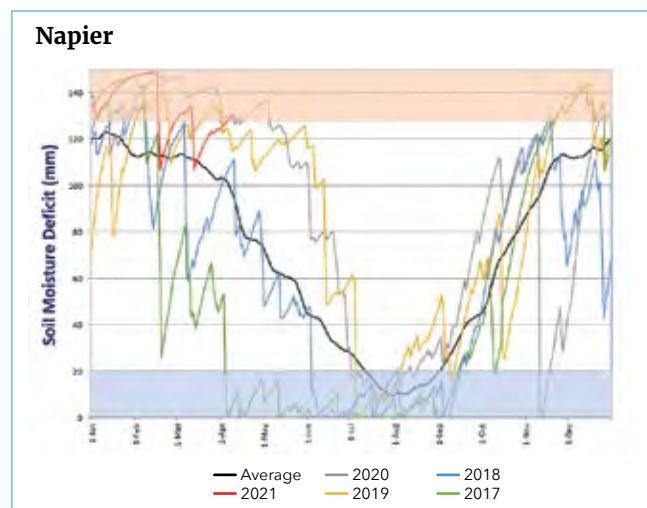


Figure 5: Napier soil moisture deficit

Napier soil moisture deficit, for the years 2017-2021 inclusive. **Extreme soil moisture deficit** is shown within the orange shading, when soil moisture levels are between 130 mm and 150 mm of deficit. **Saturated soils** are indicated by blue shading, when soil moisture levels lie between 0 mm and 20 mm of deficit.



As always, you should keep up to date with the MetService long-range forecast at <http://metservice.com/rural/monthly-outlook>.

Or sign up to the Monthly Outlook for delivery straight to your email inbox at www.metservice.com/emails.

Introducing Ag-Data driven agricultural decision-making

Agri Technovation New Zealand (AT NZ) and Chengeta Crop Care have partnered up to deliver a sustainable and nutrient-optimising solution to local farmers.

Based on the synergy between agriculture, science, and technology, Agri Technovation NZ's holistic precision farming solution will enable farmers to make more timely and informed decisions based on scientific data, findings and recommendations. Charles Hurly, director of AT NZ, tells us more about this ground-breaking and empowering agricultural solution.

"Would you drive a car without a fuel gauge? There's a lot of blood, sweat and tears riding on a farmer's harvest. It's best to cut out as much guesswork as possible," explains Charles.

Fortunately, technological advances and the increasing integration of layered data with computer software into farming practices provide the answers.

All your data in the palm of your hand

AT NZ's cloud-based solution enables farmers to visualise and manage previously complex and technical data to assist them with optimal decision-making at farm level. These systems combine data on weather patterns, soil, leaf, root results, moisture levels and more. These services culminate into informed crop nutrient recommendations given by AT NZ agronomists and horticulturalists, in consultation with the farmer, to develop a formula that will determine the best practice during each phenological stage of the cultivar, and record change over time.

"The MYFARMWEB™ platform and app serves as an information repository centre for precision-based farming that allows for the transformation of raw data into visualised information, which can be used to formulate sustainable plans of action. Data and maps are layered and integrated, making it easy to view recommendations, best practice, and suggested products. Simply put, the system will allow you to know in a timely manner what actions to take to make your farming more sustainable, and make decisions that can lead to optimising returns," says Charles.



Charles Hurly (left), Director, Agri Technovation NZ and Rob Clarke (right), Chengeta Crop Care

Decisions based on precision

A front-runner in the sphere of agricultural 'internet of things' (IoT), the AT NZ team is looking forward to sharing their unique big data solutions with producers in all the New Zealand regions.

"We are particularly excited to share our ITEST™ CARBOHYDRATES analysis programme, where sugar and starch concentrations in leaves and roots are accurately and periodically monitored throughout the season. We have seen great success with this feature in the citrus industry and look forward to empowering other farmers and agricultural industries too. We have already started with the carbohydrate testing on a number of avocado orchards in New Zealand," says Charles.

Other sustainable features include the ITEST™ WATER and MYIRRIGATION™ solutions. MYIRRIGATION™ uses soil moisture probes to gain previously unseen insights on soil moisture levels by installing them in the correct soil type. "MYIRRIGATION™ is a cutting-edge decision support tool that also provides irrigation scheduling recommendations. Water can be used optimally and responsibly." He goes on to explain that all chemical testing on samples is conducted by ISO (International Organisation for Standardisation) accredited laboratories, leaving farmers free to focus on making the right decisions to observe incremental changes throughout the season - which, if acted upon, lead to optimal yields and improved quality.

The AT NZ and Chengeta partnership aims to place these invaluable tools in the hands of hopefully all large and small producers across New Zealand. Visualisation of information gives management a call to action and is only a click away. ●

For more information, visit www.agritechnovation.co.nz
Enquiries can also be emailed to info@agritechnovation.co.nz



Monitoring hardware now included with Frost Fans

New Zealand Frost Fans manufacture the FrostBoss® range of frost fans at their factory in Hawke's Bay, New Zealand. The FrostBoss® C49 (4-blade machine) is the best-selling machine in Australasia.

Web-based monitoring of frost fans is becoming more popular among large and small growers alike, and the FrostBoss™ controller has been designed with this in mind.

The remote monitoring option, known as FrostSmart™, enables growers to access real-time monitoring of fans around the world, together with text alarms and historical data and graphs on temperature, run-hours and machine performance. The hardware required for FrostSmart™ monitoring is now included as standard with all FrostBoss® machines, which incorporate Auto Start™/Stop and wireless radio temperature probes. That means no additional hardware costs, only an annual monitoring fee to access the customer-specific data for your fans.

Several other benefits differentiate the Frost Fans companies for both New Zealand and Australian growers, including:

- End-to-end service from initial mapping and machine layouts to consent applications (if required) on your behalf, supply and installation and ongoing service and monitoring of the machines.
- A growing network of Service Centres with dedicated and specially equipped service trucks, which provide safe access to top gearboxes and fast, environmentally safe oil changes.
- Physical stock of machines and parts at all the Service Centres, enabling shorter lead times for installation and highly responsive after-sales service and support.
- Dealing directly with the manufacturer - no intermediaries.

Committed to finding the best frost mitigation solution for growers, Frost Fans chief executive Steve Haslett says "all we do is frost fans, so we stake our reputation and livelihoods on it." Together they have a significant research and development programme focused on improving the efficiency and reliability of frost fans. The result of this research has been the development of the FrostBoss® C49 frost fan incorporating the proprietary FrostBoss® clutch, controller and C49 composite blades.



The FrostBoss® C49 composite 4 blade frost fan

The FrostBoss® C49 was developed with help from former Team New Zealand aerodynamics research engineer, Richard Karn, to optimise noise reduction by using a greater blade working area and slower rotational speed than a 2-blade fan. In addition, the much higher blade passage frequency of the 4-blade fan means the noise signature no longer has a low frequency beating sound, similar to an Iroquois helicopter. Along with the FrostBoss® C59 (5-blade machine), the FrostBoss® C49 is the quietest machine on the market.

Marketed through its own companies in New Zealand and Australia, FrostBoss® fans are also installed in Argentina, Bulgaria, Canada, Chile, France and Turkey through local distributors.

As well as supply and installation of FrostBoss® frost fans, the trans-Tasman companies service and upgrade most makes of frost fan. ●

For more information: www.nzfrostfans.com

This article was written by Abbie Franklin of New Zealand Frost Fans.

Trimax Mowing Systems: A Uniquely Kiwi Way to Power Your Performance

Trimax Mowing Systems is a family-owned New Zealand company that designs, manufactures and distributes tractor-powered commercial mowing equipment.



Trimax ProCut

Founded in the Bay of Plenty in 1981, Trimax has grown into an international success story with facilities in Australia, the United Kingdom and the United States. However, the heart of Trimax (and our global headquarters) still resides where we started in Tauranga, New Zealand.

This year Trimax is proud to celebrate 40 years of business – a business which first put down its roots during the Bay of Plenty kiwifruit boom of the early 1980s. Trimax flail mowers became a popular choice with orchardists due to their low, smooth profiles and super-efficient Gamma Flails, developed by Trimax founder Bob Sievwright, which mulched prunings and mowed grass to a superior finish without damaging fragile vines.

To this day, Trimax mowers remain popular for their unsurpassed reliability, performance, usability and versatility. They produce a high-quality cut, finish and discharge spread whether they're operating on fine turf, in long grass, or through orchard and vineyard prunings.

Each Trimax mower is designed and tested to comply with international safety standards, giving you peace of mind as you operate. Revolutionary features such as SteadFAST sealed spindles, LocTEK roller bearing retention, automatic belt tensioning and easy access panels make servicing and maintenance easier than ever. A wide variety of available



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options and cutting widths allow you to perfectly customise your mower for your exact application.

At Trimax, care for the customer is at the very core of our business. We believe that equipment should never be a barrier to success, and our goal is to understand your challenges so that we can work together to create solutions. We pride ourselves on having one of the best service models in the industry, with fully stocked parts warehouses, next-day order dispatch, an industry-leading warranty and highly trained service staff, Trimax is ready to provide the advice and support you need when you need it.

The first 40 years of operation are truly just the beginning for Trimax. Inspired by our history, we're excited to share with you a growing range of mowing equipment to be released starting in 2021 expressly designed for horticulture. Our engineering research and development team has compiled the knowledge and insight we've gained from around the world, and we're gearing up to release our strongest, most versatile mowers yet. ●

Watch this space (and our website trimaxmowers.co.nz) for innovative new offerings just for horticulture, coming soon from Trimax Mowing Systems!



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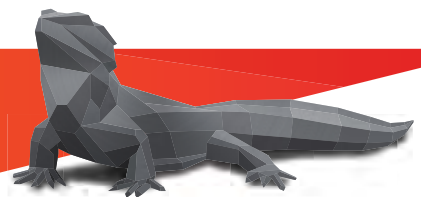
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