

Season's challenges

Page 24



In this issue

12 Gisborne growers get ready

28 Nelson harvest after hail

53 Biosecurity 101



For Sale by Tender

53 Norton Road, Waiharara

Productive Avocado Orchard in the beautiful Far North

A quality development in the heart of Avocado country, the beautiful Far North. This is a quality orchard in a beautiful location that will appeal to those looking for a lifestyle or investors looking to generate a return. With the Far North known for its consistent yields, and early production, this is a fantastic place to invest in avocados.

Set on 23.4521 hectares (more or less), held in 3 titles with approximately 13.97 canopy hectares of avocados in total. This orchard boasts approximately 3006 Hass avocado trees that range between 20 and 1 year old. There is the ability to further grow returns as these current and any future plantings mature.

The orchard has been well managed, with quality infrastructure, including an irrigation system, three implement sheds/pump shed and fully consented bores. The property also contains a tidy, two-bedroom dwelling for management or staff accommodation. A mix of sandy and peat soils, established tree shelter belts, and all situated close to the Rangaunu Harbour and nearby Kaimaumau for fishing or relaxation.

Production details and financials are available on request.

Living in the Far North has so much to offer to anyone who enjoys the outdoors. East and West coast beaches are in close proximity, with excellent fishing, great local community and grower support services nearby.

This property would be a nice addition to any investment portfolio or is the perfect size to be run by an owner/operator.

For sale by tender. Tenders close 4pm Thursday 1 April 2021 (unless sold prior). Highest or any tender not necessarily accepted.



For Sale by Tender

4015 State Highway 1 (Far North Road), Pukenui

Productive Avocado Orchard with a Far North Lifestyle

A recently redeveloped 16.5616 hectare (more or less) orchard in the heart of Avocado country, the beautiful Far North. Avocado orchards of this quality are a rare find. Known for its sandy soils, consistent yields, and early production, the winterless north is a fantastic place to invest in avocados.

With approximately 9.07 canopy hectares of avocados in total. This orchard boasts approximately 2826 avocado trees that range between 19 and 1 year old. 93% of this has been planted or replanted since 2010. The bulk of this is Hass with approximately 1.36 hectares of the new Gem variety. Plant out the balance of the land and enjoy the ability to further grow returns as the current and any future plantings mature.

The orchard has been recently redeveloped, with quality infrastructure, including an irrigation system, revamped implement shed and fully consented bore. The property also contains a beautiful family home with four bedrooms, double internal garage and extra accommodation for guests. Set within walking distance to the Pukenui village, with its range of amenities and world class fishing at the doorstep.

Production details and financials are available on request.

For those who enjoy the outdoors, the Far North has so much to offer, with both East and West coast beaches in close proximity, excellent fishing, great local community and grower support services.

With the redevelopment complete, this orchard is the perfect size to be run by an owner/operator, whilst enjoying the fantastic Far North lifestyle.

For sale by tender. Tenders close 4pm Thursday 1 April 2021 (unless sold prior). Highest or any tender not necessarily accepted.

Call Sean Stratton on 020 4111 2307 for further information or an appointment to view.

Ray White Kaitaia | Far North Circle Real Estate Limited (Licenced REAA2008)

raywhite.co.nz



Contents



MARCH 2021

Up Front

- 2 President's Word: "Bristling with risk" and RSEs inhibiting productivity improvements?
- 5 The Chief Executive: Impact of Covid-19: we must work together

Your Levy at Work

- 6 Natural resources and environment
- 8 Health and safety in horticulture
- 10 Programme thrills students
- 12 Growers get ready as FEP deadline draws near
- 16 Women in Horticulture: Profitable, sustainable businesses - Linda's goals

Your Industry

- 21 Plan and hope: harvest 2021 underway
- 24 Season challenges even the toughest of growers

- 26 Tauranga bottler aims for the top
- 28 Nelson harvest after hail
- 30 While 2021 feels very much like 2020, now is the time to be bold
- 32 Study opportunity turns life around for young whānau
- 34 Taking women's leadership to the next level
- 36 Climate change and horticulture
- 38 Three new CEOs sought for top roles
- 39 Staying Farmstrong
- 40 When 'absence' is a measure of success
- 42 Gold growers in line for rates changes
- 44 Home is where the avocados are
- 46 Startling innovation
- 48 Papaya extract potential
- 50 App speeds up recruitment
- 52 Avo update: Reviewing our industry

- 53 Biosecurity 101: How MPI works to protect growers
- 56 Crops stressed by third dry in a row
- 58 Going bananas

Technical

- 61 The season so far
- 64 Fertigation in orchard production
- 68 MetService update: Boom or bust summer - focus on northern NZ

What's New

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

- 70 A star is born
- 71 Mediterranean Shipping Company
- 72 More affordable dehydrators
- 72 Hortivate - Grow better

“Bristling with risk” and RSEs inhibiting productivity improvements?

Rabobank's Agribusiness Outlook 2021 report concludes that while the outlook for the year is “bristling with risk” and bumps are anticipated, on the flip side, most agricultural sectors can expect average to above-average pricing, manageable cost inflation and production to hold up well.

By Barry O'Neil
President : HortNZ



“Bristling with risk” is not what I would call the current scenario facing many of our growers, who can't find sufficient labour for harvest due to political restrictions on access to Recognised Seasonal Employer (RSE) scheme workers. Even if they manage to harvest and pack their crops, growers are struggling to find reliable and affordable shipping.

And these are the lucky ones, who weren't rained on in Central Otago and lost more than 60% of their cherry crop, or smashed by hail in Nelson and lost not only 100% of this year's kiwifruit, apple and hops crops, but also been left with damaged trees and vines that will take years to fully recover.

“Bristling with risk” is one way of saying growing comes with challenges. As growers, we know there will be curve balls and tests. Who, a year ago, could have foreseen that we would not have access to RSE workers and backpackers to harvest and pack our produce? And that we'd be waiting for the government's response to the Climate Change Commission's draft report and its impact on growers.

“

“Bristling with risk” is one way of saying growing comes with challenges. As growers, we know there will be curve balls and tests.

But the growers I know are resilient types, who quickly pick themselves up from a knock-down, and get on with doing what they do best – growing. So let's hope the Rabobank report is accurate about above average pricing. Let's also make sure we are supporting those that have had knock-backs, as it's always reassuring to know that others are thinking of our well-being.

But then it got worse when I read the Productivity Commission's review called *New Zealand firms: reaching for the frontier*, which made me rather despondent and frustrated.

The review starts off okay and is primarily focusing on innovation as the key to New Zealand's economic future. At a high level, it seems to make good sense, calling for:

- **A greater focus on exporting specialised products** at scale to overcome New Zealand's hurdles of size and distance.
- **An overhaul of the innovation ecosystem** to support firms and drive innovation.
- **Focused government investment** in areas of existing or emerging economic strength and competitive advantage.
- **Collaborative, focused efforts** by the government, industry and researchers on innovation policy and investments.

! But the review goes totally off the rails when it gets to the section and recommendations on migrant labour. It disturbingly claims that migration policy settings are inhibiting productivity improvements.

“

It disturbingly claims that migration policy settings are inhibiting productivity improvements.

These claims are made in a supporting report by the New Zealand Institute for Economic Research (NZIER), which includes the RSE scheme as part of a wider discourse on migrant labour. Its conclusions are that the primary sector is reliant on low-cost migrant labour and is not attractive to Kiwis, due to low wages and working conditions.

It claims successive changes to New Zealand's migration policy settings have seen the skill levels of permanent migrants fall, and the skills of temporary migrants are now at or below the New Zealand average. This, the report claims, has encouraged businesses to continue to rely on low-cost migrant labour, which has inhibited productivity-boosting investment in capital and innovation.

The NZIER report recommends the current border closures due to Covid-19 present an opportunity to review and reset migration policy. "The Government should focus migration policy more on lifting productivity, by having a principle of primarily accepting only highly-skilled migrants, and over time reducing the inflows of low-cost temporary workers," it says.

I really struggle with the concept that our Pasifika workers are low-skilled, or that they are low-cost. Try and keep up with them picking to see the skills these fantastic workers have, who are rewarded for their work with the piece rates being paid.

Secondly, the NZIER report assumes we can replace skilled Pasifika workers with Kiwis or with automation. The job scene has tightened up incredibly over the past six months. Somewhat surprisingly, Statistics New Zealand data shows that the jobless rate dropped from 5.3% in the September quarter to 4.9% in last quarter of 2020.

We know when unemployment gets low, we struggle to get fit and employable workers into our businesses. Currently, we have a situation where seasonal workers are not available or the Kiwis available are predominantly urban unemployed who do not want to move and/or do not want to work in the primary sector.

And what about greater recognition for the real benefit to Pacific communities from the RSE scheme and the generosity of New Zealand businesses? If it weren't for the scheme, more New Zealand aid money would be needed to support communities who are now able to fund their own way.



Order Now

**The best varieties
for the best results**

**Contact us for available varieties
& to place your order
for 2021 & 2022**

Santina® Variety Pictured



Kioto® Apricots



KORU® Apple



Orion® Nectarines


McGrath
NURSERIES

Specialist Fruit Tree Nurserymen
for Apple, Apricot, Cherry, Nectarine, Peach, Plum and Pears.

07 827 8281

Email
info@mcgrathnurseries.co.nz

Visit
3/1628 Cambridge Rd,
RD3 Hamilton 3283, NZ

Sales
Mike van Workum
021 242 6400
National Sales Manager

www.mcgrathnurseries.co.nz

The ORCHARDIST

Editor:

Andrew Bristol
 Ph: 04 470 5665
 Email: andrew.bristol@hortnz.co.nz

Advertising Manager:

Jackie Enright
 Ph: 04 494 9986
 Mobile: 0274 489 913
 Email: jackie.enright@hortnz.co.nz

Design:

Scenario – brand new thinking
 Ph: 04 385 9766
 Email: joy@scenario.co.nz

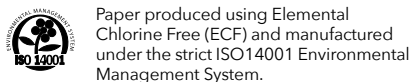
Subscriptions:

Email: info@hortnz.co.nz

The *Orchardist* is produced by Horticulture New Zealand and is free for all levy payers. *The Orchardist* magazine is partially funded by a grant from the NZ Fruitgrowers' Charitable Trust to ensure all fruit growers in New Zealand receive a copy each month.

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

ISSN: 1173-3802



This magazine is posted in an EcoPure plastic sleeve. EcoPure accelerates the biodegradation of treated plastics in microbe-rich environments. Plastics made with EcoPure are biodegradable in aerobic and anaerobic environments.

“
This labour resource has resulted in significant economic benefits for New Zealand and our communities, something that will be put on hold if we shoot ourselves in the foot here.

The NZIER report doesn't acknowledge that a key factor in the significant growth of the horticulture sector has been the certainty of seasonal labour through Pasifika and backpacker workers. This labour resource has resulted in significant economic benefits for New Zealand and our communities, something that will be put on hold if we shoot ourselves in the foot here.

And automation? Unfortunately, I hear too many ill-informed people who believe we just need to invest and it will happen. Of course, it's a road we have all wanted to go down and many have invested significantly, such as in the apple and kiwifruit industries. However, in my opinion, it's not going to happen on most orchards for some time if at all. Why? Because orchard structures and the associated environment often can't handle the size and scale of machinery that is needed to be commercially viable.

We have all seen videos of orchards with unmanned ground machines. While they might look futuristic, they sometimes look to me just like toys, and little has come of the associated hype. But with some production systems, such as potato or onion and other vegetable harvesting, where you can get the big kits into the paddock to do the work and

the growing system supports it, automation has already happened or is happening.

But where automation is the most suited is in the packhouse. The industry is already investing and seeing huge technology advances, whether that be automated camera grading systems, robotic packers and stackers, or fully automated coolstores. Real labour savings and efficiency gains have resulted, but packhouses are a far easier challenge, with a dry and clean standardised environment, than on the orchard.

Innovation is being introduced into the horticulture sector on a daily basis, whether that be new varieties, improved growing systems or moving away from harder chemicals. But the reality is that some activities will remain the same, and we need seasonal labour - especially the RSE scheme - to complement our Kiwi workers.

Lastly, to those growers that have suffered crop losses from rain, hail as well as drought now, we really feel for you and wish you all the best in getting back on your feet.

Kia kaha! ●

Impact of Covid-19: we must work together

The tentacles of Covid-19 are once again impacting on our freedom of movement and our ability to produce healthy food. This is the end that the public and our consumers see.

By Mike Chapman
Chief Executive : HortNZ

But what they do not see is the impact Covid-19 is already having when it comes to shipping, seasonal labour, restrictions on growing and packing operations and so on. What neither the government nor the public appear to recognise is that in addition to the health impact, there is the economic impact that comes from all the additional costs that Covid-19 has imposed on industry. This will be made worse by not having enough seasonal labour for harvest and then winter pruning.



Both with horticulture and government there are many competing factions, all with laudable intentions, but without direction and cohesion they are counteractive and impediments to progress. Even a modicum of co-operation will achieve unbelievable and long-lasting results. There are great examples where we collectively have achieved that - for instance, the career progression manager network.

Their achievements in attracting workers and developing careers for our workers are paying huge dividends. This is a prime example of industry and government working together to find employment and careers for New Zealanders.

Building a cohesive and unified approach as we face the current uncertainties and challenges is the only way I think we will be able to continue to feed New Zealand healthy food. The collective horticulture industry groups have already developed a Covid-19 recovery strategy that focuses on our key challenges: labour; production systems and natural resources; data, monitoring and communication; trade, policy and government; diversity and partnerships; and innovation and automation.

What we need to do is link these key challenges into a cohesive plan that government supports with its own initiatives and resources. We need the road map of where we are going and how we are to get there. We need to focus on the main activities that will collectively deliver the most impact and results, not only for horticulture but for New Zealand, by engaging and working together with the same goals and values. This is what we will be working on in the coming months - our integrated and collective industry and government plan for the future. ●

What is very apparent is the only way we are collectively as a country going to survive the twin health and economic impacts of Covid-19 is to work together across the whole country. To do this we need a collective vision and strategic direction for government and industry. We need to bridge the gap between what we know we need to do for New Zealand and the government cohesively enabling that. There are already examples of where we work well with government, and as with any working relationship, there is always room for improvement.

Challenges facing horticulture:



There are many challenges facing horticulture in addition to Covid-19 - freshwater and climate change regulation, regulation enabling us to grow healthy food and the long overdue overhaul of the Resource Management Act. If a piecemeal and fragmented approach is taken as we are forced to meet these challenges, we will miss a real opportunity as a sector and as a country to make a real lasting difference.

YOUR LEVY AT WORK

INDUSTRY WIDE ISSUES FOR INDUSTRY GOOD

Natural resources and environment



Resource Management

The government has announced its intention to split the Resource Management Act into three different sets of legislation:

- The Natural and Built Environments Act (NBEA) - to cover land use and environmental regulation.
- Strategic Planning Act (SPA) - other legislation relevant to development and long-term regional spatial strategies.
- Climate Change Adaptation Act (CAA) - managing retreat and funding/financing adaptation.

Key points on the proposed Natural and Built Environments Act:

- Regional and District Plans will be replaced by One Plan per region.
- Positive outcomes to the environment are to be identified and promoted prior to consideration of management of adverse effects.
- Biophysical limits are seen as central to protecting and sustaining natural resources.
- Those who exercise powers and functions under the Act will be required to give effect to the principles of Te Tiriti o Waitangi.
- National direction will be consolidated into a 'National Planning Framework'.

The proposed consultation will be via a select committee process. The key dates are a draft Bill in May, and then the Bill to be introduced to parliament and considered by select committee in December, with the intention that all three pieces of legislation be passed by the end of 2022.

HortNZ will develop a submission on the draft Bill following consultation with product groups, district associations and growers.



Water

Water Services Bill

HortNZ is developing a submission on the Water Services Bill.

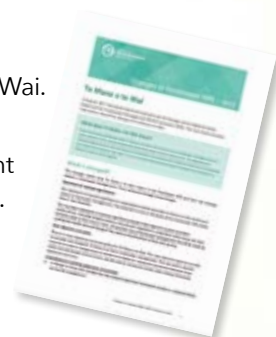
The bill will implement the government's decision to comprehensively reform the drinking water regulatory system. The Bill establishes Taumata Arowai as the new national water services Regulator.

Key points on the Water Services Bill:

- The implementation of Te Mana o te Wai.
- Drinking water suppliers to provide safe water through the development and implementation of safety plans.
- The protection of source drinking water by suppliers through the development and implementation of source water protection plans.
- Registration of drinking water suppliers.
- Multiple barriers to contamination being adopted.
- Ongoing monitoring and reporting.

The new requirements for water suppliers will apply to anyone who supplies water to others for domestic purposes. These regulations will capture some irrigation schemes, and some small supplies serving multiple users such as packhouses and worker accommodation.

HortNZ has been engaging with growers and irrigation schemes, and will make a submission in March.





Climate Change

Climate Change Commission

HortNZ is developing a submission on the Climate Change Commission advice to government on reducing emissions and adapting to climate change.

Key points from the Climate Change Commission's report:

- New Zealand's 2050 carbon zero target is achievable but not under current policy.
- Three new targets: 2% reduction on 2018 greenhouse gas emissions by 2025; 17% cut by 2030; and a 36% cut by 2035.
- Maximum cost of \$33.7 billion across 14 years, which is suggested to be significantly lower than predicted due to technological advances.
- Biggest impacts are to Transport (required emission reduction 50% by 2035) and heat, industry and power (required emission reduction 44.6% by 2035).
- The cost of keeping emissions within the recommended carbon budgets is estimated at around 1% of New Zealand's GDP (Gross Domestic Product) in 2050.

There are opportunities for horticulture identified within the report, with horticulture expansion identified as being an opportunity to achieve emissions reductions for New Zealand. The proposed reduction in the use fossil fuel for heat highlights the challenge of developing viable alternative heating sources for glasshouses.

Feedback will be sought from product groups and district associations, and HortNZ will make a submission in March. ●



Go to www.climatecommission.govt.nz to see the full Climate Change Commission's report.

RE-ENERGIZE YOUR CROPS!

CARBOFUEL™ is a complex foliar spray developed to address the carbohydrate levels in plants replenishing energy reserves for optimal growth and plant health. Agri Technovation formulated this product with alternate bearing in mind, in which this product assist mitigating yield in the 'off' years.



Agri
Technovation
Specialized to succeed

CROP PERFORMANCE
FUELLED BY SCIENCE
AND TECHNOLOGY

Bringing AT-ness to every Farmer

info@agritechnovation.co.nz | www.agritechnovation.co.nz



Health and safety in horticulture

Last year, 2020, will be remembered for Covid-19, lockdown, Labour winning the New Zealand election, Trump losing the United States election, changes in family circumstances – the list goes on, both good and bad. We faced an ever-changing world, still we Kiwis just got on with it and even managed to have a summer holiday.

By Kate Trufitt

Operating during the height of Covid restrictions was a unique situation with extremely enhanced requirements for safety. It was also an opportunity for us all to gain a little more appreciation for the importance of good Health & Safety practices.

In 2021 we look to continue the momentum. While many think Health & Safety is just a tick the box compliance requirement, we hope to change this perception by offering practical solutions that add value to growers' businesses.

The HortNZ Board has representatives from a diverse range of horticulture industries. I am a director on the HortNZ Board and the chair of the Horticulture Health and Safety Council (HHSC). Antony Heywood is a senior manager of HortNZ, general manager of Vegetables NZ and is the secretary of HHSC.

The HHSC work on behalf on industry to improve Health & Safety practices across horticulture.

During 2021, we will continue to update you with the work we are doing and look forward to engaging with more growers on Health & Safety. ●

“
...offering practical solutions that add value to growers' businesses.”



HHSC MEMBERSHIP	INDUSTRY / ORGANISATION REPRESENTED
Kate Trufitt - Chair	HortNZ Board and Apata Kiwifruit Ltd
Antony Heywood - Secretary	HortNZ senior manager, Vegetables NZ General Manager
Al McCone	WorkSafe - agriculture lead
Loy Martinez	NZ Hothouse - covered crops (vegetables)
Erin Simpson	NZ Apples and Pears
Alysha Crockford	Mr Apple
Sarah Cameron	NZ Kiwifruit Growers Inc
Silua Ettles	NZ Winegrowers



Design and construction of commercial, industrial, and rural buildings



Fixed price contracts



Free feasibility studies



Turn-key projects

Auckland
PH: 09 300 7384

Nelson/Marlborough
PH: 03 539 4750

West Coast
PH: 03 768 0751

**Queenstown/
Central Lakes:**
PH: 03 445 2750

Bay of Plenty
PH: 07 343 6744

Hawke's Bay
PH: 06 870 3255

Wellington
PH: 04 471 2232

Canterbury
PH: 03 359 0441

Otago/Southland
PH: 03 218 2750

TOITŪ



ISO 14064-1
ORGANISATION

Deloitte
FAST50

In partnership with
bnz***

Fastest growing companies 2018 and 2019



TUATARA
STRUCTURES

built forever



Alex Tomkins - inaugural winner of the Fruitfed Supplies Horticulture Scholarship with Massey University

Programme thrills students

By Alex Tomkins

Fourteen tertiary students from Massey, Lincoln, and Victoria Universities completed a two-week horticulture expedition around New Zealand late last year. The group comprised students from a range of disciplines including Horticultural Science, AgriBusiness, Food Marketing, Food Technology, and Engineering.

The Aotearoa Horticulture Immersion Programme (AHIP) was run by the Massey Business School and NZ Apples & Pears, with support from AGMARDT (Agricultural & Marketing Research & Development Trust), Zespri and HortNZ.

Students were exposed to the different value chains, various business models and potential career opportunities. The trip enabled students to grasp the sector's future challenges and opportunities. Students experienced the entire horticulture value chain from plant breeding to the end consumer. The group saw first-hand the potential role of technology, engineering and data management



to improve horticulture production efficiency and environmental sustainability, and to provide a longer-term solution for labour challenges.

Throughout the trip, the bus was used as a moving classroom, allowing students to reflect, debate, and critically analyse their learnings and insights from visits. Students were challenged to think about their observations in terms of opportunities and implications for the future of horticulture.

The trip started in Christchurch and delved straight into the vegetable seed industry while also looking at precision horticulture. The group made their way up the South Island visiting Kaikōura, Marlborough and Nelson where they were exposed to diversified farming systems, viticulture, hops, boysenberries, and Māori AgriBusiness. The second week was spent in the North Island, focusing on the kiwifruit industry, the apples sector, and agri-tech.

The programme ended in the capital with the students presenting their insights to the Ministry for Primary Industries (MPI) and HortNZ.

Major observations and insights from the trip include:	
Two-speed economy model	Within the horticulture industry, uneven growth rates within sectors have resulted in a two-speed economy. This is seen through the rapid growth of large corporate land management compared to smaller individual growers. Also, product groups primarily selling to export markets that are non-commodity and high returning are growing significantly faster than commodity horticultural products sold on the domestic market.
Volume to value to values	Historically within New Zealand's primary industries and horticulture sector, there has been a shift from volume to value. Recent transitions have seen a shift to values-based business models, with importance placed on longevity and prosperity for future generations.
Finite to infinite mindset	Students saw this in businesses where Kaitiakitanga and Manakitanga - showing respect for people and the land - were core values and reflected throughout the business and their story. Within the horticulture sector, there is an increasing shift in business values from a finite to an infinite mindset which is focused on long-term prosperity.
Consumer driven, Intellectual Property (IP) controlled value chains	During the AHIP study trip, students observed the consumer driven nature of horticulture with growing IP and Plant Variety Rights (PVR) controlled value chains, which bring significant value to the sector.
Data transparency and open innovation	Going forward, increasing collaboration within innovation and data transparency will allow for the technology and automation to improve efficiency and solve industry wide problems.
The missing middle of leadership talent	Over the next decade, a large proportion of industry managers and leaders will begin to retire. Therefore, developing future leaders and talent within horticulture to ensure knowledge is passed on needs to be an industry priority.

When you combine the knowledge of a third-generation grower with eager to learn university students, sparks fly. **Geoff Lewis** - asparagus and strawberry grower and founder of Lewis Farms and Tendertips - explained to students the importance of diversity, a longevity approach to business planning and collaboration.

Geoff has diversified his operations with dairy, asparagus and strawberries. The complementary seasons of asparagus and hydroponic strawberries provide work for employees almost all year round, reducing reliance on seasonal labour. Tendertips has been growing and packing asparagus for 40 years. Succession planning and longevity is a key part of the Lewis family's operation to ensure the business continues to be passed to future generations.

The asparagus grader and packer used by Tendertips is a testament to Geoff's understanding of the need for collaboration with innovation and technology investment, as no one grower can do it all alone. Geoff partnered with a Massey University student research project to develop the technology used for grading asparagus in the Tendertips packhouse. As an industry, how can we leverage university students to be the innovation engine and problem solvers for growers?

Alex Tomkins was the inaugural winner of the Fruitfed Supplies Horticulture Scholarship with Massey University.

Alex has now finished her studies at Massey University graduating with a Bachelor of Agri Commerce, majoring in International Agri Business. She has secured a role within the graduate programme at Southern Cross Horticulture in the Bay of Plenty. This role will enable her to get first-hand experience with a vertically integrated business in the kiwifruit industry.

"I'm really interested in the export orientated kiwifruit, apple and avocado sectors and how these crops tie in with all I've learnt throughout my degree, from horticultural production to supply chain management and international marketing," says Alex.

For Alex, receiving the Fruitfed Supplies Horticulture Scholarship has helped her enormously. It was Fruitfed Supplies Technical Advisor Celese Prior, whom she met at university, who first suggested she apply for the scholarship.

"I'm really grateful for the financial support. I would definitely recommend applying for the scholarship as it has helped me make industry connections." ●



...the bus was used as a moving classroom, allowing students to reflect, debate, and critically analyse their learnings and insights from visits.

Growers get ready as FEP deadline draws near

Some Farm Environment Plans (FEPs) will soon be mandatory in Gisborne and it is hoped lessons learned there will help inform growers around the country when it is their turn.

By Kristine Walsh

Under the Tairāwhiti Resource Management Plan, FEPs will be compulsory in Gisborne from 1 May this year for any farm that grows annual crops or commercial vegetables, or intensively farms animals.

And while there has been some confusion around when, where and how FEPs for other producers will become mandatory, growers are being advised to be proactive not only so they are compliant, but as a potential boost for their businesses as well.

For those in Gisborne who do have deadlines to meet, HortNZ organised workshops that started on 11 February and continued into March to guide them through mapping their properties and working out how they operate around nutrient, irrigation and biodiversity practices.

The workshops stepped growers through the process using the Environmental Management System (EMS) add-on module designed, certified and audited by the HortNZ-owned NZGAP (New Zealand Good Agricultural Practice).

But even as more than 20 growers gathered for the first workshop, they did not know whether the audited NZGAP add-on would be accepted by Gisborne District Council (GDC).

"Industry templates are accepted by GDC in their rules, but we are seeking acceptance of the EMS audit in lieu of a Council review of each FEP," says HortNZ sustainability and extension manager Ailsa Robertson.

"The EMS framework involves a grower using the FEP template, and the independent auditor using the EMS audit checklist. This checklist is aligned with the EMS standards, which are benchmarked to regional council requirements,



so these parts all come together in one, comprehensive assurance system for farm plans."

It has been endorsed by Environment Canterbury, but at the time of the first workshop, GDC said it was "currently evaluating whether this pathway can be used as a Farm Environment Plan (and) a decision is expected in the near future."

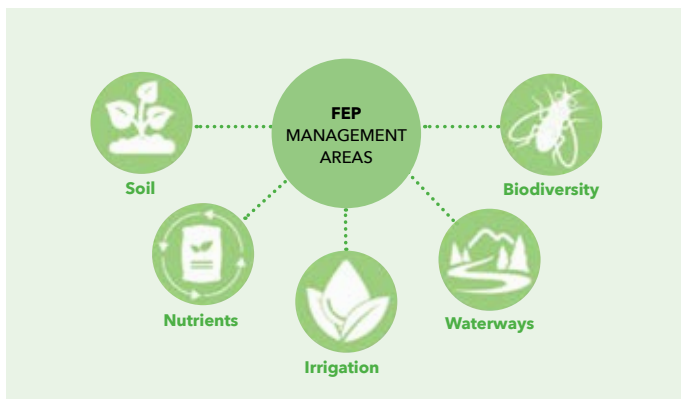
"Growers want to do the right thing but we do feel it is very hard to find the right information around what that actually is," says Gisborne Produce Growers Association chair (and Process Vegetables New Zealand board member) Calvin Gedye.

“

Growers want to do the right thing but we do feel it is very hard to find the right information around what that actually is

To be fair, GDC was one of the first local bodies to introduce mandatory FEPs and was itself operating in a bit of an information vacuum. It could not, for example, give details on when FEPs would be compulsory for growers of permanent crops because it had "not yet received new directives from central government."

In that context, HortNZ says the work it and other primary sector organisations are doing with both central government and GDC will likely give clarity to other local bodies as the FEP system rolls out around the country.



In Gisborne, HortNZ is preparing a case study of a local grower to show Council the layers of information that sit behind an NZGAP farm plan “to provide them assurance that growers using the EMS are meeting their requirements.”

“So we are actively working to seek recognition of EMS farm plans and the EMS audit,” says HortNZ sustainability and extension manager Ailsa Robertson.

“**So we are actively working to seek recognition of EMS farm plans and the EMS audit**”

“At the same time we are lobbying central government to accept industry assurance programmes, like the GAP schemes, in the new national freshwater regulations. If we are successful this would filter down to all councils, which would offer a lot more clarity going forward.”

In addition to the Gisborne sessions, HortNZ has already run NZGAP add-on workshops in Pukekohe, and plans to do the same in Levin, Hawke’s Bay, Marlborough, Central Otago and Northland.

Addressing the attendees in Gisborne, Ailsa Robertson said that while FEPs have to be done, they are nothing to be worried about.

“A farm plan is basically about documenting what you are already doing on a day-to-day basis, understanding what your key risks are, and making an action plan to address those over a period of time.”

In town to guide growers through the process, agricultural engineering consultant Andrew Barber said it isn’t about being the best, but about being better.

“Don’t panic if you have to tick ‘no’ to a question on the checklist ... if everyone was up to speed we wouldn’t need FEPs at all,” he said.

“There is no wrong answer - we can’t all be perfect from the get-go - it is about finding and acting on opportunities to take action.”

TRANSTAK[®]

ENGINEERING & EQUIPMENT

The TRANSTAK[®] range of Bin Trailers offer the fruitgrower outstanding bin handling efficiencies.



Transtak[®] 3500N/NS: 6 bin carrier

- Tractor front/rear mounted to load/carry/stack 3-6 full bins & 9-12 empty bins.
- 3000kg load capacity/1.0 metre lift with forks tilt & Transtak[®] Soft-Ride suspension.
- T3500NS model with forks side-shift to stack wooden & plastic bins.



Transtak[®] 3000LT: 6 bin trailer

- 3000kg capacity/6 bin capacity bin trailer with LED tail lights & hydraulic lock-out for on/off road use.
- Max 500mm lift height with forks tilt to load anywhere.
- Transtak[®] Soft-Ride suspension for kiwifruit, apples, stonefruit etc.

Transtak[®] 2000N bin carrier

- Tractor front mounted: 3 full bins/6-9 empties.
- 1.0 metre lift to stack & unstack bins/narrow 1850mm width.
- Hydraulic accumulator soft-ride suspension fitted.



Transtak[®] 1500L/LE 3-4 bin trailers

- Transtak[®] 1500L 3 bins: apples, kiwifruit, avocados, stonefruit etc *Low-Narrow 3.5 metre row apple option.
- Transtak[®] 1500LE – 3-4 bins/1900kg capacity with plug-in extension forks.
- Transtak[®] Soft-Ride suspension fitted.



Transtak[®] 750ATV bin trailer

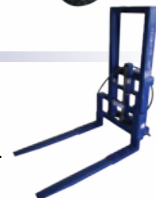
(Demo video on the website)

- Efficient ATV: 800-900kg 2-bin handling trailer.
- Electro-hydraulic lift & lower.
- Transtak[®] Soft-Ride suspension fitted.



Transtak[®] 1200BF 3 ptl stacking binfork; 2 bin capacity

- Bin stacking in orchard rows 1200kg capacity.
- Soft – Ride hydraulic accumulator fitted.



Transtak[®] 500BF Soft-Forks (MK 3 Model)

- 300 – 500 kg capacity
- Independent suspension for a smooth ride.
- Torsion sway bar fitted.



TRANSTAK ENGINEERING AND EQUIPMENT

30 Hau Road Motueka.

Freephone **0800 30 30 63**; sales@transtak.co.nz

www.transtak.co.nz

ADD-ON HELPS GROWERS GET AHEAD OF THE GAME

An environmental 'add-on' could help growers get a jump on future demands for Farm Environment Plans (FEPs), and give their businesses a big boost in the process.

Supporting its grower group of around 80 orchardists, Gisborne marketer First Fresh is helping them achieve Environment Management System (EMS) standards as an add-on to their existing NZGAP (Good Agricultural Practice) certification.

Environment Canterbury has already endorsed the EMS as a stand-in for FEPs. And as other local bodies consider whether they will do the same, those growers will be ahead of the game as FEPs become mandatory around the country.

"None of our growers can operate without NZGAP certification so what we're saying is why wouldn't you also get the EMS add-on? It's good for the environment and it's really, really good for your business," says First Fresh compliance co-ordinator Mathew Bannister.

"Growers can focus on making any adjustments highlighted by the information in their plan and that makes for better practice, and much better business."

First Fresh had already worked on helping its growers get NZGAP's Social Practice add-on - which addresses labour force issues in the industry - and with that done, the EMS is the "first cab off the rank."

And to get the ball rolling Mathew did trials with a couple of growers to see just how easy it is, and what sorts of benefits can be achieved.

In the case of one trial involving a grower producing citrus, persimmons and kiwifruit, the operator did not have an on-line map ... a requirement for the EMS add-on.

"So we jumped on Google Maps, spent an hour drawing it up, and now it's done," Mathew says.

"The bonus is he now has this fantastic new tool. For example, he now knows he has 2.5km of shelter belt so when he books the trimmer, he can be precise with information and that saves time and money.

"It's the same with information about things like waterways and nutrient budgets. Once you have that in hand you have the right background to inform decision-making going into the future."

During the other trial, the grower needed to record carbon emissions which meant measuring their fuel consumption, and that led to some interesting conclusions.

"Linking his fuel use to his income meant he could see where he had been using heaps of diesel even when there wasn't a lot of money coming in," Mathew says.

"Through that he realised he was harvesting and trucking low-grade fruit that wasn't bringing him a return, so he could plan better for next season to avoid that wastage. So not only did he fulfil his reporting requirements, he improved his operation as well."

In both of the trial cases, setting up the EMS allowed the growers to see any gaps between what they were already doing and what the EMS required, and according to Mathew Bannister, "the difference was negligible".

"Because our growers are already doing such a lot of good work, meeting EMS expectations is not a big challenge and that's what's given us the confidence to get behind it.

"Just a few years ago some were a bit resistant to the requirement to get NZGAP certification but now it's just a normal part of doing business. That's how we see the whole EMS/FEP process."

While some growers see the need for FEP or EMS structures as a regulatory niggles, Mathew Bannister says there are huge advantages for orchardists in particular.

"Permanent plantings aren't something you can switch out every year, they are there for a generation, which is why we describe growers as being incurable optimists," he says.

"In the face of all sorts of challenges they stick with it and just work towards doing better every year, and plans like these give them the evidence to ensure the decisions they make are the right ones."



SOME FEP FACTS

- HortNZ says Farm Environment Plans (FEPs) help growers assess their environmental risks, take action where required, and demonstrate progress on environmental objectives.
- FEPs are not compulsory in many areas but under the 2020 Resource Management Amendment Act, they will eventually be "mandatory and enforceable."
- HortNZ is working with councils around the country to see its NZGAP (Good Agricultural Practice) Environment Management System (EMS) add-on approved as a stand-in for an FEP.
- The NZGAP programme covers risk assessment and good practices to manage resources, including protection and sustainable use of land and water; responsible use of agrichemicals and fertilisers; waste management; biodiversity; and waste, emissions and energy.

DRAFT FRESHWATER REGULATIONS DUE MID-YEAR

Aside from the issue of Farm Environment Plans, the Ministry for the Environment (MfE) and the Ministry for Primary Industries (MPI) are also working on the development and introduction of certified Freshwater Farm Plans (FWFPs).

The requirement comes as part of the Resource Management Act Amendment Act 2020, and according to MfE climate and water agriculture analyst Maggie Rogers, the agencies will confirm the process for establishing FWFPs as soon as possible.

"We know many farmers are already working to identify and reduce risks to the environment on their properties and we intend that the certified FWFP system will build on this, providing a mechanism to help farms comply with the National Environmental Standard for Freshwater Management," she says.

"In many cases a farm's existing plan may be able to be transitioned or adapted to meet requirements for a certified FWFP (and) this could apply to the NZGAP Farm Environment System audited add-on, providing it meets the requirements that are being developed.

"Until the new Freshwater Farm Plan regime is in place in their area farmers should continue using any existing plans to manage environmental risks. Implementing a certified FWFP is an ongoing process, not a one-off event. It's about understanding a farm's risks, and then continuous improvement moving the farm in the right direction."

“

None of our growers can operate without NZGAP certification so what we're saying is why wouldn't you also get the EMS add-on?

MfE and MPI are engaging with stakeholders and experts in farm planning (from industry, councils and Māori) during drafting of the regulations and it is expected that there will be public consultation in mid-2021, Maggie Rogers says.

"The final regulations are expected to be in place in 2022 and there will be a gradual roll-out of the new system, by catchment areas, based on a range of priority criteria.

"Freshwater Farm Plans will become part of a wider programme of continuous improvement in on-farm environmental management, as part of the government's road map to a sustainable future for the food and fibre sectors." ●



2021 Horticulture New Zealand Director Elections

Calling for Nominations for Two Directors

The Horticulture New Zealand constitution provides for a term of three years for elected directors with one third of directors retiring by rotation each year.

The following Directors retire by rotation this year.

Bernadine Guilleux is offering herself for re-election

Mike Smith is **not** seeking re-election

In accordance with Clause 12 (e) of the Horticulture New Zealand Constitution nominations are now being sought from individual grower members, affiliated Product Groups and affiliated Grower Associations.

Candidates must be nominated by at least two grower members or affiliated organisations.

The election is based on electing the best people for the job with no allocated seats for product, sector or regional representatives.

Candidate criteria

Nominated candidates must be:

- a person who is an active grower member of HortNZ; or
- a director, shareholder, partner or trustee of an active grower member who is appointed by that member as the principal representative of the entity in their dealings with HortNZ; or
- an employee of an active grower member who is appointed by that member as the principal representative of the entity in their dealings with HortNZ.

If more than two (2) candidates are nominated, an election will be held where individual grower members will vote for their preferred candidates. A profile for each candidate will be included with the voting papers distributed to growers.

The nomination form and position description is available on HortNZ's website www.hortnz.co.nz or can be requested from the Board Secretary via email Kerry.Norman@hortnz.co.nz or by phone 0508 467 869.

Nominations close at 5.00pm on Friday 9 April 2021



Newly elected Chair of New Zealand Avocado Growers' Association Inc, Linda Flegg, inspects avocados at KauriPak, the Katikati family business of which she is a Director

Profitable, sustainable businesses – Linda's goals

AVOCADO
FEATURE

Ensuring the industry association is relevant and sustainable into the future and grower views are well represented are among the goals for newly elected Chair of New Zealand Avocado Growers' Association Inc, Linda Flegg.

By Elaine Fisher

An independent review of the structure of the avocado industry in 2020 highlighted a number of areas that growers felt could be improved, Linda says.

"We've never undertaken a formal review before, so it's a real milestone for the industry. The information in the final report will give us recommendations to decide on a pathway to ensure we're relevant for the next 10 years and beyond. That relevance is all about how we as an industry association support our members to have profitable and sustainable businesses.

"In combining the two organisations, NZ Avocado Growers' Association Inc, and Avocado Industry Limited under the NZ Avocado banner, NZAGA lost its visibility as an organisation. The review reported that growers want to see that visibility restored, and I support that."

Other challenges ahead include competition from Chile, particularly in Australia; ensuring Asian markets receive the quality fruit they require; and handling the significant on-shore crop increases predicted to come on stream within the next 10 years.

"Chile exported around 400,000 trays of avocados to Australia this season and that's probably less than one percent of its total crop, so that's a concern. While ensuring we retain our place in the Australian market, we also have to pay attention to Asian markets to ensure we retain and grow export volumes there."

In the current season, 1,016 New Zealand growers exported around 4.6 million trays of avocados, up from 2.9 million trays in the 2018-2019 season.



KauriPak avocado Business Manager Jenny Gilliver (left) with her sister Linda Flegg



Linda Flegg carrying out pest monitoring on an avocado orchard

A plus (if there is one) of Covid-19, is that consumers are seeking healthy foods, increasing the demand for New Zealand avocados, but the negative impacts of the pandemic have included disruptions to shipping and increased costs of air freight.

“Fortunately, this season’s fruit has been of very good quality and has stood up well to shipping delays.” While exporters and NZ Avocado are continuing to work closely with airlines and shipping companies, Linda believes disruptions are likely to plague the coming season too. “We are not a big enough industry to charter ships as Zespri does for kiwifruit.”

“

Avocado growers are really passionate about long-term sustainability - not just for the environment, but social and economic sustainability too.

With all those challenges ahead, Linda’s role in the chair will not be easy, but she is focused on both the immediate issues and those of the future, with a vision “to quote former NZAGA chairman Ashby Whitehead - to make the boat go faster”.

“Avocado growers are really passionate about long-term sustainability - not just for the environment, but social and economic sustainability too.

“We want the industry to have a positive sustainability story by making evidence-based decisions for everything that we do. This will allow us to achieve our goals such as leaving a light footprint on the earth, supporting strong communities, and providing safe workplaces.”

For Linda, her governance role requires stepping back a little and looking at the big picture, something she has learnt to do since being elected to the NZAGA in 2016.

“I’ve always been a details, operations person but quickly realised that there is a difference between operations and governance. I joined the board to give back to the industry which has given much to me and to learn new skills.”

In 2017 Linda was elected vice-chair. When in 2020 chairman Tony Ponder stepped down, she became the first woman in the NZAGA’s 40-year history to take the role. While believing roles in any organisation should go to the person best suited for that position, Linda is nonetheless pleased that the current NZAGA board has a strong female presence with Karen Pickford, Maria Watchorn and Paula Kearns also at the table. This reflects the fact that many women are involved in the management of avocado orchards and make up around 50% of the industry workforce.

Linda, a member of Women in Horticulture, an organisation which supports women in the industry and encourages them to take leadership roles, grew up immersed in horticulture.

Her parents first bought a dairy farm at Kauri Point near Katikati in the 1950s, and over time converted the land to grow a wide variety of crops from pumpkins to kiwifruit and avocados.

As soon as she was old enough, Linda helped in the orchards and packhouse, but didn't see a career future in the industry. "When I was at high school, the only career I knew of in horticulture was manual labour. How different it is now, with so many, many opportunities."

Educated at Katikati primary and high schools, Linda completed a certificate in business computing thinking about a career in IT. Her first job was in container logistics at the Port of Tauranga with Seatrans. "Part of my role was to train staff to make the transition from the DOS based computer software to Windows 1."

After five years and seeing little opportunity to progress in that role, Linda joined the private adult learning provider Bay Business Academy, training women to rejoin the workforce and helping teenage girls who struggled at school to gain the skills to prepare for work.

In 1999, when her older sister Jenny Gilliver left to start a family, Linda stepped into her role in the family business. Today she is a director of the businesses Morris Moore Farms, KauriPak, AvoPic and Kingsmill Engineering, which between them employ 20 full-time staff.

Morris Moore Farms operates the company's avocado and kiwifruit orchards; KauriPak packs avocados for 160 grower clients; AvoPic is a contract avocado harvesting company servicing KauriPak clients, and Kingsmill Engineering maintains the machinery and equipment operated by the businesses.

When Linda first joined the family firm, her role was only just full-time. Today she is responsible for the companies' compliance requirements including health and safety, food safety, phytosanitary requirements and GLOBALG.A.P. while another full-time staff member carries out the administration work that once made up her role.



Miniature bull terrier puppy, River, with Linda Flegg, Chair of New Zealand Avocado Growers' Association Inc, who is also a judge and breeder of bull terriers

Linda's first steps into industry leadership began when she joined the NZ Avocado Packer Forum which represents the companies packing avocados and has a memorandum of understanding with NZ Avocado, consulting on post-harvest requirements.

Four years ago, Linda was elected chair of the Katikati Fruitgrowers' Association following a long family tradition of involvement in grower representation.



It is still possible to be profitable on a small orchard as well as a large one, so long as growers apply best practice and produce quality fruit.

"When I stood for a position on the NZAGA board in 2016 I was up against two men and was pleased to win the seat." Re-elected for a second term, Linda became deputy chair, and when Tony Ponder signalled his intention to stand down, expressed her willingness to upskill for that role.

While very much her own woman, Linda nonetheless draws on the decades of experience her parents Dorothy and Hugh Moore have in the horticultural industry both as growers and in leadership roles.

Hugh a former NZAGA chairman, is renowned for his exceptional memory of facts and figures, something Linda finds invaluable in helping understand the background to many of the avocado industry's practices and quality standards. "Knowing the why behind the things we do helps with current decision making."

The "fashionable and trendy" status of avocado as a super food is among the attractions for many growers, and it is an industry which offers opportunities for all levels of orchard size and investment.

"It is still possible to be profitable on a small orchard as well as a large one, so long as growers apply best practice and produce quality fruit."

Bull terriers are Linda's other passion. For more than 20 years she has bred and trained the breed under the name Vortex Kennels. Such is her expertise that Linda is a national and international judge, who has regularly travelled overseas to judge at prestigious events.

"I have four adult bull terriers and two puppies at present. Numbers of pedigree bull terriers are dwindling, and my goal is to preserve the breed by working with owners and breeders to ensure that we continue to produce healthy bull terriers with sound temperaments."



To keep up to date with our news and activities, join our membership database by emailing info@women-in-hort.nz. We welcome everyone. ●

TAKING PART IN A HORTICULTURE FIELD DAY?

THINK ABOUT BIOSECURITY! HERE ARE SOME EASY STEPS.

Field days are a great way to share information and knowledge in a hands-on way. However, movement of people, goods and vehicles between farms/orchards during a field day can present a biosecurity risk. Pests or pathogens can inadvertently be carried:

- onto the host's property
- back to the attendees' property.

Implementing simple everyday biosecurity practices can help to minimise the biosecurity risk for both hosts and attendees, which is a great outcome for all.

If you are an **ORGANISER:**

- Include biosecurity messaging on promotional material and in communications with host properties.
- Minimise the number of vehicles and use transport that is not usually used on the farm/orchard if possible.
- Keep a register of all attendees to ensure tracing is possible if required.
- Avoid visiting properties that are known to have high risk pest, pathogen or weed infestations.

If you are a **HOST PROPERTY:**

- Make sure good biosecurity practices are visible on your property.
- Provide a biosecurity briefing about the actions you'd like visitors to take so that attendees know what you expect of them.
- Ensure that you have a designated and clearly signposted parking area.
- Provide a footwear wash and disinfection station at the point of entry e.g. boot scrubbers and water for cleaning, sanitising spray or a footbath containing an appropriate sanitising product for disinfection.
- Provide hand sanitiser if people will be touching plants or soil.
- Avoid use of other people's tools and equipment for demonstrations, unless they have been thoroughly cleaned and disinfected first.
- Monitor the part of your property where the visit took place over time for unfamiliar pests, pathogens or weeds.

If you are an **ATTENDEE:**

- Make sure your clothing and footwear is clean. Avoid wearing clothes and shoes that you wear on your own farm/orchard.
- Clean and disinfect your footwear between each site during the field day and before returning to your own farm/orchard.
- Follow all biosecurity signage and requests at host properties.

BE A BIOSECURITY CHAMPION:

HELP TO PROTECT YOUR PROPERTY AND YOUR SECTOR FROM PESTS AND PATHOGENS.

Disclaimer: While every effort has been made to ensure the information in this publication is accurate, Horticulture New Zealand does not accept any responsibility or liability for error of fact, omission, interpretation or opinion that may be present, nor for the consequences of any decisions based on this information.



YOUR INDUSTRY

ACROSS THE SECTOR — ACROSS THE COUNTRY

Going bananas

Page 58





Hawke's Bay Fruitgrowers' Association President Richard Pentreath

Plan and hope: harvest 2021 underway

Hawke's Bay horticulturalists have pulled out all the stops to plan for what will be the trickiest harvest in a decade with a tight labour supply due to Covid-19 restrictions and a strong New Zealand economy.

By Rose Mannering

Hawke's Bay Fruitgrowers' Association president Richard Pentreath says there is no question growers harvesting apples and kiwifruit will face shortages. "There will not be enough, we won't get anything like the number of New Zealanders we need. Unemployment levels are well below what was predicted. The uptake of subsidies for unemployed people to relocate has been very low. People with a history of unemployment have been offered a 'Pastoral Support Plus' subsidy of \$1,000 if they move to a different region to help with the harvest, and stay for a period of six weeks or longer.

Growers have been proactive, and those who may have been successful creating a point of difference might help. Competition for labour will hit its peak from mid-March through into April, as multiple apple varieties and kiwifruit all begin to come on stream.

Increases in wages Recognised Seasonal Employer (RSE) scheme workers at \$22.10, and the minimum rate increasing to \$20.00 an hour on 1 April may lead to growers leaving some of their lower paying crops or varieties behind. Other innovative solutions include the setting up of programmes for senior school students picking over their Easter Term One break. "We are looking at ways to think outside the box, it will be a matter of somehow getting through," Richard says.

T&G had a promising start to their apple harvest in early February with one of their new varieties, Jugala, moving from tree to ship without any delays. Early shipments of Jugala were destined for Vietnam and China.

T&G East Coast supply manager Ivan Angland acknowledged it will be a tricky season.



Richard Pentreath was thrilled to be able to find workers to undertake maintenance jobs - mulching young kiwifruit vines - prior to harvest. Spreading straw from left, Thomas Moeke, Ngati Martin, Rarangi Paku Matiaha

Like all industry participants, T&G know it will be tight with their labour supply. "We have done a lot of modelling; there will be tight periods. We will be staying calm and focusing on quality as we head into the Royal Gala harvest," he says.

Ivan is hopeful they will be able to harvest most of their crop. "We don't foresee issues, but if we have to bypass crop, we will."

A modelling tool has been sent to all growers and suppliers to assist them with planning for their harvest. "We meet daily on this issue, we don't want anyone to feel isolated," he says. He expects suppliers will be taking unprecedented steps as each business does what it can to remove the crop. "The net will go wider if they have to; family members may be called in to help."

The final pick in some varieties may be sacrificed due to the labour shortage. "The last pick, or 10 to 15% of the crop, will be at risk of being left behind as growers move to the next variety," he says.

T&G feels comfortable with supply of its flagship variety Envy as it ripens later in the season, and because of its propensity to produce large fruit that is easy to pick. "Pickers want to pick it; we are in a lucky position with Envy as it is a premium product and will be treated accordingly."

RSE workers are coming out of MIQ (Managed Isolation and Quarantine) from early February. "We will be taking it slowly, so they get work fit; they are thankful we have invested in bringing them out here."

In late November the government announced 2,000 RSE workers from the Pacific Islands would be allowed to come into New Zealand. Extra government measures include raising the base payment to \$22.10, paying Pacific Island workers a minimum of 30 hours a week while they are in MIQ, as well as flights and MIQ costs, a total of \$7,000 per worker before a single apple is picked.

AgFirst consultant Jonathan Brooks says the apple harvest is running five days earlier than a normal season. Most growers have navigated through the season with only small amounts of hail in Hawke's Bay, and what initially looked like a stellar fruit season has pulled back to a good average, with a wet November contributing to a slow up in size.

He believes the looming labour shortage will erode the professionalism of growing in New Zealand, with no guarantee of labour supply.

"There will be serious challenges around labour; we are certainly not in the position of control we have been for the last few years - we are back to 'winging it'," he says. Growers have managed as much as they can, but with limited resources and opportunity.

Ministry of Social Development (MSD) East Coast regional commissioner Annie Aranui says community engagement with MSD to try to plug labour gaps has been impressive. "We are all trying to make this season as positive as we can."

10-15%
THE LAST PICK, OR 10 TO 15% OF THE CROP, WILL BE AT RISK OF BEING LEFT BEHIND AS GROWERS MOVE TO THE NEXT VARIETY

The limitations on the numbers of backpackers and RSEs coming into New Zealand because of Covid-19 restrictions has meant employers need to do things differently to source their labour. There has been a greater focus on sharing between different product groups and regions to accommodate different peaks and troughs. "This will stand us in good stead going forward," she adds.

The greater reach by the horticultural industry to find pickers has made more people aware of career pathways within the industry. With some planning, she believes more continuous employment can be offered by horticulture.

“

The greater reach by the horticultural industry to find pickers has made more people aware of career pathways within the industry.

The government has supported different study options allowing for greater personal development.

"We accept it is a huge worry for employers, but also huge pluses. We are pleased with how everyone got through thinning," she says.

All of the government agencies have stepped up to do what they can - Hastings District Council, Ministry for Primary Industries, Ministry of Business, Innovation and Employment and Ministry of Social Development - everyone has stepped up.

A trial to offer pastoral care for employers taking workers off the domestic purposes benefit has been rolled out to a wider group at the start of harvest.

Richard Pentreath says that on his own kiwifruit block a heavy fruit set led to a big thinning job; he had 20 school-age workers thinning through the summer. "They were slow, but did a reasonably good job," he says. The kiwifruit crop is of good quality with high dry matter, with the size down a little on predictions.

Last season's kiwifruit returns were very good, and high prices are expected to carry through to the following season. "We are fortunate we are selling a product that is considered good for your health; millions of dollars of research money has been spent backing up these claims with science."

"Now we have to wait and see if we can lure pickers away from apples for the second and third weeks of March," he says. ●

Pack Freshness with Confidence

SmartFresh™ InBox

New! AgroFresh is pleased to announce registration of SmartFresh™ InBox for apples and kiwifruit.

The original post-harvest choice to maintain consumer-desired produce freshness, flavour and quality is now available for convenient "on the move" fruit quality protection.

SmartFresh InBox, now available for the first time in New Zealand, is an easy to use sachet that delivers AgroFresh's proven SmartFresh technology to inhibit the negative effects of ethylene and maintain fruit quality throughout the distribution chain.

Simply place the SmartFresh InBox sachet in the box and it is ready to be shipped immediately or stored depending on your needs.

- Protect shipments and target new business opportunities in long-distance markets
- Ideal for pick, pack and ship
- Reduce food loss



an AgroFresh solution



Actual size:
40.6mm x 45.7mm

AgroFresh

We Grow Confidence™

AgroFresh.com

FOR APPROPRIATE USE BY CROP, PLEASE CONTACT AGROFRESH NZ LTD:

Jane Turner, Commercial Lead
JaneTurner@agrofresh.com 021 777 024

PLEASE NOTE: Individual results may vary. Read entire label and directions before using this product. SmartFresh™ InBox is registered pursuant to the ACVM Act 1997, No. P9052

™Trademark of AgroFresh Inc. © 2021 AgroFresh Solutions, Inc. All rights reserved.



Kevin Bayley (right) with a trusted RSE worker

Season challenges even the toughest of growers

Kevin Bayley, who has been growing fruit for more than 30 years in the Hawke's Bay, says the risk with Covid-19 is that it makes New Zealand horticulture unsustainable.

By Andrew Bristol

"The fruit's been stunning this year - it's the best I've ever seen," says Kevin.

"The rain in November was the making of the season and it hasn't been too hot. We winged it with the summerfruit harvest but with apples, there's just not going to be enough workers to get the crop off."

Kevin estimates that Hawke's Bay is going to be about 4,000 workers short.

"Locals can never make up that shortfall and good people are hard to find. Several of my permanent employees have worked for me for more than 20 years, while some last for less than a week. That is why we need the Recognised Seasonal Employer (RSE) scheme, end of story, even though a lot of people are saying that technology is

going to change our dependence. But that's 20 years away and won't happen quickly enough."

Kevin says thanks to Covid, everything's in disarray.

"The plastic crates the supermarkets demanded we put produce in this season were supposed to arrive in September but are now scheduled for February. It's also increasingly difficult to get parts for tractor and machinery repairs.

"There's going to be a point where New Zealand's economy is affected by worldwide supply shortages."

Kevin is constantly developing his land. "You have to keep up with development as trees get old. I have the plant variety rights to my own apple, Bay Queen. Ten new hectares of this variety has just cost us \$1m in set-up costs."



Top image: The Fruit Shop, Hastings
 Bottom image: Bay Queen apples

Kevin says he enjoys being a grower but it is quite stressful. "Some things I just don't get. New Zealand prides itself as one of the world's best food producers and yet as a grower, there are all these obstacles to negotiate."

"Also, the two supermarket chains in New Zealand are competing with each other to drive returns to growers down, which is not sustainable. What's more, customers want perfect produce, but in New Zealand they're not willing to pay for it."

Five years ago, Kevin set up a shop in Hastings, which his daughter runs. "The shop takes a lot of energy and my daughter does a great job. The shop's doing really well and is quite iconic in the Hawke's Bay."

Kevin says the horticulture industry is changing. "There are fewer and fewer family-owned enterprises and land is being sold to corporates for development. For smaller growers, it's getting too hard."

"There are growers pulling out apples before harvest this season because of the labour shortage. What the horticulture industry does is awesome, it is a good industry, but there are many challenges at the moment." ●

YOUR PARTNER FROM NEW ZEALAND TO THE WORLD.

At MSC, we provide our apple clients with direct 24/7 access to our vastly experienced local specialists. Our hands-on approach to customer service is supported by an advanced reefer fleet and service routing that offers competitive transit times from New Zealand to the key international apple markets.

MSC

MOVING THE WORLD, TOGETHER.

[msc.com/apples](https://www.msc.com/apples)



James Greenlee, Grove Manager

AVOCADO
FEATURE

Tauranga bottler aims for the top

It's the good oil – Avocado Oil New Zealand Ltd selling under the 'Grove' label, based at Te Puna near Tauranga.

Words by Geoff Lewis : Photographs by Trefor Ward

Founded by entrepreneurs Doug Batchelor, Brian Richardson and Harman Grouwstra, Grove now produces and exports avocado oil to more than 20 countries worldwide including China, Japan, Russia, Australia and the Middle East.

Global sales and marketing manager Greg Ryan says the avocado oil extraction business started off as a small-scale enterprise more than 20 years ago using a reconditioned German Flottweg olive oil press which is still in use today.

"We believe we were the first in the world to produce extra virgin avocado oil, and aim to produce the best quality avocado oil in the world."



The avocados go through the machine and the extracted product is stored in one-tonne, 1,066 litre bags or 'intermediate bulk carriers', packed in one-cubic-metre square boxes before being bottled.

The raw material comes in the form of 2 million kilograms of 'processor grade' fruit, mostly from Bay of Plenty avocado packhouses - fruit which is not up to standard for sale and export as fresh produce.

"We started to go around the world and see if we could sell it. At that stage there were very few people producing extra virgin avocado oil and the industry was in its infancy."

Ryan says avocado oil has become sought-after in culinary applications as it has the second highest 'smoke point'



Water is separated from oil



Robin Tessendorf,
Production Manager



Greg Ryan, Global
Sales and Marketing



Avocados being cleaned
prior to processing

- the point at which it will begin to smoke during cooking applications like frying (it is peanut oil that has the highest smoke point) and is a healthy choice for baking and in searing foods at high temperatures.

“
...We believe we were the first in the world to produce extra virgin avocado oil, and aim to produce the best quality avocado oil in the world

“For cooking, avocado oil is superior for flavour. Customers in our Asian markets love it. We are now finding different applications globally in baking where avocado oil is used in place of butter.”

Grove markets its oil in 250 ml bottles as extra virgin, or with lime, garlic, lemon pepper or chilli flavourings.

In New Zealand the product goes out through both the major supermarket chains, which account for 80% of national sales.

Production manager Robin Tessendorf says that following oil extraction, the pulp (the remains of the fruit), the skins and pits, are provided to a Mount Maunganui-based compost manufacturer. However, Grove is always on the look-out for innovative ways of using the waste product sustainably.

The avocado harvest runs from September to April and Grove employs 16 people during January and February, the top of the season.

Manager James Greenlee says Grove dominates the Australasian avocado oil market, supplying between 5% and 10% of the whole international market for avocado oil, and could sell more than it currently produces. ●

Driving Crop Performance



Horticulture TasmanCrop
THE HORTICENTRE GROUP | 0800 855 255

NovaTec®

- Sustained Nitrogen availability with reduced leaching
- Improves root health, plant growth and crop quality
- Excellent nutrition
- Talk to us about the Novatec Fertigation range



Nelson harvest after hail

When Jamin Brown from Mad Melon heard about the hail-damaged apples around Tasman after the Boxing Day storm, he decided to pitch in and help some of the growers by juicing as many as he could.

By Anne Hardie

The small start-up business that kicked off the ground last year with watermelon juice can process about 80,000 litres of juice a month, so he is concentrating on some of the region's smaller growers and providing them with some return for their fruit.

"It's never going to be enough when you compare the losses, but at least it will put food on their table. That's what we try and achieve as a nation when disasters happen, right? We pull together and work through it."

The hail prompted him to think about markets the business could align itself with, should it take on additional work. Apple juice returns are low and markets saturated, which prompted him to look for a point of difference that justified juicing the damaged apples. He is keeping those details under wraps.

The project targets a fraction of the damaged crop, but it has created possibilities for future juicing and growth.

"The new markets we are positioning ourselves in have required substantial investment from us to handle the hail demand. It is in my best interest to continue to grow these markets year after year, considering hail will always be a threat to the growers."

Meanwhile, bins of hail-damaged apples are heading to Hawke's Bay where they will be juiced at Cedenco. Motueka Fruitgrowers' Association chairman Richard Clarkson says Cedenco still had bins in Nelson after closing the facility last year and those would be filled with damaged apples to head north at harvest.

It's been a tough season for growers, but he says the nature of the game means they are pretty resilient and tend to connect more with each other after a big event such as the hailstorm. He says some businesses will fold, but it's too early for all growers to judge the outcome from the hail.

That won't happen until the crop has been harvested and final payments are received at the end of the year.



The local market has provided more options for Andrew Lowe this year

Hail netting saved a lot of apples, and on Birdhurst Orchards where he is pipfruit manager, about 50% of the fruit will still meet export standard because of a range of hail netting systems. That's despite all but two of its 24 blocks being hit by hail to varying degrees.

Class 2 apples for export will play a bigger role in the region this year, and he says every packhouse will be slightly different in what their class 2 programme looks like and how that affects growers' returns.

Once the crop is harvested, Richard says the next challenge will be sorting out sufficient labour for winter pruning. By then, most of the Recognised Seasonal Employer (RSE) scheme workers in the country will have been here for a long time, and many will want to get home. Yet with Covid-19 restrictions it is still an unknown how sufficient numbers will get back to New Zealand.

As the kiwifruit industry heads toward harvest in the region, about half of the gold kiwifruit or 2.2 million trays has been taken out of the picture due to hail. However, grower and New Zealand Apples and Pears Board director Evan Baigent says the fruit that escaped hail damage is shaping up as a "pretty good crop." His own orchards lost about 90% of the kiwifruit - plus apples - so there's little fruit to meet that description.

Zespri's pool insurance scheme will help, but the scale of the damage diluted the amount per tray for growers, which meant there "wasn't much at the end of the day".

"It's a matter of putting your head down and looking forward to next year," he says.

Despite frosts and rain at the wrong time, then hail, Andrew Lowe from Lowes Orchard near Brightwater, is "cautiously optimistic" about harvest results for the array of fruit he produces.

ABOUT 50% OF THE FRUIT WILL STILL MEET EXPORT STANDARD BECAUSE OF A RANGE OF HAIL NETTING SYSTEMS

“

Luckily we had left a bit more fruit on than desirable, which gave us the ability to thin out more hail damaged crop

His grandparents bought the orchard back in 1935 and today it encompasses 13ha of apples, pears, stonefruit and strawberries that are harvested for both local and export markets. Between a stall on the orchard and three markets a week, the local market fruit makes up a good chunk of the business income through the season. The flavours of older apple varieties such as Golden Delicious and Sturmer provide a point of difference, and in a year of hail, the local market is more forgiving of slightly damaged fruit which often go under the label 'fruit with character.' While export varieties including Breeze and Red Sonia will have the true picture of the season revealed when they reach the packhouse.

Andrew says it has been an "interesting season," that began with winter arriving in spring. Stonefruit - they are among just a few growers in the region to persevere with stonefruit - was flowering and a series of heavy frosts reduced the crop considerably. Wet weather added a bit of russet to the apples which meant it wasn't a conducive start to the season. But overall, fruit looked okay and the early stonefruit harvest produced good quality fruit.

Cool, cloudy weather through cell division in the apples meant fruit size was down, then their chosen chemical thinner stressed the trees more than anticipated. The upside of that was less hand thinning, so when the Boxing Day hailstorm struck - albeit on a lesser degree than around Motueka - there was still a larger crop of apples on the tree than usual to enable them to remove the most damaged fruit.

"Luckily we had left a bit more fruit on than desirable, which gave us the ability to thin out more hail damaged crop. But it won't be until it goes through the packhouse that we will get the full picture.

"We're fortunate because we have a number of different crops and outlets, and the way we sell our fruit makes us cautiously optimistic." ●

Protect your cherries against rain, hail and insects

Stable yield with a high packout rate. Less worries – more comfort!

VOEN
VÖHRINGER GmbH & Co. KG
COVERING SYSTEMS

Contact your regional VOEN specialist:
Franklin Trouw | Trouw Horticulture
+61 (0)419 552 720
franklinhbt@gmail.com



"In respect of health implications of the pandemic, I see a wealth of opportunity for New Zealand and particularly the horticulture sector", says Ian Proudfoot

While 2021 feels very much like 2020, now is the time to be bold

In the December 2020 edition of this magazine, I explored the question 'Is it going to be OK' as we waved 2020 goodbye and looked forward to 2021. I suggested for those that are prepared to be bold and see the world in front of them as it is today, the answer was undoubtedly yes. Sitting in Auckland, locked down at home again as I write, balancing work and home schooling and wondering why I didn't buy some extra flour at the weekend, it does not feel like 2021 is very different to last year.

By Ian Proudfoot : KPMG

While I recognise that the immediate disruption of another lockdown will not last forever, the consequences of what we are living through will have fundamental and far-reaching impacts on all aspects of our lives. We know this is the case; our lifestyles are shaped by practices and institutions that arose from the Second World War, or more recently,

the September 11th attacks and the Global Financial Crisis.

At a guess the Covid-19 pandemic will materiality shift how public health is managed moving forward at both a country and a global level, as well as focusing people more closely on their own personal health outcomes. I also expect it will reshape how our global supply chains work given that the

system has been stretched to the limit, and in some cases failed, for much of the last year.

In respect of health implications of the pandemic, I see a wealth of opportunity for New Zealand and particularly the horticulture sector. The sector grows products that are widely recognised as being integral to a healthy diet and maintenance

of a strong immune system. Greater focus on public health is likely to result in more demand for fruit and vegetables as governments look to address the root causes of poor health outcomes in their communities and consequently spotlight the role that diet plays. Global recognition of the strong health outcomes that New Zealand has achieved during the pandemic provides a platform for us to boldly leverage when talking to customers and consumers around the world about the attributes inherent within our produce.

The picture for global supply chains is less positive. The country woke up to the supply chain challenges industry has faced for the last year when it became apparent that many Christmas presents would not be under the tree on Christmas Day. The media narrative at the time placed the blame largely on delays at Ports of Auckland, which to me was unfair as our understanding is this is just one pain point in a global supply chain which is being disrupted by a lack of equipment, increased operating costs and delays at both ports of departure and arrival due to Covid related protocols and testing.

The problems we now see clearly with our supply chains have been building for years. The cost of operating a trade route to New Zealand is high, through both an economic and environmental lens, and we, in the main, are not a major market for global freight companies. Faced with significant challenges across their global businesses many may find it easier and economically viable to drop their New Zealand routes and focus on fixing the issues on the major trades between Asia, the US and Europe, which will have a more immediate and significant impact on the profitability of their businesses.

Combine sea freight challenges with the uncertainties faced in relation to air freight while borders remain restricted and discretionary travel limited, and the picture becomes even less positive. It is likely government support will be required for months

(and potentially years) to come to provide access to affordable air freight for exporters whose product value proposition relies on rapid transit to market. Without support the cost of air freight would be economically crippling for many of the exporters that rely on these services to secure premium returns in market.

“
Global recognition of the strong health outcomes that New Zealand has achieved during the pandemic provides a platform for us to boldly leverage when talking to customers and consumers around the world about the attributes inherent within our produce.

There is a burning platform for change facing almost every export focused food producer in New Zealand. We grow far more product than we will ever eat in this country,

so we have an inherent need to sell food to the world, both to generate economic wealth and secure our own food system. What the last year has taught us is that the systems and processes that we rely on to connect with customers and consumers are not as certain or reliable as we believed them to be.

Now is the time to be bold in rethinking supply chains. Recognising that we are an expensive place to ship product from, we need to be certain we are growing products that will command sufficient premium to cover increased supply chain costs into the future; this may mean what we grow has to evolve or change. It may mean that we need to explore new ownership or partnership models around freight channels, is now the time for an airfreighting or shipping co-operative? It may mean more product is stored, processed and packed in market, or even grown to our heat, light and water recipes in controlled cropping environments overseas.

The only thing we should be certain about is that nothing should be off the table as we look to capture the opportunities that our successful health outcomes have created for the food and fibre sector and horticulture businesses more specifically. ●

VISTASEAL™
PRUNING WOUND DRESSING

Prune and heal with VistaSeal!
 Available from Farmlands

Farmlands
 co-operative

Biolchim
 Concimi speciali

0800 200 600
 www.farmlands.co.nz



Samantha Dhand

Study opportunity turns life around for young whānau

Samantha Dhand never thought she could be successful at anything until she was introduced to a pathway of opportunity through studying horticulture at the Primary ITO.

Supplied by Primary ITO

Growing up has been something of a struggle for Samantha, who left school at 14 to work fruit picking in orchards in the Coromandel and Bay of Plenty.

Now 23, she's on the path to achieve her goals to work in human resources and administration in the horticulture industry.

By the age of 21 Samantha, of Ngāti Porou, had seven years' experience in the industry working in orchards, vineyards and packhouses, but she didn't know there was opportunity for her to succeed further in the industry.

"I always thought I would be stuck in an orchard for the rest of my life day-to-day. So many people I have worked with have been doing the same job for over 30 years. I didn't want to be that person."



Samantha is ever thankful for the day in 2019 when a Primary ITO trainer came to the orchard where she was working and suggested that she could study for a qualification in the industry.

Opportunity turns life around

It's an opportunity that she says has turned her life around, given her hope and a positive pathway for her five-year-old tamāhine (daughter) and the 14-year-old tungāne (cousin) that she raises.

"I didn't really know that a piece of paper could get you that far. I didn't know the Primary ITO existed and I didn't see myself studying.

"When you come from a family that is not that close and there are a lot of issues, you don't know of the opportunities that are there.

"I never knew I would get some sort of opportunity to be able to enhance my experience and learn a lot more than I ever knew. This will be such a great opportunity for my babies."

“

I never knew I would get some sort of opportunity to be able to enhance my experience and learn a lot more than I ever knew.

Samantha was raised by her grandparents, both Ngāti Porou, spending much of her early life on Pouakani Marae in Mangakino on the banks of the Waikato River. "I was brought up around my Māoritanga and I did kapa haka through my childhood."

The whānau is originally from Ruatoria, with her grandfather being from Hicks Bay. "They came from a very strong group there. Even though they moved away from the homeland they still had their connection to their whenua - we knew our connection."

Over the years Samantha's seen a range of work cultures in orchards, including workers lacking motivation because they don't feel valued.

Whānaungatanga inspires the mahi

Samantha says she is overjoyed at the connection she feels working for Tauranga based kiwifruit grower Ngai Tukairangi Trust Orchards, which has shown her a different side of the industry.

"To actually experience a place where Māoritanga means so much it is a different kind of feeling. It makes me feel more at home."

"It's the whānaungatanga, aroha, tautoko and mana within the company. The feeling of our tipuna beside us helping us achieve those individual tasks and goals but also bringing us together as a whānau."

A highlight for her was meeting the chairman in Matapihi. "He is Ngāti Porou like me and we worked out during our kōrero he had been brought up across the Makatoite river from my grandmother. That was so awesome to find that connection."

Samantha's experience has inspired her to work in human resources where she can bring whānaungatanga into the workplace for both staff and management in horticulture.

"You don't see many Māori in the management side and when you do you see a huge difference. That is what I want to do."

“

You don't see many Māori in the management side and when you do you see a huge difference. That is what I want to do.

"It's about making it a better experience for staff so that they enjoy their mahi and feel valued. If you bring the cultural aspect in they feel the mana and āwhina at home and at work."

Māori often get caught in a situation where they feel they have to follow in others' footsteps or take advice which can hold them back from achievement, she says.

"I didn't realise that it is not really your family who need to believe in you, it is you that needs to believe in yourself to get there."

"People will row with you but who will continue to row that waka when you no longer have the mana too? I've learnt we have to help ourselves and not rely on everyone around us, because not everyone is there to help keep your waka afloat."

Helping others to achieve

Samantha says she's motivated to help others achieve in the industry and is thankful to her tutor Sharon Fowler who hasn't given up on her even when she struggled.

A further boost was attending the 2020 Ahuwhenua Trophy Excellence in Māori Farming Awards, the first time the event centred on horticulture.

"I couldn't believe there were so many people coming to celebrate Māori. To see the encouragement that we have in the community makes such a big difference.

"For people to acknowledge our tipuna and our whenua and bring that different perspective. They make us want to teach others where we come from."

“

For people to acknowledge our tipuna and our whenua and bring that different perspective. They make us want to teach others where we come from.

Two years after being introduced to an opportunity, Samantha is on a path to achieve her level three qualification in Fruit Production and having a bright future in horticulture for herself and her whānau. ●

Taking women's leadership to the next level

As co-owner of Woodhouse Farm Organics, and with 25 years' experience in administration, Joanne Turner has a diverse range of skills, and it was to hone and enhance these that she took part in the Agri-Women's Development Trust (AWDT) six-month Next Level leadership and governance development programme.



Joanne Turner, co-owner of Woodhouse Farm Organics

By Elaine Fisher

Operating a small horticultural business can sometimes be isolating, says Joanne, who with her husband Greg, runs their Demeter-certified berry farm near Palmerston North. There they grow raspberries, boysenberries and blackcurrants along with orchard fruit and vegetables which they sell at local markets and to retail outlets in the lower North Island.

"Sometimes my horizon is only one to two days ahead, as with perishable crops we are always looking for the next rain or sun event, when to apply compost or other day-to-day tasks. Taking part in the course was an opportunity to look further ahead and build a long-term strategy."

“

One module looked at governance which, having come from a management role, I found very useful

Joanne is also a member of the Biodynamics New Zealand Council which is the certifier in New Zealand under the Demeter certification trademark, registered in 1984. For three years she was council secretary, and it was in this role that Joanne decided to enhance her leadership and governance abilities and step up to become a council member.

Initially she applied for the AWDT's Escalator programme, but such was the demand from women in the industry to take part, that the trust established the Next Level programme. It is designed for change-makers and aspiring leaders across the sector, from farmers and growers to women in support and service industries, community-builders and executives.

The programme combines individual learning and support from professional facilitators and coaches, with the power of a cohort-for-life - a group of like-minded women who grow to trust and support each other throughout the programme and beyond.

"I wanted to understand what a good leader was and to reaffirm that the council's function is different from management. We are a small not-for-profit council and it's hard not to try to do everything. Recently we have secured funding for extra staff time so we can now concentrate on governance, not day-to-day management."

Establishing exactly what the difference between management and governance is, was one of the strengths Joanne gained from the Next Level programme. "One module looked at governance which, having come from a management role, I found very useful.

"I thoroughly enjoyed the programme. All the presenters were excellent and generous in giving their time and expertise. I also now have the support of a network of lovely women from different backgrounds and experiences. I would thoroughly recommend the programme to other women in horticulture."

The Next Level course aims to help participants break through internal barriers to find confidence and courage; develop a mindset for leadership; find their way to motivate and lead; develop the ability to positively influence others; build communication skills; learn to stay cool under pressure; connect with like-minded, supportive women and create a personalised plan of action, including a governance CV. ●

“

I wanted to understand what a good leader was...



There are still spaces available for South Island Next Level programmes:

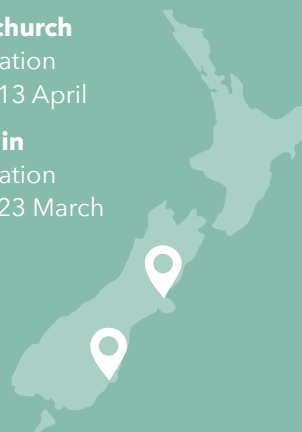
To find out more go to: <https://www.awdt.org.nz/programmes/next-level/>

Christchurch

Registration closes 13 April

Dunedin

Registration closes 23 March



Supporting Aotearoa's Growers



- ✓ Industry Training
- ✓ Residue Testing
- ✓ Plant and Seed Health Diagnostics
- ✓ Organic Certification
- ✓ GAP and Sustainability Programmes
- ✓ CropSure Safe Spray Assurance Programme
- ✓ Approved Supplier Certification and more

Talk to us today

0508 00 11 22 info@asurequality.com



Horticulture is a sector where the impacts would indeed be uneven, and it will be important to make a strong case for financial or other support to growers affected by the move to carbon zero by 2050

Climate change and horticulture

Recently the Climate Change Commission published its draft recommendations for how New Zealand can reach its target of net zero carbon emissions by 2050.

By Kirk Hope : Chief Executive, BusinessNZ

To reach the target the Commission is seeking a 2% reduction on 2018 greenhouse gas emissions by 2025; a 17% cut by 2030; and a 36% cut by 2035.

Those stiff new targets would mean the cost of emissions rising from around \$40 per tonne of carbon currently under the Emissions Trading Scheme, to around \$140 per tonne by 2030, and would mean sector-specific requirements on top of the current Emissions Trading Scheme (ETS) obligations.

Specific policies are recommended for transport, heat, industry and power, agriculture, forestry and waste.

The costs of those policies would fall unevenly on different sectors and also within sectors.



Horticulture, a sector that currently relies at least in part on fossil fuels, would likely face varying cost increases, and HortNZ and others will no doubt be putting in submissions to the Climate Change Commission consultation process.

Among other impacts on horticulture, the Commission's recommendations would mean coal-fired boilers would have to be phased out, with a transition required to other forms of glasshouse heating - a significant transition cost for some.

Growers in the North Island who have moved from coal or oil-fired heating to the more environmentally-friendly natural gas will also be required to change, as the Commission is recommending no new gas connections after 2025 and the use of natural gas to be phased out altogether by 2050.

Transport costs will also rise, in line with the Commission's suggestion that petrol and diesel prices could be expected to rise by up to 30 cents a litre by 2035.

The horticulture sector will no doubt be considering these recommendations carefully and working through the opportunities and challenges posed.

Increased costs will be the main challenge for the industry, but opportunities will also be found.

The key opportunity raised by the move to a net zero carbon environment is of course the prospect of mitigating climate change.

Droughts and water shortages are a key challenge for horticulture. Increasing droughts on the East Coast where many food crops are grown, along with increased variability of weather in other parts of the country, are symptoms of ongoing climate change, and growers will be keenly aware of the need to ensure the rate of climate change is slowed.

The many growers who are exporters will also be very aware of the value of their environmentally friendly brand. Overseas customers increasingly desire foods produced in a healthy, low-emissions environment, and New Zealand's ability to achieve net carbon zero status will be a significant boost to their brand.

Early mover advantage is another opportunity to be gained from forging ahead with the move to carbon zero. While the costs of converting from fossil fuels to other forms of glasshouse heating may be challenging at this time, they could be higher in future - growers who make the change now could reap competitive advantage for the future.

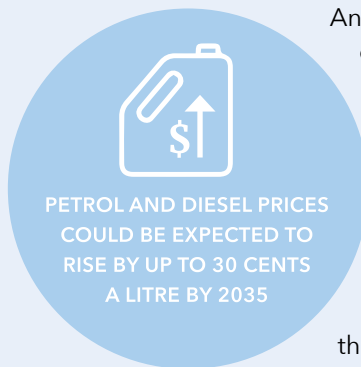
BusinessNZ is working through the Commission's recommendations thoroughly.

We are particularly interested in the Commission's assessment of the net cost of action, and will take some time to work through the assumptions that underpin those costs and what that might mean for businesses.

Our view is that there is a need to have cost-effective alternatives lined up before making significant changes.

“

Our view is that there is a need to have cost-effective alternatives lined up before making significant changes.



And those changes will have to take into account our reliance on export competitiveness and our need to remain competitive in international markets.

Perhaps the most important requirement overall is to balance our climate action ambition with economic growth.

It is reassuring that the Commission thinks the impact on growth will be small and that the transition will create opportunities for new jobs, business and exports.

But as the Commission acknowledges, the impacts will not fall evenly, and it is important we support those people and businesses who will be impacted.

Horticulture is a sector where the impacts would indeed be uneven, and it will be important to make a strong case for financial or other support to growers affected by the move to carbon zero by 2050. ●



Kirk Hope is Chief Executive,
BusinessNZ, www.businessnz.org.nz

PATTULLOS NURSERIES

A Star is Born

Cosmic Crisp® WA 38 cv

You have seen the demand in the US, become part of this exciting Cosmic adventure!

Dramatically lower your orchard production/labour costs with this one to two pick high packout long storage apple.

Taking orders now for planting winter 2022 and beyond.

Exclusively available from Pattullo's Nurseries!



**COSMIC
CRISP®**

**Give us a call
today to discuss
your needs!**

Kerry Sixtus
Phone: 06 844 6310
Mobile: 0274 440 887
Email: office@appletrees.co.nz

Three new CEOs sought for top roles

Recruitment is underway for three high profile Chief Executive roles within the horticultural industry, each offering challenges and opportunities for those appointed to fill them.

By Elaine Fisher

Mike Chapman, chief executive of HortNZ, has signalled his intention to step down; Nikki Johnson, chief executive of New Zealand Kiwifruit Growers Inc will take up the role of strategic projects manager with Zespri Global Supply, based in Bologna, Italy, in April; Stu Hutchings chief executive of Kiwifruit Vine Health has been appointed the new chief biosecurity officer for the Ministry for Primary Industries.



Barry O'Neil, chair of HortNZ, says these changes are not unexpected. "These are big, busy roles and there's no hint of jumping ship. Rather for those chief executives whose careers are continuing it is a logical part of their development progression that they want new challenges.

"Each leaves behind an organisation in a better place than when they joined. Nikki, Stu and Mike have carried out excellent work, fulfilled their responsibilities as chief executive of their respective groups and I admire what they have achieved.

"There is sure to be a large number of people interested in these roles and they will bring skills and experiences which will take these organisations to the next level.

"It's a great time to be involved in horticulture as our industry not only has huge potential for growth but is also producing healthy, sought-after foods with lower environmental impacts than many other land uses."

“

It's a great time to be involved in horticulture as our industry not only has huge potential for growth but is also producing healthy, sought-after foods...

Horticulture's growth will bring growing pains, and Covid-19 issues are far from resolved, including around shipping and air freight, the world economy and labour, but Barry says there's much to be optimistic about.

The Climate Change Commission report includes the recommendation of transforming dairy land into horticulture at a rate of 2,000 hectares per year from 2025, something Barry thinks is very achievable.

"Horticulture is producing healthy crops with, in many cases, higher returns per hectare than pastoral farming, and less impact on the environment."

It's an industry built on innovation, and innovation will continue to help solve future problems including from new improved plant varieties, biological approaches to pest and disease control and increased use of automation to address labour shortages.

“

It's an industry built on innovation, and innovation will continue to help solve future problems

"Horticulture is a leading light in many of these fields and it's a collaborative industry which shares knowledge for the benefit of all."

The HortNZ Board is preferably seeking a New Zealander to fill Mike Chapman's role. "The board decided the right person for the role would be a Kiwi who knows the key players or can get to know them quickly, and who understands the special cultural perspective of our industry and Aotearoa New Zealand." ●

Staying Farmstrong

Farmstrong is an award winning nationwide rural well-being programme that launched in 2015 to help farmers and growers live well to farm well.

Prior to launching, Farmstrong spoke to many farmers and some growers who said that they prioritised putting systems in place to look after their produce, land, stock and machinery, but weren't as good at putting things in place to look after themselves.

Farmstrong spokesperson, Gerard Vaughan, says that's why Farmstrong was started. "Just as growers draw on science to grow their best produce, Farmstrong draws on science to design tools and resources that help improve the well-being of people working in the business."

Farmers and growers also told Farmstrong that they operate in environments where families often live at their place of work, and many of the pressures, such as weather, regulations and fluctuating market prices are out of their control. Also, demanding workloads, particularly during peak times, can result in people not getting away from the business, which can contribute to increased stress levels.

Over the past five years, Farmstrong has attracted many farmers and growers who have shared what they do to make sure they are investing in their well-being.

“

Just as growers draw on science to grow their best produce, Farmstrong draws on science to design tools and resources that help improve the well-being of people working in the business.

"Alongside information on topics such as stress and burnout, recovery time, sleep and healthy thinking strategies, we include the practical things farmers and growers do to look after their well-being in their busy lives," says Gerard.

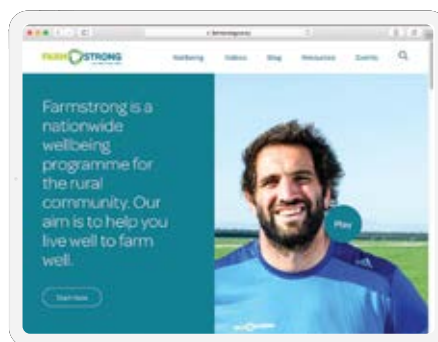
This year Farmstrong will be working more closely with the horticulture sector to better understand the various challenges faced by growers of different types of crop in their businesses, and work with them on solutions for self-care.



Farmstrong spokesperson, Gerard Vaughan

Early this year, Farmstrong undertook 50 face-to-face interviews with growers (business owners and those that work for them) to get a better understanding of their challenges and the things they do to take care of themselves. These interviews are being followed up with an online survey to get a wide response from as many growers as possible.

"The findings from this research will help to tailor our advice and initiatives over the coming years to the day-to-day realities of those working in the horticulture sector," says Gerard. ●



For more information on Farmstrong visit Farmstrong.co.nz

Irrigation Express

Online Orchard Irrigation Supplies

Call our experts 0800 130 905

www.irrigationexpress.co.nz



When 'absence' is a measure of success

There are few roles in which success is measured by the absence of something, but helping to ensure 'nothing happens' is very much part of the job description for New Zealand's new Chief Biosecurity Officer for the Ministry for Primary Industries (MPI), Stu Hutchings.

By Elaine Fisher

"Success in biosecurity is about not having incursions, but when nothing happens, there is the risk of complacency."

Recruiting the "team of 5 million" New Zealanders through public awareness campaigns has proved invaluable time and again with incursions such as fruit fly in Auckland and currently, helping combat Covid-19 in humans.

Stu, currently chief executive for Kiwifruit Vine Health (KVH), will continue to call on every Kiwi to help keep our country free of unwanted pests and diseases in a role which will take an overview of the work of the Biosecurity New Zealand directorates which focus on import health standards pre-border, at the border at ports and airports, and post-border.

"One of the mandates for the new role is to look across the whole system to provide assurance that it is working well."

"We're excited to have Stu join us as our first chief biosecurity officer, says Penny Nelson, Deputy Director-General, Biosecurity New Zealand. He has proven leadership in biosecurity, and in his previous roles he has always had a genuine focus on putting growers and farmers at the centre of everything he and his team do – something incredibly important to us at MPI, and integral to successfully all working together to keep unwanted pests and diseases from making their ways onto our farms and orchards and into our communities."

Biosecurity New Zealand systems protect New Zealand from imported pests and diseases that could harm the food and primary sector, New Zealand's environment and biodiversity, and the health of New Zealanders.



New Zealand's new Chief Biosecurity Officer for the Ministry for Primary Industries (MPI), Stu Hutchings

The new role is one Stu is well qualified for, given his wealth of experience and knowledge in management of biosecurity risks in both animals and plants, in research and innovation and through his wide network of contacts formed from working with farmers and growers, industry and central and local government partners.

Stu joined KVH three years ago from the role of group manager for OSPRI and has had previous roles as acting chief executive there as well as at the Animal Health Board. A veterinarian by profession, he has also held roles within private vet practice and risk management product development for the New Zealand Veterinary Association.

“

Kiwifruit is an amazing industry to work in because of the proactive nature of the industry...

Alongside his role with KVH, Stu has been an independent director on the Mycoplasma bovis board, which with MPI, is charged with eliminating the disease from New Zealand's dairy and drystock herds.

"Kiwifruit is an amazing industry to work in because of the proactive nature of the industry and I have especially enjoyed working at KVH. It has a passionate team of people and is an organisation in which you can come up with an issue or problem, talk it through, do background research and implement solutions relatively quickly. I have also enjoyed the collaboration between KVH, Zespri, New Zealand Kiwifruit Growers Inc and the wider industry."

Formed to take over the industry's response to Psa-V, KVH has been at the forefront of government and industry biosecurity collaboration, becoming the first to sign the Government Industry Agreement (GIA) in May 2014.

Now the focus for KVH is switching to a wider view than Psa-V, and Stu has been heavily involved in the work leading to a proposed new regulation framework to better manage biosecurity risk to the kiwifruit industry.

"Instead of focusing on a single pest, like Psa, the proposed plan focuses on protection against the full range of biosecurity threats to our industry, and provides for a consistent and pragmatic approach to managing pathway risks such as young plants, budwood, pollen, orchard equipment and other items moved by people.

"The proposed plan is equivalent to the current Psa-V National Pest Management Plan (NPMP) but is more fit-for-purpose and makes sure all the right settings are in place so that we can detect anything new quickly enough to stop its spread, limit impacts, and aim for eradication."



...when it comes to biosecurity there is no such thing as zero risk

The name chosen when KVH was formed in 2010 - Kiwifruit Vine Health - is a fortuitous one. It could have been the Psa Management Agency, but instead it is a name which focuses on vine health and leaves the way open to a much wider field of responsibilities.

"Instead of focusing on disease management, we can think about vine health from choosing the right varieties, to the health of plants which go on to orchards, to maintaining vines in a healthy state through soil health, irrigation and orchard management to improve their resilience to pests and diseases. We are seeing similar approaches to starting from a healthy place in veterinary and human wellness."

Stu grew up in Palmerston North and Wellington, returning to Palmerston North to study veterinary medicine at Massey University before working as a partner in a veterinary practice in Taupo.

"It was while I was there that I became interested in population-based disease control. Rather than focusing on individual animals it is thinking about the epidemiology of how a disease works and spreads across a population, understanding the risks to a whole group and working out how to address them."

At the time bovine tuberculosis was a major issue among deer herds in the Taupo region, which helped spark Stu's interest in the bigger picture and led to his role with OSPRI. The organisation is a partnership between primary

industries and the government and manages two national programmes - NAIT and TBfree. NAIT provides the national animal identification and traceability system and TBfree aims to eradicate bovine TB from New Zealand.

That aim is drawing closer to reality, but it's been a hard-fought battle hampered by the fact that wildlife such as possums can transmit the disease. "In the early days of the TB response whole herds were killed and we were constantly finding the disease. The emotional and financial strain on farmers was huge. Now numbers are so low, finding it in herds is rare."

Good progress is also being made towards eradicating *M. bovis* from New Zealand, and if that happens, New Zealand will be the only country in the world to do so.

"We are towards the end phase limit of the disease and can now start the phase to prove freedom from it. Recently there has been a small increase in detection, but that was not unexpected given the seasonal surveillance of bulk milk testing. Each season we expect more testing to find traces of *M. bovis* but the traces are getting less and less over time.

"This has been a great collaborative effort between the farming industry and government, with the farming community shouldering a lot of the burden both emotionally and financially."

Biosecurity incursions carry a significant personal and financial cost for all those affected. The kiwifruit industry did an outstanding job during the Psa-V outbreak of 10 years ago, with no suicides attributable to the stresses caused by the disease's initial devastating effects.

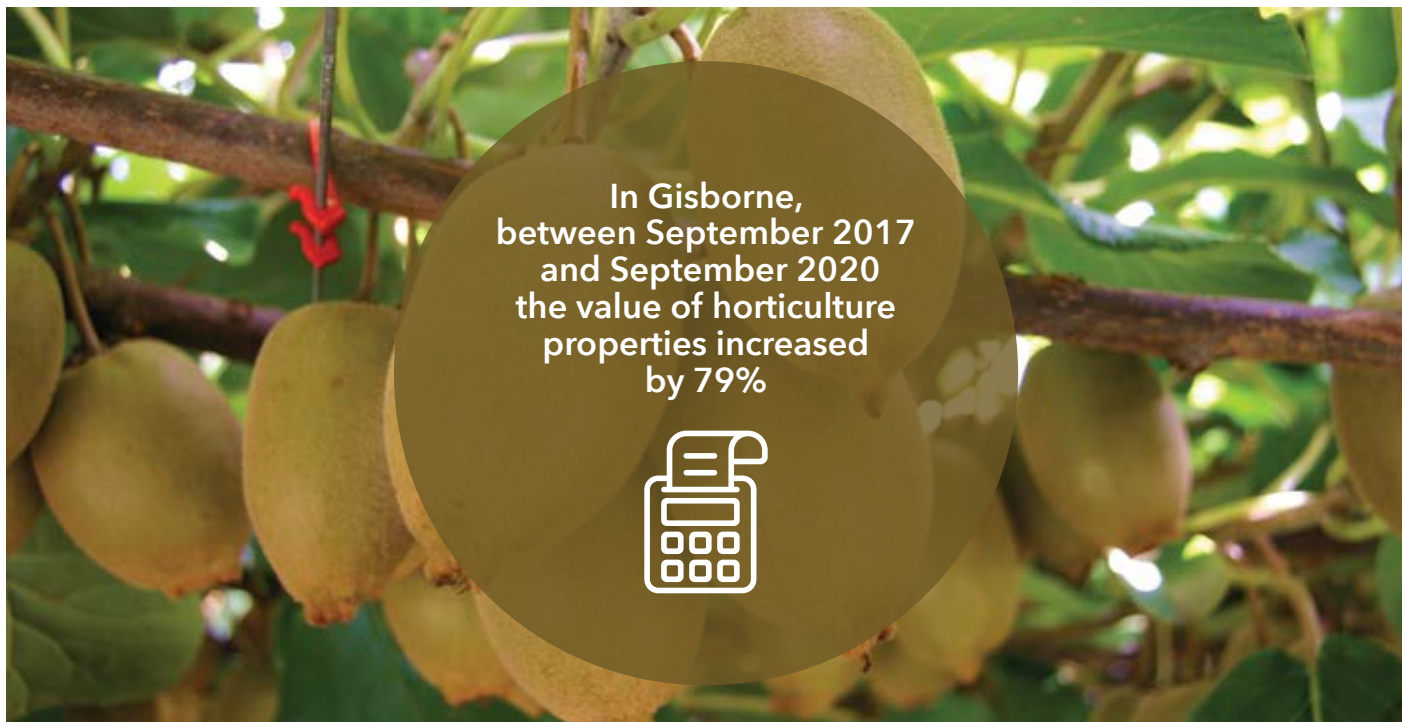
"Pastoral care, making sure there is support for those directly affected, is a crucial part of the whole process."

Biosecurity New Zealand has turned some of its attention offshore to reduce the risk of incursions, and its work to keep out the brown marmorated stink bug (BMSB) has to date proved successful. "Last year interceptions of the BMSB on-shore were 50% down on the previous year because of the controls introduced in 30 plus overseas countries sending goods to New Zealand."

With the borders closed because of Covid-19 and fewer people entering New Zealand, some of the risks from unwanted pests and diseases have reduced, but goods and products are still arriving through the mail, shipping and airfreight, so Biosecurity New Zealand staff cannot relax their vigilance.

For Stu, the absence of the need for a response to an outbreak, or successful detection and elimination on-shore will be the biggest reward in his new role.

"But when it comes to biosecurity there is no such thing as zero risk and there will be incursions in future." ●



In Gisborne,
between September 2017
and September 2020
the value of horticulture
properties increased
by 79%



Gold growers in line for rates changes

The outcome of objections to the inclusion of gold kiwifruit in rates calculations for Gisborne growers will be under scrutiny as the change is rolled out around the country.

By Kristine Walsh

Due to its rating cycle, Gisborne District Council (GDC) is the first to include gold kiwifruit licences in its rating calculations, as has been recommended by Valuer-General, Neill Sullivan.

The change has resulted in at least four objections that should be resolved by 1 July 2021 – or later if the objection goes to the Land Valuation Tribunal for settlement.

But however long they take, they are unlikely to affect the outcome, as Neill Sullivan expects that “all councils will adopt this method for valuing gold kiwifruit properties.”

The changes were mooted after rating valuation providers and Mr Sullivan met in August 2020 to discuss the definition of Value of Improvements, and reached a view that valuations had to include both licences to grow gold kiwifruit vines, and the planted vines.

And it is Mr Sullivan’s view that the change had to be made in the interests of consistency.

“Existing rating valuation practice already includes the impact of licences in the Value of Improvements for other horticultural uses such as apples and grapes,” he said.

“

But however long they take, they are unlikely to affect the outcome, as Neill Sullivan expects that “all councils will adopt this method for valuing gold kiwifruit properties.”

“This was one of the factors that prompted discussion about the seemingly inconsistent practice of removing licence values for gold kiwifruit.

“The previous practice for removing those licences was to a large extent based on uncertainty about whether they were attached to a specific property, and whether a licence was a mandatory requirement to allow planting and ongoing farming.”

Given the answers to those questions was ‘yes’, the Gisborne valuations set at 1 September 2020 were based on the market valuation of kiwifruit orchards at that date.

“The rating valuations must align with how a kiwifruit orchard would transact in the marketplace,” GDC says. “The land value also includes the land and water consent, while the value of improvement includes the kiwifruit licence, vines and infrastructure such as trellising, overhead canopy and irrigation.”

“

The rating valuations must align with how a kiwifruit orchard would transact in the marketplace

The changes are likely to have an impact in Gisborne where, GDC says, between September 2017 and September 2020 the value of horticulture properties increased by 79% “with a corresponding 56% in land value, driven by local and Bay of Plenty investors developing large scale gold kiwifruit.”

“This strong performing sector is expected to grow even more over the coming years as new apple and kiwifruit plantings come into full production,” the council adds.

“Current development cost including land purchase of around \$800,000 per canopy hectare is spent for gold kiwifruit orchards, with capital values of around \$1 million per canopy hectare on mature orchards. This means a value movement of 200-300% for developing and establishing orchards.”

GDC also says the impact of increased valuations may not be as great as some think ... “if your valuation increases

by 50% it does not mean rates increase by 50% (and) an increase in values does not increase the overall rates collected by Council.”

However, because the proportion of rates charged is based on value, most gold growers will see a hike over and above that seen by other property owners around the district. ●

“

...most gold growers will see a hike over and above that seen by other property owners around the district

INVEST IN STRUCTURES THAT LAST

All Hortivate structures are designed and engineered to your requirements, contact us for your 2021 developments.

System Options

Plant support
(non-hail)

Integrated plant
+ hail structure

3 row structure
+ hail cover

Staged structure
for hail cover



Concrete structure & Neutral Grey anti-hail net 10-12% shading

SUPPLIERS OF ANTI-HAIL NET

If you are looking to protect existing orchards with anti-hail net, get in touch with the Hortivate team!

System Options

V5 Center Release

Retractable
Center Release

Center Bungee
System

hortivate
Grow better.



Concrete structure & Crystal anti-hail net 7-10% shading

0800 222 312 | info@hortivate.co.nz | www.hortivate.co.nz



Gary and Helen Patterson

Home is where the avocados are



Helen and Gary Patterson were pretty keen to get out of Auckland, and originally had a five-year plan which quickly turned into a five-week plan after they started looking around for an orchard property in the Bay of Plenty.

by Claire Ashton



The avocado orchard and home on Plummers Point Road in Whakamarama jumped out at them and when they went to view the property, Helen walked into the house and says "it just felt like home." They acted quickly, won the auction, and invested in their two-hectare avocado orchard and home in the Bay of Plenty.

They preferred avocado to kiwifruit as avocado is less labour intensive and less susceptible to adverse weather, disease, and cyclical downturns. Helen had been involved in the kiwifruit industry some years back so had first-hand knowledge and experience. They both continue with other jobs. Gary is a fitter and turner by trade and the orchard work of mowing, fertilising and weeding fits in alongside

his contract work, while Helen has her own payroll business and takes care of the administration side of things for the orchard.

Most of the groundwork had been done on the property and there was a good crop, but there was still work to be done to bring it up to scratch. The previous owners generously spent time with them during the handover process, but there was still quite a bit of administration to do. A big challenge was having only a week to pass the GLOBALG.A.P. quality assurance programme and become certified.

During their first year on the orchard high winds put a lot of the crop on the ground, which was pretty disheartening, so the goal was to get the fruit down out of the wind and produce a premium product for a specialised market to get a better return. It took heavy pruning to get the alternate year fruit crop back on track, and after four years, Gary reckons there are another two years to go before they get it to where they want to be, and he admits "it has been a bit of a challenge."

One of the biggest challenges was the dry spell of three months last season where no rain meant less fruit growth so the avocados didn't size up. They went through and did a size pick. Gary made up some size templates and lightened the crop so that the main pick would prove literally more fruitful. The remaining fruit sized up rapidly and nine weeks later got to the size they wanted.

With a bigger sized fruit, it means they are open to more markets, but despite that, they had a higher export rejection rate than they would have liked. Their goal is to have that rejection rate lower than 15% so that more fruit goes to the export market. The Pattersons are with Seeka, which is a smaller avocado packhouse that predominantly deals with kiwifruit, however the attention and advice they receive from both the customer relations manager and the technical manager, Jonathan Dixon, leave them more than satisfied, despite bigger companies operating in the region.

Advice especially around pest monitoring, is invaluable, as staying on top of pests is critical particularly around picking time. If a pest presence is picked up in the packing shed, it has to be closed down for fumigation and that is something everyone wants to avoid. The main pests on an avocado orchard are leaf roller, thrips and six spotted mites, but due to fortnightly pest monitoring, these are usually picked up so they can act swiftly to eradicate them. The Pattersons try to be as environmentally friendly as possible and see this practice as the way of the future, and as something that adds value to their product.

"In a nutshell, we want a good quality product we get a maximum return for in terms of effort in the cleanest, greenest way, and there is nothing more satisfying than going to the packhouse and seeing the trays being packed."

“

In a nutshell, we want a good quality product we get a maximum return for in terms of effort in the cleanest, greenest way

One of the harder things to do during pruning is to put around a quarter of the crop on the ground and mulch it. Gary says it is best not to be on the orchard when that job is in progress, and Helen especially has to avert her eyes as those avocados could equal income. It is much better though for the tree health and regular fruit bearing, to sacrifice that fruit to help the tree regenerate for the following season.

Time out for them means taking the boat, 'Sulua' out. Sulua means a sea creature, and catching sea creatures (or fishing as it is commonly known) is something Gary would like more time for in the future as he strives for that work-life balance. ●

ThermoMax

Frost Protection

- Provides internal warming more compact flowering
- For use on fruit tree crops
- The "spray on" that adds to all other methods
- Good results have been achieved when applied through irrigation lines

Excellent results to
-2°C



0800 735 859 www.bdmax.co.nz

See the website for HortResearch report 10264 & 9 years of grower experience. Available from Farmlands & Horticulture.





Marketing Manager Sam Temperton packing avocados

Startling innovation



Down the end of a Te Puna Road driveway near Tauranga, boxed in by a shelterbelt and a kiwifruit orchard, there's a small miracle in marketing going on with avocados.

Words by Geoff Lewis : Photographs by Trefor Ward

While kiwifruit is king in Bay of Plenty horticulture, the avocado is the rising power, and the expanding team behind The Avo Tree have developed a streamlined system for harvesting and marketing the fruit all over New Zealand, improved returns for small growers, and have branched out into a list of value-added products.

Business owner Thorley Robbins has always lived rurally and grew up in horticulture on his parents' kiwifruit orchard at Katikati. At age 15 he grew strawberries for market. He went on to do a four-year degree in industrial design at Massey before skipping the ditch to work in his chosen profession in Australia.

But home is home, and there are economies to be found hanging with the olds, so he returned to the Bay and decided to set up a business picking, packing and home-delivering avocados.

He leased a former kiwifruit packing shed and grading machine which he set about modifying to sort out different sizes of avocados.

"I spent my last \$7,000 getting a website designed and a Facebook post - then I discovered I'd sold more fruit than I had."

Today, The Avo Tree will pack and courier boxes of fresh avocados to anywhere with a postal address in New Zealand, from Bluff to Northland and even the Chatham Islands. About 95% goes to private consumers, with the remainder heading out to cafés and restaurants. An ordinary week can see between 2,500 and 3,000 boxes out the door each containing an average of 14 avocados. Just before Christmas The Avo Tree team packed and sent 50,000 fruit in a week. In the 2019-2020 year it harvested, boxed and delivered more than a million avocados nationwide.



A perfect product



Thorley Robbins, Owner



Facial care and beauty products range

As it turns out, most of the people making the orders are women. Customers buy subscriptions and billing is made simple by a regular direct payment from the customer's bank account. Customers can order boxes of fruit as they like - one-offs, one box a fortnight, three-weekly or monthly, through the company's website.

Thorley dislikes bureaucracies and The Avo Tree's business model is designed to make the harvesting, ordering and payment processes as simple as possible for growers and consumers.

The western Bay of Plenty region has a mild maritime climate ideally suited to horticulture. Over the years many people have bought land around Tauranga as lifestyle blocks and planted small orchards for personal consumption and hoping to turn a few bucks selling from roadside stalls.

These outfits are often too small to attract the attention of the big packhouses geared up to supply the supermarket chains, and the fruit not suitable for the export market.

The Avo Tree takes the product of about 60 smaller growers. First up, growers don't have to wait for months to get paid, Thorley Robbins and marketing manager Sam Temperton will visit a small block, some of which may only have a dozen trees, assess the crop for size and quantity, pick it themselves and pay the grower on the spot - which may be \$2,000 to \$3,000 a week until the fruit runs out.

"We pick most of the fruit ourselves. We might pick 10 bins in a weekend," Thorley explains.

The avocado season stretches from August to March. The most popular variety is Hass, which accounts for about 95% of the crop. The remainder is made up of the Reed variety, which helps to bridge the late autumn season.

The Avo Tree has a commitment to sustainability. The fruit is packed in untreated pinewood wool, the boxes are compostable and held together with similarly biodegradable gum-paper tape.

At Te Puna there's an 'upstairs' - a mezzanine floor built into the old packhouse where visitors are introduced to The Avo Tree's new ideas in product development.

First is a recently launched range of six avocado-based skincare products, face creams and moisturisers, and potentially soaps to be added. The initiative is under development and requires volume and investment, he says. Viarni Bright was employed as brand manager in 2018.

Another idea is a range of avocado leaf teas which come in three blends: lemongrass and ginger as a digestive tea, an immunity tea blended with cinnamon and tulsi (holy basil) and a calming tea infused with chamomile.

"Avocado leaf has a slightly aniseed flavour. We had it tested and worked with a food scientist in the United States. Avocado leaf is very high in quercetin, a common plant flavonoid and anti-inflammatory. Once we realised there was a reason to produce (avocado leaf teas) we worked with the guys who make the blends that have digestive, immunity-enhancing and calming effects."

“**Avocado leaf has a slightly aniseed flavour. We had it tested and worked with a food scientist in the United States.**”

The Avo Tree collaborated with Wellington-based ParrotDog brewery to produce an avocado leaf flavoured beer.

"They brewed it. We wanted to attach the brand to it as we knew it would help us with a bit of PR. It was only available in cans and only a small run through the craft beer scene, but people enjoyed it."

They've even given miniature avocado trees as pot plants a go in 'Avo vases' - decorative non-fruiting specimens.

"It's a lot for a small team to do on a shoestring. In the long run we would like to export. It's a smarter way to sell New Zealand avocados. It's a step towards 'brand New Zealand' avocados, a means to a higher-value product," Thorley says. ●



Raymond Young in Japanese papaya orchard selecting green fruit for research in New Zealand

Papaya extract potential

Usually we associate papaya with the golden tropical fruit that is deliciously sweet and juicy. But Raymond Young, a New Zealander living in Japan, is far more interested in papaya leaves and green unripe fruit.

Words by Wendy Laurenson : Photographs by Raymond Young

“Papaya leaves have been used in tropical areas for traditional herbal remedies for mosquito related illnesses, so we’ve initiated a research and development project supported by Callaghan Innovation and clinical study at universities in Asia and the United Kingdom, to see if they may be effective against dengue fever. Early results are both promising and surprising.”

Raymond is the managing director of a Queenstown based company Fuller Young International, and the project started over six years ago with a request from his Singapore-based daughter concerned about dengue fever risk to her children. “She’d heard that papaya extract worked against the dengue fever virus, and that has led us to actually growing papaya and extracting compounds from the leaves. After identifying the key compound that was effective against the dengue virus, we started looking at efficient methods of processing and manufacturing, but discovered that getting consistent sizeable quantities of

papaya leaf was difficult. We investigated various supplies from Pacific Island nations but logistics and verifying that the plant was free of GMO (Genetically Modified Organisms) in origin proved tricky, so we started to grow our own in Japan where I live and have family connections.”

While papaya grows and fruits best in tropical climates, Japan has cold winters and hot summers, so Raymond and his colleagues grew them there as an annual crop. They trialled different varieties boosted with organic nutrients and irrigation to get vigorous growth while retaining a high percentage of the effective enzyme, and eventually came up with their own TM (trademark) variety named *Wakatengu* with origins in Malaysia and Japan.

“After a five-year investment, we struggled to produce the tonnes of leaf we needed for commercial production, so we shifted focus to look at the health benefits of green papaya fruit, which is very popular in Japan and Asia as



Young papaya in Kerikeri trial



Papaya in Kerikeri trial, 2.5 months after planting

a vegetable both in cooking and salad. We were getting up to 40 kilos of green fruit per plant in the annual growing season, so we sent a sample 100 kilos to Callaghan Innovation for processing and testing for enzyme strength.”

Raymond was interested to find that green papaya had up to 50% more beneficial enzyme than that from ripe papaya. “We’ve also learnt that in the tropics where a papaya plant will grow for at least seven years, the enzyme production that’s useful for medicinal purposes diminishes after two years, showing us that there’s an advantage in young annually grown plants.”

Callaghan Innovation made suggestions on scaling up the manufacturing extract processes in New Zealand, so Fuller Young International then looked at options of growing it in Northland. “After discussions with Plant & Food Research, we agreed to contract research the test-growing of *Wakatengu* variety at their Kerikeri research orchard,” Raymond explains. “We planted our first several hundred plants on just under one hectare there in early spring 2019, which is less than the scale of our operation in Japan, but Japanese winters are colder and summers hotter so we expected different outcomes. The first New Zealand season was successful, and by tweaking our growing method we managed to get the same plant vigour and leaf production. We harvested leaf before winter 2020 and have worked with Callaghan Innovation on extracting the active ingredient. It was interesting that the compounds believed to be beneficial in treating the dengue virus were more potent in the leaves of the crop grown in New Zealand than that grown in Japan, so we replanted in spring 2020.”

If results continue to be successful, Fuller Young International will be looking for Northland contract growers to produce the required 50 to 100 hectares of papaya needed for commercial production to meet the leaf extract requirements alone. “With the combination of leaf and green fruit production, grower returns could potentially be higher than kiwifruit.”

“

With the combination of leaf and green fruit production, grower returns could potentially be higher than kiwifruit.

A recent added development to the project is making a green tea from papaya leaves using the traditional Japanese drying process to retain health benefits. “We’ve now invested in machinery which we’re exporting to New Zealand to be the base of a small tea-making factory.”

Raymond says that with initial research results for papaya leaf extracts looking so promising, things are now progressing fast. “We’re in negotiations and entering collaboration agreements with a global company in nutrition health, and we’re strengthening ongoing research with institutions from the UK, Malaysia and Japan. This research is with New Zealand grown papaya extracts and relates to work on reducing age-related illness and lifestyle cancers by boosting the immune system. We plan to launch the extract product as an adjunct to treating dengue fever in Asia the Pacific region this year.” ●



Genevieve Griffin-George, PICMI's founder

App speeds up recruitment

Contactless recruiting – thanks to new App.

By Elaine Fisher

Growers and post-harvest operators can reduce the hassles and paperwork involved in recruiting staff by using an app which automatically selects those suited for the job.

Developed by Kiwi agritech start-up PICMI, the app enables employers to hire staff without meeting them face-to-face. For job seekers, it offers the chance to find out what they need to know about a job before applying, and all the 'paperwork' is done online.

"If the applicant meets all the criteria for the position, they fill in their details and agree to the employment contract, which is usually completed within 20 minutes," says Genevieve Griffin-George, PICMI's founder.

"Using our cloud-based tool we're seeing growers reduce hiring time by 70% from application to contract to induction. For job seekers, we're reducing the friction to find and do work. They know straight away if they have a job or not. Most job seekers apply for many jobs and then wait, hoping to hear back.

"This causes frustration for both job seekers and growers, who find that many applicants aren't actually available. We can increase the capacity of our labour force by enabling job seekers to find seasonal work that suits their needs and give them the flexibility to choose part-time or full-time seasonal work, based on location."

The idea for PICMI grew out of Genevieve's experience of managing her family's kiwifruit orchard near Motueka and the issues around finding, hiring and managing seasonal staff. She formed a team with two experienced technologists, and together they have been working alongside growers for more than a year to perfect the technology.

"We are a mighty but a small team of three, dedicated to solving a problem for New Zealand growers, but one that's a global problem too - the time it takes to hire people. We've built a tech that is easy to use and does what it should without being complex."



Genevieve Griffin-George with seasonal workers on the family kiwifruit orchard



On a personal level, Genevieve has found using the app has given her more time to spend with staff on her family orchard once they are hired, rather than being tied to a desk sorting through paperwork.

“Employers can add induction and health and safety information, including videos, on the app and job seekers can upload all their personal details, including bank accounts, emergency contacts and IRD numbers, which are held securely on the platform and only released to the employer once they have signed the documentation accepting the job.

“That means the employee can use their information for future job applications without having to find all that information again.”

PICMI has already received industry attention with three Fieldays awards, and Genevieve has presented the app at TechCrunch in San Francisco and EvokeAg in Australia. Next season the company plans to launch globally.

An estimated 24,000 seasonal positions need to be filled in kiwifruit orchards in the Bay of Plenty this harvest season, with thousands more across horticulture and viticulture industries around the country. And extreme weather events such as the January hailstorms and floods in the South Island have added extra complexity to the labour issue this year.

“Covid-19 meant many growers had to change how they were hiring. They were concerned about the risks of employing someone before they met them face-to-face, but because of the savings, speed and ease using PICMI now they wouldn’t go back to any other system.

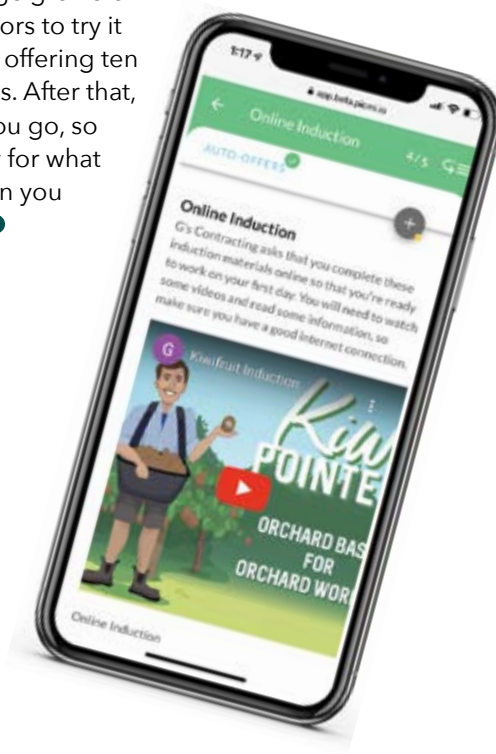
“We’re already seeing PICMI deliver some fantastic results for customers. Our newest Bay of Plenty customer registered 670 job seekers, and 450 of them secured

contracts to work this season. Forty-five percent of the contracts were signed within one hour and 80% within one day.”

“**Forty-five percent of the contracts were signed within one hour and 80% within one day.**”

PICMI has important additional benefits for business. “It improves industry compliance and reporting integrates easily to flow data to other business systems.

“To encourage growers and contractors to try it out, PICMI is offering ten free contracts. After that, it is pay as you go, so you only pay for what you use when you are hiring.” ●



Reviewing our industry



By Jen Scoular : Chief Executive, NZ Avocado

It's quite incredible the information we willingly (or inadvertently) give when we sign up for something as simple as a store or website loyalty programme.

Many people provide huge amounts of very personal information to Google, we share where we have been, in fact where we are, who we are with and so often, exactly what we ate. So it can't be a privacy issue that is stopping three out of every four people checking in with the Covid-19 tracer app. We dislike compliance, but we all need to do better. Just do it, as Nike says.

Our industry is going through a review of its structure to ensure it is relevant now and for the future. We haven't reviewed the structure for a long time, and with the significant growth in our industry, it's timely to be asking the different types of grower and stakeholder what is important to them, and what works and doesn't work. The board has shared the review report and is seeking further feedback prior to a full day meeting in late February.

The diversity of our industry was highlighted. We have 1,800 orchards, although between 500 to 700 of them only produce fruit every few years. Our largest producing orchard is 120 hectares and we have new developments of orchards that will be up to 200 hectares. Yet the average sized orchard is less than three hectares. There are 50 orchards (4% of the total) over 10 hectares, and these produce 23% of the volume. Eighty percent of the volume comes from less than 40% of the orchards. Yet some of our smaller orchards are also highly productive, and some of the larger ones not so productive. The highest four-year average yield is over 30 tonnes per hectare, yet our average is less than 9 tonnes per hectare. According to a recent survey, 40% have been in the industry more than 15 years, 31% between five and 15 years and 29% have been in the industry less than five years.

“

Eighty percent of the volume comes from less than 40% of the orchards.

That same survey highlighted that nearly 90% of respondents considered that all 12 areas we asked about, within the scope of NZ Avocado, were important to focus on. These include:

- Supporting adoption of best practice to increase production per hectare
- New research on productivity
- Improving fruit quality
- Reducing compliance costs and cost of production
- Developing and maintaining New Zealand, Australian and Asian markets
- Working together across the supply chain
- New research
- Biosecurity

Which makes us feel we are working in the right areas for growers.

Reducing cost of production and reducing cost of compliance were highlighted as areas the industry is not managing well, an answer I suspect many other industries might also receive. Good value returns to avocado growers are dependent on being able to export to high value avocado markets around the world.

New Zealand's avocado growing and export systems are recognised in our export markets for delivering safe, traceable, quality avocados to consumers. These export systems have enabled New Zealand to gain and retain access to high value markets ahead of many competitor supply countries. New Zealand currently benefits from good value returns in markets such as Australia, Thailand and Taiwan to which only a small number of other countries currently have sufficient systems and access to export their avocados.

More, rather than less investment into compliance is the likely future in order to ensure growers are able to continue to leverage the value of the market access these export systems enable in a time of global pandemic. ●

Biosecurity 101: How MPI works to protect growers

Mike Inglis, Northern Regional Commissioner for the Ministry for Primary Industries (MPI), spoke to us about the biosecurity approach to Covid-19 and more broadly about how MPI works to reduce the impact of threats to growers.

By Heather Woods

The Covid-19 response

Mike Inglis says New Zealand - the people, the government, and the many agencies tasked with managing Covid-19 - has done an excellent job, and the small freedoms we appreciate now like going to the beach, to work or to the shops, are testament to that. From an MPI perspective, it has taken solid leadership, clear deliverables and an outcomes-focused plan for it to work, and those qualities are second nature for Mike, coming from a background in Corrections where there is a policy of driving performance and operational excellence to ensure successful leadership. And he's a public servant at heart, so when Covid-19 made its grand entrance, the only option was to rally the troops and get down to business.

Protecting people is the number one priority so a Covid-19 oversight group was formed to engage with the Ministry of Health, unions and public service agencies at the airports. In the early days where flights from China were the main concern, it was all about arranging appropriate PPE (personal protective equipment), physical screens being erected, and physical distancing - everything we now know as the physical changes required and which are vital for biosecurity risk assessment on the passenger side. In fact, the entire MPI response was aligned with the Ministry of Health, with well-being at the core of their communications for the ongoing support of staff health and safety. It has also been important to support essential workers; they have done us all proud, they have helped keep us safe.



A Biosecurity team member inspects goods at a port to help prevent unwanted organisms from entering the country

Threats to New Zealand and how they're managed

To be effective in managing threats at the border it is important to understand that the biosecurity system is not actually just about the border. Risks are managed through multiple layers of protection. Offshore agreements with other countries are in operation before people and cargo even reaches New Zealand. Countries exporting goods to New Zealand can help to mitigate the risk of biosecurity threats by following processes and procedures to ensure proper treatment and fumigation where required. On arrival at our border, goods are screened, passengers are scanned, and trained staff assess the high-risk targets and the likelihood of hitchhikers. If pests are found, they're eradicated and managed quickly.

Passenger non-compliance with biosecurity rules is usually unintentional, like forgetting an apple or orange in hand luggage, which makes targeting them difficult. But mistakes like that can be costly and allow threats like fruit flies to go undetected until it's too late. Staff are expertly trained in risk assessment, have access to effective tools, and with the recent investment into new technology, scanners capable of automatic detection are adding a further layer of protection.

In recent years, the explosion of e-commerce has resulted in an increase of seed and plant products ordered online making their way into the country. MPI have worked closely with offshore teams and directly with companies to make sure they are following due process, maintaining



our import standards, and that health standards are also understood. There is a risk of animal products and untreated goods arriving via the international mail centre, which is why MPI is working with NZ Post and investing in a new, high-tech centre due in 2023.

The team can't physically inspect everything that crosses the border, but import documents are checked, audits are conducted, and high-risk items are clearance checked before release. So protection for growers and their livelihood is quite extensive.

Passenger and cargo hitchhikers

Technology helps the fight against biosecurity threats, but as it is not 100% foolproof someone must still physically inspect and identify risks. It is a joint intelligence effort between Customs and Biosecurity to target and decide what consignments are a potential risk, may contain insect pests, and monitor the country of origin. About 5% of all cargo has bio-material that requires assessment, such as fresh produce and plant materials. There is a very clear biosecurity system in place that must be maintained to keep New Zealand disease and pest-free. Transitional facilities around the country are also inspected by quarantine officers and approved staff for clearing cargo.

The risk compliance rate is currently 98.9%. That means there's only a 1.1% chance of a threat sneaking through. Messaging to passengers is very clear, and education is ongoing, but people still make costly mistakes.

For instance, there is a risk of African swine fever entering the country from people bringing in meat products. Staff and dogs are trained to inspect and confiscate these items. In the opinion of Mike Inglis the biggest risk to growers coming across our borders are fruit flies and brown marmorated stink bugs (BMSB). Technically, they're not ranked as two priority pests, but the impact they have has been seen first-hand, and fruit fly required full community support to eradicate it.

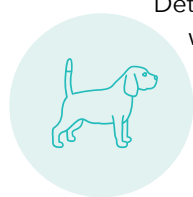
“
The risk compliance rate is currently 98.9%. That means there's only a 1.1% chance of a threat sneaking through.

The Queensland fruit fly, the Pacific fruit fly and the Mediterranean fruit fly damage almost all fruit and vegetable crops, they limit trade and impact export markets. It is for that reason our health standards are so tight, to ensure imported fresh products are free from fruit flies and their eggs. There is also a national surveillance programme that actively watches for around one-hundred species of fruit fly, but in particular the Queensland fruit fly. There are about 7,500 pheromone traps around the country near airports, seaports and densely populated areas. So far, all large-scale removals have been successful.

BMSB is the other serious offshore threat to horticulture crops. They hide in cargo and confined spaces like machinery, and in mail, so mandatory offshore treatment is a key layer of protection. And that is one of the most successful programmes to date, collaborating with Australia officials to develop the offshore treatment programme that resulted in a reduction of BMSB interceptions by 73% in 2020.

New import rules also take a hard line on sea cargo and vessels that don't comply, with inspecting officers given the power to prevent the discharge of cargo and direct them to leave New Zealand.

Using detector dogs



Detector dogs are some of the hardest working members of the MPI team, and they have excellent ongoing training in both plant and animal risk. Covid-19 had an impact on the number of quarantine officers required at a passenger level and while they've been redeployed elsewhere, the capacity of detector dogs has been maintained. The training methods used for the dogs are approved and independently audited every twelve months.

An entire centre, including kennels, is set up so the dogs can be put through their paces. Dogs are used for the detection of fruit flies, BMSB, and plant materials. And a close eye is kept ensuring there's a good balance between plant and animal detection training. Training the dogs for each kind of threat is similar in terms of the response expected by the dogs, and the rewards they are given to maintain their detection behaviour.

Beyond the training and ongoing work carried out by the dogs, MPI uses awareness campaigns and education to position the dogs publicly as a line of defence. Detector dogs are reliable, intelligent, and a crucial part of the biosecurity strategy.

When threats evade biosecurity

It is impossible to prevent every threat from finding its way into our community - nature will always find a way and human errors happen. But it is important to know that if you spot a threat, securing it and engaging MPI quickly is the best thing to do. The NZ Pest hotline is available for this purpose and Mike Inglis said he would welcome direct calls to get on top of anything that poses a risk to growers or the wider New Zealand population and environment.

The biosecurity pledge is to work together across borders, and that might mean physical borders, communities, regional stakeholders, or public service agencies. The goal is to identify problems and solve them quickly, before they become unmanageable, large-scale issues. Communication and engagement keeps conversations flowing and risky evaders at bay.

“

The goal is to identify problems and solve them quickly, before they become unmanageable, large-scale issues.

Growers: how to innovate safely

As growers, looking for new ways to work and new products and innovations in the horticulture sector is always top of mind. This might include sourcing new seed varieties or grafts from outside New Zealand. To do this safely, your best path forward is to engage MPI early. Everyone wants to be part of innovation in the sector, and early warning helps to plan for essential testing and monitoring. If we all play our part, growers can reach beyond the current scope of their business and take advantage of opportunities that may have previously felt out of reach, at the same time keeping our import standards high. ●



Heat Pump Food Dehydrators



For drying food in an easy and quick way, the economical solution to producing value added products, whether you're looking to grow your product range or give a new business the kickstart it needs.

Nuts, Berries, Fruits, Vegetables, dry to Slices, Pieces and Powders, - with the end result being succulent, healthy, and tasty dried products every time.

Unique Features: Because no hot vapour is lost during the drying process, no energy is wasted, achieving 100% energy recycled. Therefore highly efficient with low energy consumption.

- **WRH-100 Cabinet series** can dry up to 100kg of fresh product
- **WRH-300 Cabinet series** can dry up to 350kg of fresh product
- **AIO-500/600 Chamber series** can dry up to 1500kg of fresh product

Contact us for free testing for your product, or more information:

Netropolitan Ltd: 3 St. Georges Bay Rd, Parnell, Auckland

Ph: 09 368 4416, Mob: 021 358 380

Email: sales@netropolitan.co.nz, www.netropolitan.co.nz/brand/ike/



Phoebe Scherer, Assistant Consultant with Fruition Horticulture

Crops stressed by third dry in a row

Western Bay of Plenty growers and orchardists are coping with the effects of the third dry summer in a row, and many who have not needed irrigation in decades are now looking at their options to secure water resources.

By Elaine Fisher

Phoebe Scherer, assistant consultant with Fruition Horticulture in the Bay of Plenty, says many did not expect the summer of 2020-2021 to be dry too. It followed a dry winter, and a spring with below average rainfall.

“Some kiwifruit growers who have been orcharding for 20 years without irrigation are finding their vines stressed and fruit size is smaller because the water reserves in the soil have not been replenished by the expected rain events.

“We are advising those who can, to apply for consents to sink bores or take surface water, but most water resources in the Western Bay of Plenty are already over-allocated.”

In order to future-proof their businesses, other growers are building ponds or investigating ways of harvesting

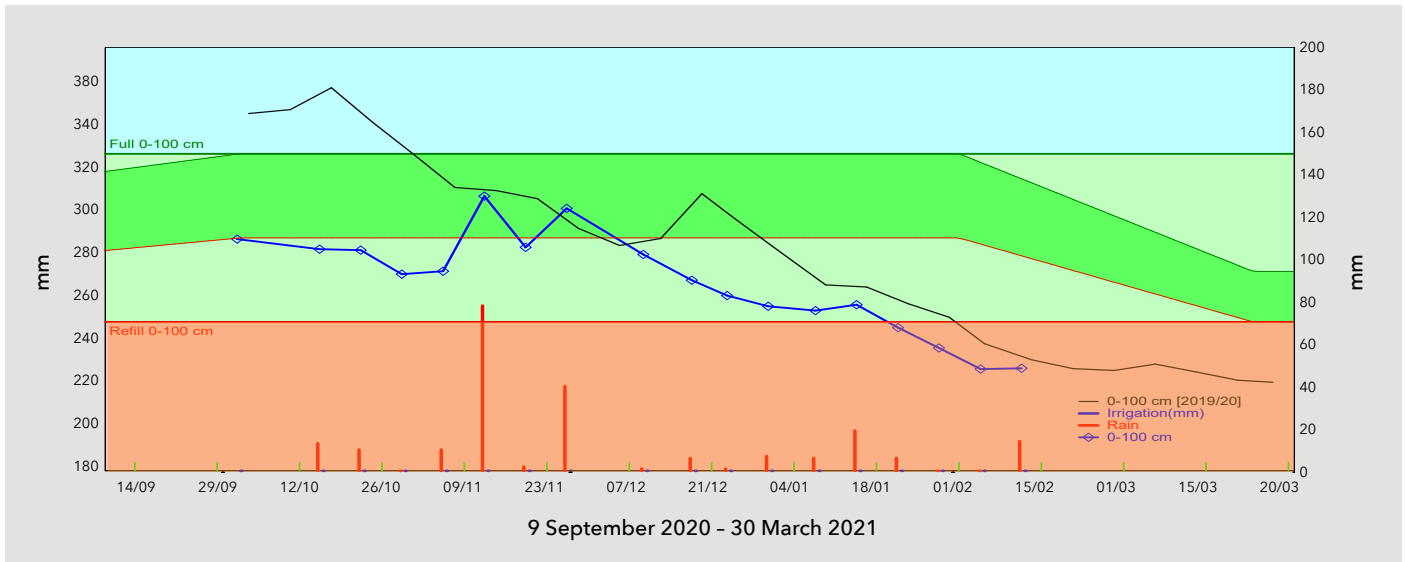
and storing rainwater, as are growers and orchardists who are establishing new plantings.

“There is a general realisation that climate change is happening, and we can no longer rely on rain arriving when we have traditionally expected it to.”

Those who have access to bore water, town supply or other water sources are also more carefully monitoring irrigation to ensure water is used efficiently, and technology is helping.

“

...most water resources in the Western Bay of Plenty are already over-allocated.



This graph shows the deficit of moisture in the soil of a Tuapiro orchard near Katikati in the Bay of Plenty. The blue line is this year's figures, while the black line is last year's readings. Moisture levels are lower than for the same time last year. (Source: Fruition Horticulture)

Fruition provides weekly and continuous soil moisture monitoring and irrigation scheduling services, using Sentek soil moisture equipment.

"Monitoring soil moisture enables growers to know how much water is going on, and how efficient it is in reaching the roots."

Management techniques such as applying mulch and compost are also being used to help retain soil moisture, says Phoebe.

Bay of Plenty Regional Council water shortage event manager, Steve Pickles, says the region entered 2021 with lingering drought conditions from long-term rainfall deficits starting in early 2019.

"We came into this summer on the back of last year's drought, which we never recovered from, so there was always a high chance of low stream flows this year," he says.

In mid-February, there was a risk that stream flows would reach critical levels, and council would impose water restrictions on consented water users, if significant rainfall didn't happen.

"The most affected area in the Bay of Plenty is currently waterways with their headwaters near the Mamaku ranges. It is most likely that the same processes affecting those streams are also reflected by decreased groundwater levels within the Rotorua geothermal system too," Steve says.

Under Level 2 of the Water Shortage procedure, the Regional Council will undertake additional flow

measurements in affected waterways, increase assessment, analysis and reporting for the focus area, while also increasing communication with affected stakeholders.

"As advised last year, water users need to be preparing and planning for water restrictions if the dry weather conditions continue."

"Even though our initial focus is in the Rotorua area, other streams over the wider Bay of Plenty region are also dropping. So it is important that all water users plan for some possible disruption to their water supply this summer. This includes all consented and unconsented water takers.

“
...water users need to be preparing and planning for water restrictions if the dry weather conditions continue.

"Summer water restrictions may be needed in the near future to protect our local waterways, and the wildlife they support, from harm during record low stream flows."

Across the region, everybody can also do their part to help to care for local waterways. Water users should check for leaks in their systems and take steps to always use water as efficiently as possible to avoid wasting it. ●

Going Bananas

I recently spent a few days in Northland visiting tropical fruitgrowers. Bananas have been grown in the top half of the North Island for many years, but mainly as the occasional plant situated in a sheltered site or close to a north-facing wall. Bananas are a tropical fruit and require warm conditions if they are to thrive. For this reason, almost all of the bananas consumed in New Zealand are imported from tropical countries (mainly the Philippines and Ecuador), where labour is cheap, and the climate is suitable.



Greenhouse bananas at Mathew Bergersen's property, Te Puna

By Mike Nichols

Our neighbour, Australia, grows its own bananas (mainly at Coff's Harbour and in North Queensland), and has overcome the problem of being a high wages country by prohibiting imports. Thus, the retail price of bananas in New Zealand tends to be about half of the Australian domestic price. In Turkey there is a rapidly increasing banana growing industry (8,000 ha) using plastic-clad greenhouses near Mersin, which has a similar latitude to Northland, but this is protected by a 100% tariff on imported bananas. The Spanish Canary Islands (which I visited in 2019) exports only to continental Spain, which (although part of the European Union) restricts the cheaper central American grown bananas into Spain.

So, what future does banana production have in New Zealand? I consider that the prospects are good, provided that we prevent any of the serious banana diseases (such as Panama disease) from entering the country, by ensuring that our plant quarantine is effective in preventing the import of any plant material (except for fruit). Such as unofficially bringing in banana suckers from the Pacific islands. The only fresh plant material must be in tissue culture, and then placed into biosecurity until confirmed as being free from any potential pathogens.

The second requirement is to determine how best to grow the crop under New Zealand conditions. New Zealand is not the humid tropics - anything but, however it could still be economic and profitable to produce tropical fruits in a sub-tropical part of the country. We need to develop our own unique production systems.

In fact, a study of the literature demonstrates just how little we know about how bananas grow, and the factors which



influence productivity. Because bananas grow so easily in the tropics, the research about them is very limited. When we then try to interpret this into a sub-tropical environment it becomes even more difficult.

Bananas are an interesting crop in that they are propagated vegetatively, either by taking suckers (with a few roots attached) from the base of existing plants, or by tissue culture (which is now the more favoured method). They are best described as day-neutral plants in terms of flowering meaning that day length does not influence when they flower, unlike short-day plants such as chrysanthemums or hops, which only flower when the day length falls below 12 hours, or long-day plants like onions, which only form bulbs under long days. This does not, however mean that they necessarily always flower after a certain time, as temperature and other climatic factors will also influence flowering time. At the base of the banana plant is a corm like structure from which shoots develop, and one of these will become the main shoot. All the leaves and flowers are developed at the base of this shoot, and grow up within the pseudo stem - which is really the base of the earlier leaves. Depending on temperature, the banana produces about one leaf every month, and flowers after it has about 40 leaves; however, at any one time it probably only has some 8 to 10 leaves, as the older leaves die and are damaged by the wind.

It appears that floral initiation may well be critical in New Zealand as the majority of fruit I have seen tends to be short, and the bunches may require thinning to increase fruit size. Temperature during the flower initiation phase appears (from the literature) to be critical. As the majority of New Zealand production appears to have

been outdoors, this may well sort itself out due to global warming and protective cropping – only time will tell.

Of course, there are a number of questions which must be asked about the quality of the locally produced banana. Certainly, in my limited experience they have a nicer flavour and texture than the imported bananas, and they have thinner skins. Obviously, they will be higher priced than imported produce because New Zealand labour is a little more expensive than in the Philippines and Ecuador. Harvesting, however is not time demanding, as this simply involves cutting the stem of the banana plant half through close to the ground and lowering it down until the bunch of bananas can be easily removed from the plant. So as much as 20 to 40 kg or even 60 kg of fruit can be harvested at a single time.

Obviously, productivity will be the key to whether a successful local industry can be developed. Certainly, the way bananas are produced in the tropics is not the model to use, and we should be making use of all the best research available. We now know that bananas respond best to warm but not hot temperatures – the optimum is 28 degrees Celsius, and anything over 35 degrees Celsius is not good news for bananas. We know that potassium and boron are very important fertilisers for bananas, and that silicon may also play an important role. Regular irrigation is essential, and a well-drained soil is vastly superior to a clay soil.

For New Zealand's sub-optimal conditions there can be little doubt that some form of protective cultivation is essential, not only to reduce wind damage of the leaves, but also to increase (if only slightly) the ambient temperature.

While in Northland I spent some time at Geoff Mansell's property near Maungatapere. Geoff is the chairperson of BONZA, Bananas of New Zealand Aotearoa, and he took me to visit several growers in the Whangarei area. Geoff has a property with a soon to be completed large (and tall) greenhouse in which he plans to grow bananas. He also has an outside planting, which is well sheltered from the wind. He took me to visit Linda and Owen Schafli's property near the Whangarei Heads. Shelter is the key, and they plant their tropical fruit crops in the gullies and leave the ridges in native bush. They grow not only bananas but also pineapples, coffee and other tropical plants.

Later that day we paid a visit to Ross and Karen Potter (Sunrise Bananas NZ), who are probably the largest banana growers by area in New Zealand. They are converting a dairy farm into a banana plantation. Still in the early stages, the importance of wind protection for bananas was clearly obvious from the damaged leaves. Natural windbreaks are planted, but need a year or two more to really become effective.

Of course, bananas are not only useful for their fruit, but the large leaves can make a very valuable natural (and biodegradable) wrapping for produce.

Local banana production is not restricted to Northland, and I am well aware of the Gisborne group, of an interest in Hawke's Bay, and of the planting by Mathew Bergersen near Tauranga of some 150 plants in greenhouses.

The protection from the wind, and additional warmth from the greenhouse shows clearly in the large, undamaged leaves shown opposite. There is no reason why greenhouse production should not be considered in any sheltered area north of Taranaki and Hawke's Bay, and even some of the very sheltered valleys near Nelson might be suitable.

A major supporter for local growing has been Dr Jane Mullaney of AgResearch, who has emphasised the potential of tissue culture propagation, and the importance of ensuring that varieties are true to type by DNA testing.

Marketing is the key to developing a sustainable industry, and for bananas there are two choices. Currently the majority of bananas grown locally are sold through the local farmers' markets, but this can only operate close to the production area. The alternative is to use the supermarkets, and this will require strict adherence to NZGAP (Good Agricultural Practice).

It is not easy to predict how bananas might develop in Aotearoa in the future, but two factors are clear.

1. Virtually all the crops grown commercially in New Zealand in greenhouses use hydroponics in order to ensure that the plants have an adequate supply of water, nutrients and oxygen (aeration).
2. Clearly if the flower initiation period is the most critical phase in fruit production, and temperature is the determining factor, then research is required to understand the response, and how best to produce high quality bananas consistently in a less than perfect environment.



For further information on BONZA, contact geoff@bonza.net.nz or david@bonza.net.nz



**NZ Feijoa Growers Association Inc
2021 Commodity Levy Rate**

NZ Feijoa Growers Association Inc advises that the rate for the Feijoa commodity levy in 2021 remains at 3% of the price of feijoas sold in New Zealand at the first point of sale, or 3% of the fob value for export feijoas, or 3% of the unprocessed value of feijoas if a grower processes the feijoas on their own account. All prices are exclusive of GST.

The 2020 Annual General Meeting of the Association voted to keep the levy rate at the same level as the previous year.

Ian Turk
Manager, NZ Feijoa Growers Association Inc

www.feijoa.org.nz

TECHNICAL

THE LATEST INNOVATIONS AND IMPROVEMENTS

Fertigation
Page 64





This mature Jazz™ block on M9 rootstock had no early Regalis®. Note the excess vigour compared to the Jazz™ planted on CG202 and MM106 rootstocks which received Regalis® at pink bud stage



Close-up of the crop on M9 Jazz™ that did not receive Regalis® at pink bud. Fruitset was light, short vigour excessive. A pit and blotch risk

The season so far

This month I shall review how the season has gone so far taking the theme of what worked and what did not. We were fortunate to experience a dry winter, so soil conditions were better than normal for root health in Hawke's Bay. This gave trees a good start when spring finally arrived.

By John Wilton : Deciduous Fruit Specialist, AgFirst

In recent years we have experienced very cool late winters and early springs. This has delayed bud break, making timing of dormancy breakers tricky. Biological benchmarks, such as using earlier deciduous trees as bud break indicator plants has proven to be much more reliable than calendar dates. In the case of cherries and pipfruit the bud break in weeping willows is a good indicator for when the hydrogen cyanamide application window commences. Where you want to push the early boundary, lifting concentrations will improve response for hydrogen cyanamide dormancy breakers.

Vigour Control

Last year there was a report in the *Good Fruit Grower* indicating that Apogee® (known here as Regalis®) applied at pink bud stage, rather than after shoot growth, around the 3cm shoot growth length stage to the very pit prone variety Honey Crisp®, markedly reduced pit and blotch;

whereas application at the 3cm shoot growth stage had little impact on pit and blotch and sometimes increased its incidence.

A number of growers here applied Regalis® at pink bud stage to high vigour blocks this spring. The results were spectacular. New growth vigour was substantially reduced, fruitset and retention markedly improved and it appears fruit size has also benefitted. This is a new tool for managing tree vigour, fruitset and crop load. A big advantage of Regalis® is that it only works on the parts of the tree where the spray is applied. In young orchards, for instance, a directed spray to the lower tree will shut down lower tree growth without affecting upper tree growth. This is very useful for controlling lower tree vigour in double leader systems planted on stronger rootstocks and ensuring good fruitset so that crop load can be used to control canopy vigour.



A general view of Jazz™ growing on CG202 rootstocks. These trees received Regalis® at pink bud stage, chemically thinned with Metamitron and thinned very early. The crop is impressive with good fruit size too

A close-up of the crop on CG202 rootstock. These trees had Regalis® applied at pink bud stage. Note the short, terminated bourse shoots. Compare with Figure 2 which shows a similar photo taken of Jazz™ on M9 rootstock which had no Regalis®

PATTULLO'S NURSERIES

building profitable horticultural businesses together

Pattullo's Nurseries, bringing you premium cultivars from the world's best breeding programmes.

Place your business with Pattullo's – Contact us today!

Give us a call today to discuss your needs!

Kerry Sixtus
 Phone: 06 844 6310
 Mobile: 0274 440 887
 Email: office@appletrees.co.nz

There are also some reports that Regalis® applied early may assist in reducing the impact of fireblight infection spread within the tree. This is a big problem where trees are planted on susceptible rootstocks such as M9.

Thinning Sprays

The concerns about labour problems saw many orchardists lift the aggressiveness of their chemical thinning programmes with the objective of reducing the hand thinning task. It is now 10 years since we started working with Metamitron, so in that time we have learnt a lot about it in regard to response. This product has a more or less straight-line response to rate applied, which can be affected to some extent by weather conditions following application. Cloudy days and particularly warm nights will increase response. As most of our rain events on the eastern parts of the country are associated with short-lived southerly rains and cool nights during the post bloom chemical thinning window, we do not often get prolonged cloudy weather periods with warm night temperatures that could markedly increase Metamitron response.

A critical factor in Metamitron response and maybe also Benzyladenine (BA) too are water rates. Dilute sprays apply around 1L of spray per 10 cubic metres of tree row volume (TRV).

Metamitron is a whole tree chemical thinner, so unlike some of our older chemical thinners does not work well as a directed spray to a small portion of the canopy.



A general view of Jazz™ as twin leaders on MM106 rootstock. Vigour is well under control and fruit quality, size and colour has benefitted



Close-up of Jazz™ fruit on a MM106 tree which was sprayed with Regalis® at pink bud stage. This is good fruit size for this variety on MM106 rootstock

The main cause of failure of Metamitron chemical thinners is applying insufficient water for canopy size.

Length of the photosynthesis suppression period also appears to be an important factor in type of response. In recent years, we have looked into double application strategies applying two low end of the label rates about five days apart. We have found this approach to do a much better job than a single spray at a higher concentration. The double spray approach lengthens the photosynthesis depression period, but unlike going to higher concentrations which deepens the depression for photosynthesis, giving a much more aggressive response which tends to blow holes in the crop.

Our observations indicate that using two sprays does a much better job of bringing most of the crop down to singles and a few doubles. This reduces hand thinning effort considerably. A huge labour saving. On younger, more vigorous trees, or easily thinned varieties, the double spray approach was too aggressive.

Sprayer Calibration

With thinning and growth regulator sprays it is often necessary to use different nozzle patterns to general cover sprays.

Chemical thinning sprays need to be directed more towards the upper tree than cover sprays, and need to avoid applying excessive water rates into the lower tree.

Fruitset

While spring conditions were reasonably good for fruitset, we noted several situations where fruitset failed.

One of these situations seemed to be associated with severe manganese deficiency symptoms expressing early in the season, often before bloom. Scired often showed these symptoms, and where they were severe, fruitset failed.

Manganese deficiency is fairly common here but usually does not show up until later in the spring. Nitrogen deficiency is often associated with poor fruitset and it is thought that early season severe manganese deficiency may be implicated in nitrogen availability within the tree.

We also generated some data to show that a blossom period ReTain® lifted fruitset in situations where there was poor provision for cross pollinators.

Disease Control

Where appropriate spray measures were taken, disease control has been good. Fireblight has been a problem on many orchards with late flowers. There was a heavy infection period in late October which many people missed or overlooked. ●



A fruiting orchard - in a designed irrigation system, irrigation water is mixed with soluble fertilisers to enhance crop production

Fertigation in orchard production

When it comes to orchard production, fertilisation and irrigation are the two most important management factors. With advances in technology, fertigation, a technique used to apply fertilisers to plants via irrigation was developed. In a designed irrigation system, irrigation water is mixed with soluble fertilisers to enhance crop production.

By Joachim Nachmansohn

It is an effective and flexible method as it enables the placement and timing of the nutrient application to be controlled. The appropriate nutrients can be applied in relation to the fertility status of the soil as well as the growth stage of the crops. This has been made more effective by using specialty fertilisers and biostimulants. Specialty fertilisers are water-soluble solid fertilisers that release nutrients gradually to plants over a certain period while minimising the possibility of nutrient loss.

These are then complemented with slow or control release products, stabilised, customised, fortified, and liquid or chelated fertilisers (organically enhanced nutrients for

optimised uptake). Biostimulants are used in fertigation as activators to enhance the uptake and efficiency of nutrients by plants, but are not nutrients themselves. Think of them as catalysts in a reaction process; in most cases, they are microorganisms or extracts of organic materials such as seaweeds or humic substances (organic compounds). They are used to stimulate the natural processes that benefit the crop such as tolerance to stress and improved crop yield and quality. Humic acids, seaweed extracts like kelp and beneficial bacteria and fungi are a few examples of popular biostimulants. This article focuses on how using fertigation with specialty fertilisers and biostimulants is key in modernising orchard production.

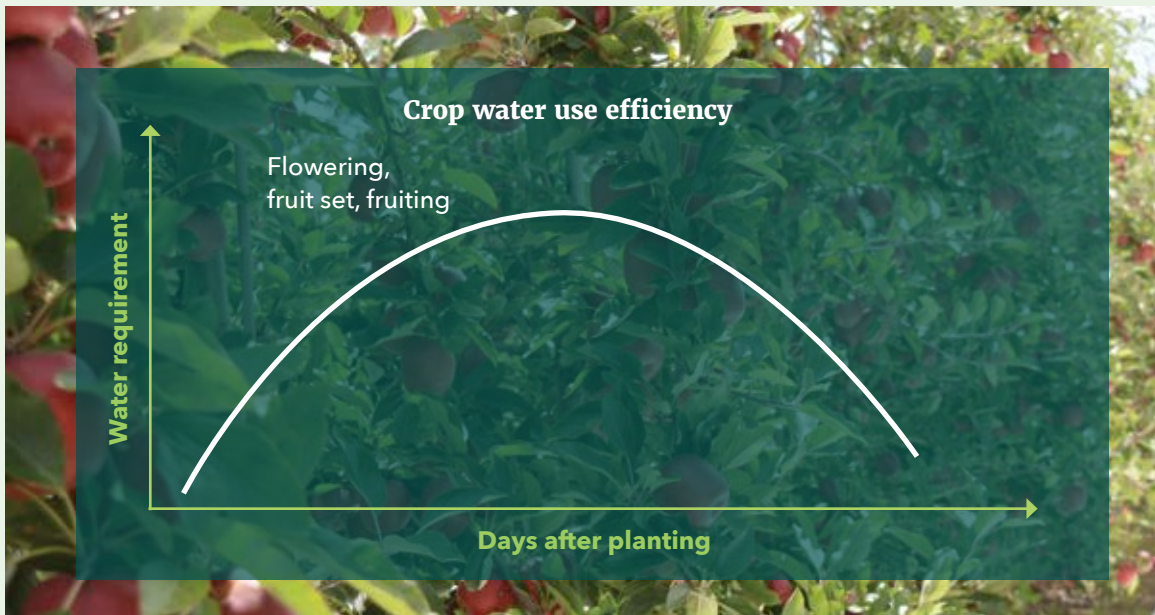


Figure ①
This illustrates water requirement by the crop over the season. The demand changes with the stage of growth. This illustration is helpful in understanding the concept of optimised irrigation scheduling

Fertigation technology

Irrigation has been in use from as early as the 1940s. Wild flooding, furrow and border dyke systems were then used to irrigate fields. With the advent of modern technology these systems have evolved. Currently, sprinkler, drip irrigation and pivot irrigation systems are being used to irrigate and fertilise fields according to the needs of crops (Figure ①). Every 12 years, irrigated farmlands have doubled in size in New Zealand, meaning more people are taking up irrigation. Areas around the East Coast and Central Otago receive little rainfall during summer, and irrigation is the only way to enable continuity in production.

“
Areas around the East Coast and Central Otago receive little rainfall during summer, and irrigation is the only way to enable continuity in production.

Over the years, fertigation has proved its effectiveness in irrigation systems for orchard production. It is considered by environmental enthusiasts as a good form of environmental conservation. It has been found to be very effective in the production of tree crops like avocados, but also in vine crops such as kiwifruit and grapes, and for blackcurrants, while saving on labour costs and improving orchard productivity. About 7% of land in New Zealand is irrigated, and this forms a good foundation for people to take up fertigation. Currently, most fertilisers are still being utilised through basal application as planting and top-dressing fertiliser, but this narrative is about to change. Fertigation using efficient irrigation systems is now considered an essential component in orchard production.

Before applying specialty fertilisers together with biostimulants to your irrigation, it is advisable to first do a trial over a small area to see if they will make a significant difference by comparing plants under fertigation treatment with the rest of the crop. It is important to define beforehand what you want to assess; whether it be yield, quality or water/nutrient use efficiency.




L.E. Cooke Nurseryman Ltd

Growers of high quality fruit trees

75 York Road, Longlands, Hastings, 4120

- Apples
- Nectarines
- Pears
- Apricots
- Peaches
- Plums
- Cherries



L.E. Cooke Nurseryman Ltd
Proudly serving the fruit industry for 65 years

Try us first for your fruit tree requirements!

Marty & Kelli Cooke
PH: 06 870 7043
EMAIL: lecooke@xtra.co.nz
CELL: 0274 396 205 (Marty)

www.lecooke.co.nz

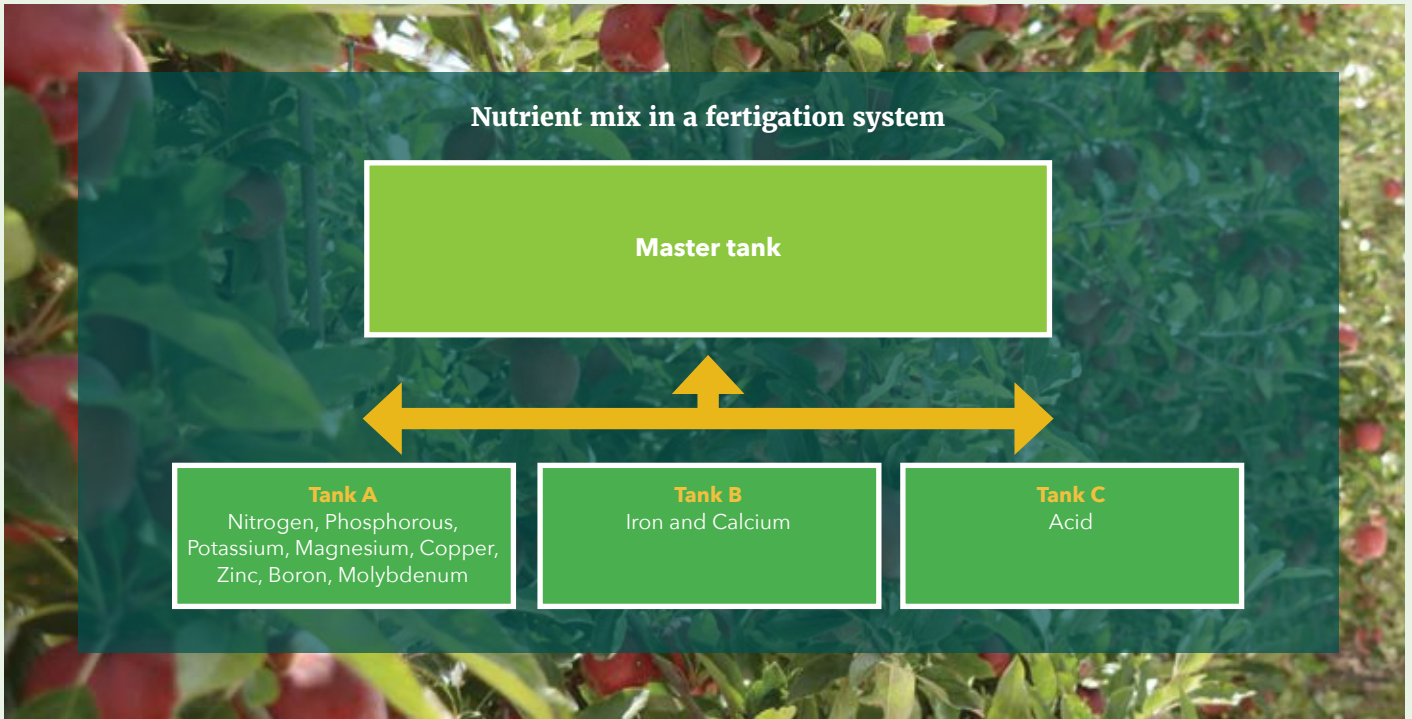


Figure 2 This illustrates how nutrients generally are mixed in a fertigation system. As a rule, phosphates and sulphates should never be mixed with calcium as this can lead to precipitation causing solid deposits in the tank leading to uneven mixture

There is choice about the type of irrigation system to install. The initial costs involved in setting up and maintaining the system should be considered, whether it is sprinklers, drip irrigation or a pivot irrigation system. Use of sprinklers to inject water-soluble fertilisers has been found to be very effective and affordable. With this system, water will be applied through pipes. You will need a pressure tank that is connected to a vent and directed to the main pipe. The fertiliser is injected into the water tank, which will be distributed to crops via irrigation through sprinklers. Uniform distribution of nutrients is guaranteed with this system and a larger portion of the field will be covered.

However, its use is dependent on the weather conditions. If it is too windy, consider waiting for a more appropriate time to fertilise the orchard, otherwise there is a risk that nutrient distribution will not be uniform and that fields will be irrigated unnecessarily.

With drip irrigation, also known as trickle irrigation, nutrients are delivered through pipes fitted with emitters or drippers and positioned close to the plants. This is considered more precise as it directly emits nutrients to the roots. The major downside is that it can be prone to clogging (blocking of pipes) that leads to a lack of uniform distribution of nutrients (which of course can be countered with accurate measures).

Pivot irrigation systems are popular among orchardists. This is commonly known as the water wheel. In this system, the centre pivot will apply nutrients in a mostly circular pattern around central pivot points (although other options exist). With time setting, fertilisers can be applied at a particular time of the day. Just like sprinklers, it is recommended that crops are irrigated when it is less windy, in the early mornings or late afternoons.

Fertigation scheduling and management

The main objective of fertigation scheduling is to maximise yield, irrigation, nutrient efficiency and crop quality by applying the exact amount of water and nutrients needed by the crop, or replenishing the soil moisture to the desired level while applying nutrients.

When devising this schedule, three important questions should be considered:

When to irrigate? Defined by the soil moisture content and growth stage.

How much to irrigate? Defined by the crop moisture content.

How to irrigate? Defined by the irrigation equipment and the layout.

For efficient fertigation management, the goal is to meet the nutritional needs of the crop while minimising nutrient losses. To achieve this, you will need to consider the availability of nutrients in the soil, the nutrient requirements of the crop, and how the nutrient delivered will match the crop's need for development. The approaches you take will depend on your level of experience. Generally, you can decide to do a rough estimate of the total amount of fertiliser that will be needed by the crop taking into account any changes that might occur in the availability of nutrients. This is called a prescriptive approach. The measure of nutrients and water that will be taken up by the crop will be the estimated amounts that the crop will assimilate by fertigation for its production.

“

For efficient fertigation management, the goal is to meet the nutritional needs of the crop while minimising nutrient losses.

Alternatively, you can decide to use a corrective plan where through fertigation, the nutrient solution is regulated routinely, based on nutrient demand by the crop and depending on the growth stages and nutrient concentration in the soil. This approach is geared towards minimising the risks of nutrient deficiency and toxicity. For a more experienced orchardist, both approaches can be integrated into one system for optimal fruit production.

Before mixing your soluble fertilisers, note that some nutrients, (i.e. fertiliser products), are not directly compatible and therefore need to be stored in separate tanks. Mix all the nutrients together except for iron and calcium that need to be mixed separately. It is often necessary to have yet another tank with acid for adjusting the pH (acidity/alkalinity), as illustrated in Figure (2). Also, remember to have regular maintenance checks on the system to enhance the life span of the equipment as well as to improve water and nutrient use efficiency.

The benefits

The benefits of fertigation are many and should be able to convince any orchardist who has not thought of implementing such a system. I will discuss a few pros and cons here. Target fertilisation allows the addition of nutrients at the exact rate that the plants need at particular growth stages. It helps with uniform application and distribution of nutrients across the irrigated area. It provides equal distribution of specialty fertilisers and biostimulants to all plants, and offers full protection of the soil from degradation resulting from excessive and

continuous use of solid fertilisers. When specialty fertilisers and biostimulants are used in this system, enhancement of nutrient uptake by fruit crops in the orchard is guaranteed. These products will help improve the soil's ability by making the nutrients more available for the plants.

Despite the numerous benefits that come with fertigation, uneven nutrient distribution can occur. Having blocked emitters or sprinklers as a result of chemical clogging is also possible. This is likely to happen when you have fertilisers rich in nutrients such as magnesium and calcium and with water that is high in bicarbonates. When this happens, the efficiency of the whole system is reduced and must be addressed. Additionally, fertigation systems only allow use of water-soluble fertilisers that will mix quickly and more efficiently in water, and require the use of special equipment that is resistant to corrosion due to chemical reaction. Despite the high initial cost, fertigation systems have proven to be the most advanced trend in fertiliser application. With the ever-increasing world population and the notable increase in the demand of healthy fruits, fertigation will soon become the most sought-after trend in orcharding. ●

The ORCHARDIST®

Reaching all levy-paying fruit growers in New Zealand, in print and online.

If it's fresh produce in New Zealand, we have it covered.



Online

\$95 for 11 issues & \$12 for one issue

Print

New Zealand resident:
NZ\$125 (GST inclusive)

Australia & Pacific:
NZ\$210 (airmail delivery)

Rest of the World:
NZ\$220 or US equivalent (airmail)

For information about how to subscribe please visit hortnz.co.nz/news-events-and-media/magazines

METSERVICE UPDATE

Boom or bust summer – focus on northern NZ



By Georgina Griffiths : Meteorologist, MetService

La Niña update

As expected, La Niña conditions peaked in intensity in the tropical Pacific Ocean in mid-December 2020, and then have exhibited a generally easing trend since that time. The most likely outcome as we head into autumn (March through May 2021) is further weakening, meaning that overall, neutral ENSO (El Niño Southern Oscillation) conditions are expected by April. A neutral state of affairs is then predicted to continue as we enter winter.

New Zealand weather maps January and February 2021

Even though La Niña has peaked, a lag effect has meant that it was still a major driver of our weather maps to start 2021. In both January and February, intense Highs were intermittently present to the south of New Zealand and over the South Island (Figure 1, Figure 2). While each High located over the South Island produced easterly winds over the upper North Island, these Highs were mostly dry in January (such as seen in Figure 1). However, as February progressed, an active area in the tropics to the north of New Zealand resulted in some wetter easterly rain events for the upper North Island (such as seen in Figure 2).

This pattern of highs being intermittently located further south has meant that the early part of 2021 has not been as dry as was experienced in 2019 and 2020 for the upper North Island (e.g. regions north of about Taupo). In those two drought years, the subtropical ridge that holds over Northland was stuck fast, and kept rain-makers away from northern New Zealand.

Boom or bust rainfall

Summer rainfall is traditionally 'boom or bust' in the northern regions, with rainfall at this time of year known to be fairly 'unreliable.' That is, spotty afternoon thunderstorms can be highly 'hit or miss', with one farm copping significant localised rainfall, and the next door neighbour seeing virtually nothing in the gauge.

In addition, most of the heavy rainfall for northern areas of the country is generated from weather systems coming from the tropics or subtropics, to the north of

New Zealand. And these systems are also generally unreliable! For example, two Tropical Cyclones had formed by mid-December 2020 (Tropical Cyclones Yasa and Zazu), but neither came close to New Zealand to deliver any rainfall. At the start of February, another three Tropical Cyclones had formed (Ana, Bina and Lucas), but once again, these systems did not yield any decent rainfall for New Zealand. Notably, forecasts of subtropical or ex-tropical systems are generally less accurate, giving a double entendre to the sense of 'unreliable'!

Northern rainfall – so far, better than the last two years

To highlight the better-than-the-last-two-years rainfall so far this year, Figures 3, 4 and 5 show year-to-date rainfall accumulation, compared to normal, and compared to previous years, for Kerikeri, Whitianga and Te Puke. All three locations received some decent rainfall in mid-February 2021, and all three locations were running wetter than the two previous years, at the time of writing.

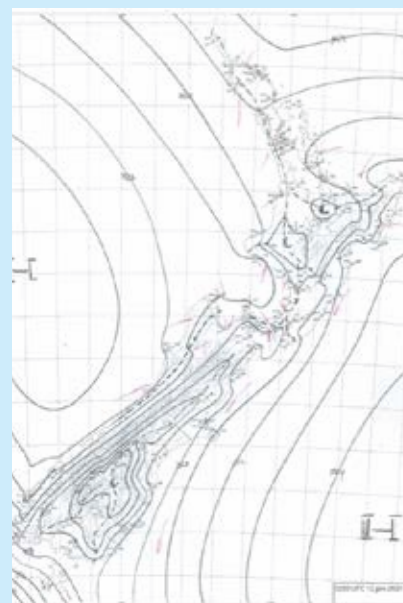


Figure 1: Hand drawn analyses, such as this one shown for 3pm 12 January 2021, help inform the MetService Expert Meteorologist's knowledge of meso-scale features and synoptic patterns every 3 hours, every day. This helps the MetService forecasters to determine which weather models are accurately capturing current conditions, meaning that their forecasts are likely to be better than those models which are not

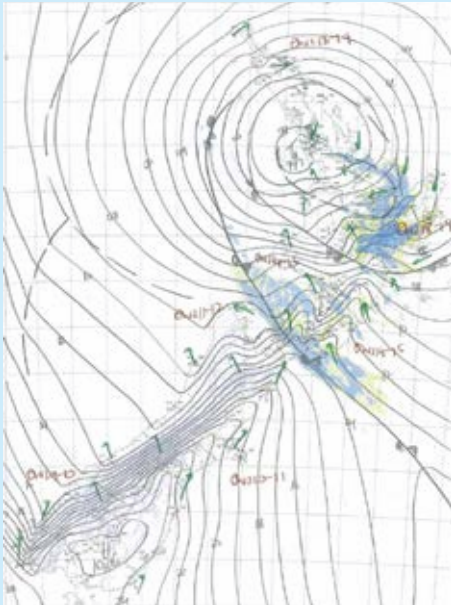


Figure 2: Hand drawn analysis for 6am 16 February 2021, showing a significant Low and associated rain bands affecting the North Island

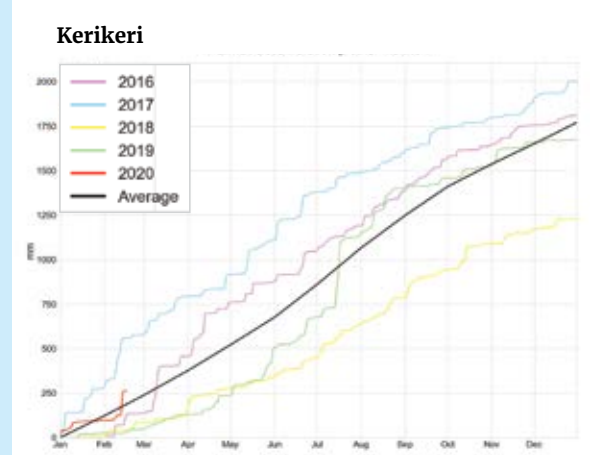


Figure 3: Annual rainfall accumulations (mm) for Kerikeri for the last 5 years. The annual average rainfall accumulation is shown in black

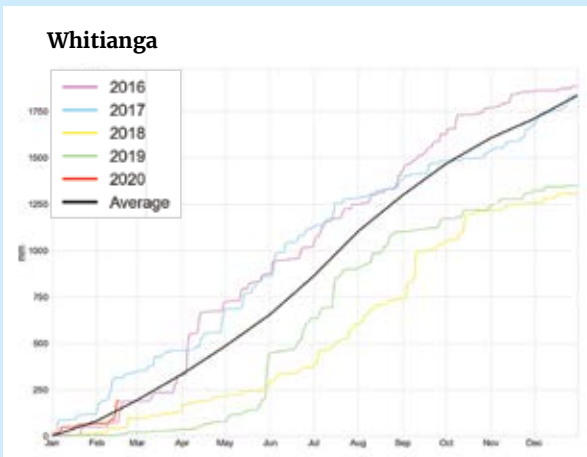


Figure 4: Annual rainfall accumulations (mm) for Whitianga for the last 5 years. The annual average rainfall accumulation is shown in black

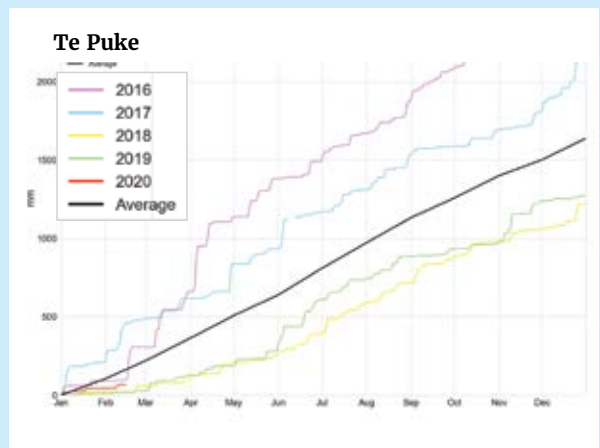


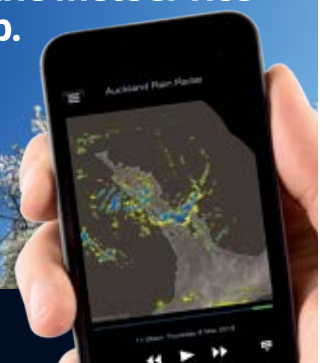
Figure 5: Annual rainfall accumulations (mm) for Te Puke for the last 5 years. The annual average rainfall accumulation is shown in black



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. ●

Rain or shine, stay informed on the MetService Rural Weather App.





MSC Mediterranean Shipping Company – your partner from New Zealand to the world

MSC has been operating in New Zealand for 25 years. Throughout this time, we have become one of the leading carriers of New Zealand apples thanks to our highly skilled and dedicated local apples team, our truly global port coverage and consistent investment in the most advanced reefer technology available.

Exceptional customer care

We provide our apple clients with direct 24/7 access to our vastly experienced New Zealand-based apples team. Our local team works closely with every individual client to develop tailor-made customer care platforms that are carefully designed to meet the specific needs and requirements of their business.

“

MSC allows us to work with one company and deliver our product around the world...

Heath Wilkins
CEO, Golden Bay Fruit

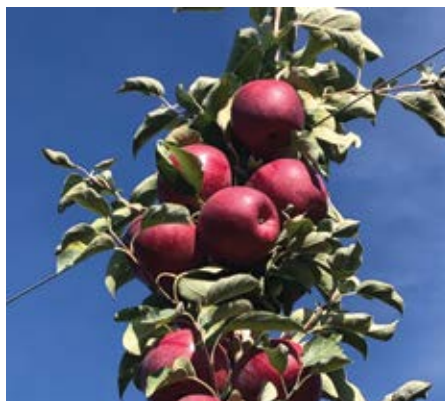
Fast and reliable shipping

With the option to choose from four weekly shipping services from New Zealand, MSC offers our clients competitive transit times to all the key international apple markets, and more.

Advanced reefer technology

We understand that the New Zealand apple industry relies on MSC to ship apples across some of the longest reefer sea miles on the planet. MSC does this by operating a truly world leading reefer fleet, including PRIMELINE and NaturalINE containers that are the most efficient and environmentally friendly container refrigeration units available. ●

To learn more about how MSC cares for your fruit, go to www.msc.com/apples



A star is born

The classically bred WA 38 apple is the result of a cross between Enterprise and Honeycrisp made in 1997 by the Washington State University (WSU) apple breeding programme. The apple is sold under the brand name Cosmic Crisp®, selected by consumers for consumers. The distinctive starburst-like lenticels help give the apple its name.

The large, juicy, dark red apple has a firm and crisp texture that provides ample sweetness, making it an excellent eating and baking apple. It is naturally slow to brown when cut and can maintain its texture and flavour in storage for up to a year.

Globally managed by Proprietary Variety Management Limited, the New Zealand company, WA 38-2 Ltd, was granted the exclusive New Zealand rights to grow, market and sell WA 38 apples. The initial milestone is to plant 150 hectares over the next seven years.

WA 38-2 Ltd has since licensed six marketing desks the right to market and sell Cosmic Crisp branded apples, each committed to plant 25 hectares. New Zealand Fruit Tree Company has the propagation license, with trees available through Pattullo's Nurseries.

For all growers wanting to be part of the programme and wishing to grow WA 38 they should contact any of the appointed marketers: Johnny Appleseed Holdings Ltd, Te Mata Exports Ltd, New Zealand Apple Ltd, Bostock NZ Ltd, Freshmax Exports Ltd and PickMee Fresh.

With the exclusion of the United States, each marketer can promote and sell Cosmic Crisp® branded apples through the key markets around the world, using the peer-to-peer marketing model that permits the sale of fruit between the seller and buyer.

The first fruit was picked last year in early April in Hawke's Bay. WA 38 displayed its dark-red appearance and distinctive lenticel markings. The fruit was of medium to large size, uniform in shape, crisp and juicy, with a sweet,

tangy flavour. The explosive release of juices distinctive of the Cosmic Crisp®, gave the fruit a refreshing bite.

Fruit samples assessed after eight months' storage demonstrated similar eating qualities as if freshly harvested. The texture and juiciness remained, though the sharpness experienced at harvest time had dissipated.

Each marketer has been allocated test trees that have been planted in a range of sites. Small volumes of fruit will be harvested this year for market assessment.

Jack Hughes of Fruition Horticulture has been contracted to support growers' technical queries.

Driven by the Washington State apple industry, where over 13 million trees have been planted in just three years and with an aggressive multi-million-dollar marketing launch, WA 38 is quickly becoming a global apple, marketed and sold under the Cosmic Crisp® brand. With nearly two million cartons harvested and packed in 2020, there is an estimated 5 million cartons to be harvested in 2021, then 10 million, then 15 million, and it goes on from there.

The Cosmic Crisp® WA 38 cv brand apple is a rapidly rising star in the industry. ●



Give us a call today to discuss your needs. Contact Kerry Sixtus at Pattullo's Nurseries on either: **06 844 6310** or **027 444 0887** or email **office@appletrees.co.nz**

More Affordable Dehydrators

Auckland based Netropolitan is a specialist importer of processing equipment for Artisan food producers.

Recently turning their attention to the fruit and vegetable sector, Netropolitan have imported the latest range of IKE closed loop dehydrators, offering a new and lower price point in effective dehydration solutions.

The WRH-100 series machines quickly and efficiently dehydrate a wide range of fruit and vegetables. Starting from just \$16,000 the WRH-100 series come complete with trays and accessories, these units can dehydrate up to 100kg of produce. Larger machines are available capable of dehydrating up to 1500kg of product per batch. Similar currently available dehydrators start from \$100,000 so this range offers options for niche businesses or for the purposes of researching and testing new food options with less financial outlay.

When it comes to energy efficiency these dehydrators are top performers, as heat is circulated within the 'closed loop', ensuring minimal energy losses. Easy to install and operate, these are simple compact plug-in models which have optional cloud-based support if required.

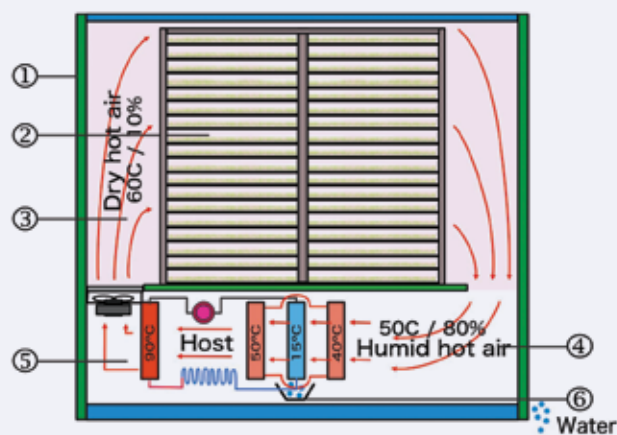
“IKE closed loop dehydrators offer a new and lower price point in effective dehydration solutions

The IKE WRH-100 series is suitable for a wide range of dehydration uses including apples and other pip fruit, citrus, kiwifruit, berryfruit, nuts and flowers. Produce retains colour and fragrance on the low to medium settings and retains much of the nutritional value of the original produce.

With increasing disruption to export and freight channels it's an excellent time to re-think the post-harvest options for surplus fruit and vegetables which may otherwise go to waste. Similarly, with imports getting more expensive and problematic, options to supply the home market with products which have traditionally been imported may now be economically viable particularly if the equipment required for niche innovation is affordable. ●



Working principles



Description of Parts:

- | | |
|-------------------------|---|
| 1. Drying house | 4. Hot and humid air |
| 2. Material to be dried | 5. Core body of the dryer |
| 3. Hot and dry air | 6. Condensed water (released from the drying house) |

A limited number of IKE-100 dehydrators are now available in New Zealand. Make enquiries directly to Gerald Hochwimmer on **021 258 380** or email **info@netropolitan.co.nz**

Hortivate – Grow better

Hortivate was established to challenge and improve growing structures and crop protection that are used in horticulture today. Hortivate is a Kiwi family business with deep roots in the horticulture industry going back five generations.

Hortivate works hand-in-hand with growers to innovate and develop new products and systems that help growers to 'Grow better'. We have also partnered with established European companies to bring superior products to the New Zealand market.



Concrete structure with crystal hail net



Retrofit structure with neutral grey hail net

Pre-stressed Concrete Structures

Building systems from the ground up allows Hortivate to bring the greatest value to you as a grower. Our structures are made from pre-stressed concrete, so they are the most sustainable structures on the market. They are 100% organic ready, not subject to rot or degradation, have exceptional longevity and are very simple to install.

Being able to integrate your plant support and your required crop protection into one fully engineered structure creates an economically viable solution for a guaranteed harvest. It also decreases the footprint of your structures and reduces installation costs.

Using 50 MPa (megapascal) pre-stressed concrete means you are building a structure that will last you 50 years at least, a product that does not weaken over time. ●

Testimonial

Here is what Mark Thomas of Thomas Bros Limited had to say about Hortivate structures.

"Hortivate structures are easy to install, cost-effective and a solid product. The ease of having the complete system arrive on-site at one time simplifies the project and we enjoyed dealing with one supplier at competitive rates.

The componentry of the structure is very user friendly, allowing you to use a larger range of experienced staff to install."

Retrofit Systems

After the Boxing Day hailstorm in Motueka, the importance of hail protection for fruit crops could not be more magnified. Hortivate offers solutions for growers with existing orchards that do not have hail cover. This involves working out how to extend and strengthen the existing structure, then designing the most suitable hail net system.

Likewise, this past season cherry growers have experienced devastating losses in production from rain causing cracking of the fruit. Hortivate also delivers solutions for automated retractable rain protection over your cherries.

Retrofitting a system onto existing structures is a cost-effective way to gain protection over existing orchards. This process can be difficult, so contact the Hortivate team to have a chat and they will walk you through the best solution for your orchard. ●



If you have any growing structure or crop protection requirements get in touch with the friendly bunch at Hortivate on **0800 222 312** or send an email to **info@hortivate.co.nz**. Alternatively check out our website, **www.hortivate.co.nz**.



We know horticulture

*Collaborating, innovating
and supporting
New Zealand growers*

*Woven into the horticultural industry
for more than 100 years, we have
been working alongside growers,
organisations and suppliers to
deliver reliable advice and solutions
for a range of crops.*

fruitfedsupplies.co.nz

Fruitfed Supplies

A trading division of PGG Wrightson Ltd