



# WE'RE ALL ABOUT AVO'S!

NEWSLETTER WINTER 2020

www.justavocados.co.nz | 54 Woodland Road, Katikati | 07 549 3027

## Welcome to our Winter Newsletter,

Our day-to-day way of life in New Zealand has for the most part returned to normal; however, with the threat of COVID-19 still looming and numbers spiralling outside of New Zealand's borders we cannot become complacent.

Conditions for our business in certain areas are challenging. The positives of this situation are that we produce an amazing fruit packed with goodness. More consumers in Asia have developed a greater awareness and need for healthy food during the pandemic and more have indicated they will continue this mindset even after the pandemic is over. Inside this newsletter Jacob and Midge cover more on COVID-19's potential impact on our NZ avocado season.

In preparation for export, we have been transitioning our growers from NZ GAP to GLOBALG.A.P.. This process has been tracking nicely with our Grower Compliance Coordinator Jude Reyland doing an outstanding job of working with growers and making this as simple as possible – thanks Jude!

New staff who have joined us recently are Pieter Steyn in the role of Woodland Road Business Manager and Chris Wahlstrom in the role of Group Logistics Manager. Both have strong backgrounds and bring new skills to the team. Pieter is responsible for maximising the efficiency and profitability of our Katikati avocado packhouse, coolstorage, and ripening and distribution facility and managing staff therein. Pieter has previously held management roles in the wine and kiwifruit industries including working for Baygold.

Chris is responsible for all international and onshore logistics across key Darling Group fresh produce. The management of logistics for New Zealand avocados will make up the majority of his tasks. Chris has previously worked in export logistics for a number of shipping lines including Cooltainer, Reefer Logistics - Kuehne + Nagel, and Mediterranean Shipping Company.

Inside the following pages, Erica talks about how critical this period of time is to tree health and ensuring improved as well as more consistent production; we feature the stories of growers Grant and Samantha Kokich and Chris and Jenni Shallard and their success following Erica's orchard management programmes; and John and Kyra give a roundup of what's happening in Northland and the Bay of Plenty.

Happy reading.

Regards,

Andrew Darling



Jacob Darling, Kyra Fielden and Andrew Darling of Just Avocados with Luuka Jones, at the Just Avocados season review and preview meeting in Whangarei 20 July.



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## IN THE MARKETS

### JUST AVOCADOS MARKET UPDATE

We are looking forward to what is shaping up to be a fantastic year for higher returns. However, the last few months have been challenging for us all as we look to come out the other side of Covid-19. The effects on the economy of this continuing pandemic are not all known yet and will continue to slowly emerge and in different ways for different countries. Health food is in demand and avocados are an amazing source of nutrients - a story that we will continue to tell in our marketing this season.

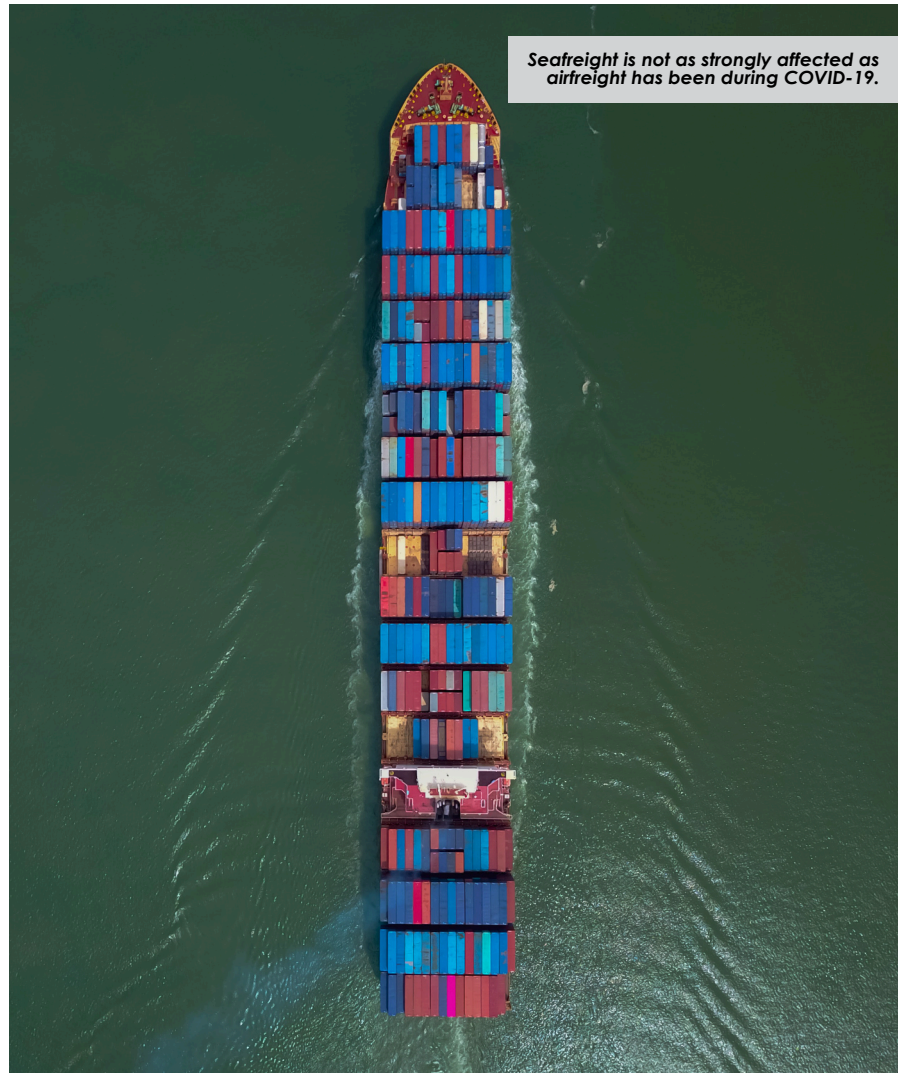
#### WHAT EFFECT IS COVID HAVING?

Covid-19 has caused severe interruptions to many businesses; however, the timing of the start of the New Zealand avocado season has meant we have had time to plan and prepare how we will best navigate our required logistics in this new world.

Seafreight has not been as strongly affected as airfreight. According to the Ministry of Foreign Affairs and Trade, countries representing more than two-thirds of New Zealand's trade are showing normal seafreight operations.

Airfreight makes up a small percentage of Darling Group's NZ avocado logistics (5-10% in this space). An issue facing our industry is New Zealand's closed border. There are not the volume of passenger flights coming in and out anymore. Putting this into numbers - in January 2020, the total number of people arriving into New Zealand was 741,173 with 699,069 departing. This has tumbled to 9,162 people arriving in June with 14,864 leaving. Because of this lack of supply, airfreight has significantly increased in cost during COVID-19. This is an area we are continuing to understand and negotiate.

Anecdotally, demand for healthy food is strong and our market plans are continuing as normal. However, the longer COVID-19 continues, the greater the effects may be on employment and income and we could see some areas of some markets impacted in terms of spending and desire to purchase premium imported products. Our focus is to position our avocados as a health product and we are working with the industry to communicate this key



message through all of our available channels to consumers.

#### STRATEGY

At the core of our strategy is profitability and across the team we will continue to engage and educate on best practice for orchard health and return crop. This entails managing your orchard to ensure effective harvest timing, allowing high productivity every year, high pack outs and mitigated quality issues. We will lead the way in this space by the harvest strategy that we set for our Darling Group investment orchards.

2019-20 was the first season that we introduced the new pool structure which is a very different structure from what the status quo across the industry has been. The idea of this structure is to allow growers to harvest all their crop in the early pool if they are focused on consistent production, high profitability, and return per hectare as a profitability measure. We also have the late pool which will cater for the late premium option if this is appealing to growers and



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their orchard health and position is such that it can successfully hang fruit late.

### MARKET MIX

Last season, Just Avocados placed 42% of export crop into Asia as a part of the long-term development phase for our New Zealand growers. This was 25% higher than the overall industry percentage. Our market strategy has shifted slightly since our last formal communication as values in the Australian market are changing daily. For the 2020-21 season, we will look to place closer to 30% of our volume into Asia with the 70% balance heading to Australia. Our early priority will be to supply our key Asian markets - China, Korea, Taiwan and Thailand.

Key initiatives are being created throughout Asia with all our direct supermarket accounts to promote New Zealand avocados and the value proposition that we have as a brand and as a product.

Australia's progress is significant. This season we have strong demand from direct retail with a 200% increase in volume to this channel. The total market volume is significantly down which is highlighting our increased volume; however, our ability to get fruit to our customers faster than our competitors is something all customers have valued.

With many Australian retailers moving away from the ripening process, and more towards wanting a hard-green piece of fruit, this will highlight the

importance of supply chain efficiency. Converting this to a tangible upside to a grower's bottom line is our focus. This season we are opening our new 6500 sqm warehouse and import and export facility based in the Brisbane market. This will provide growers with NZD \$1.50 per tray, per size onto their bottom line by creating efficiency through economies of scale across the supply chain. This is the value proposition for our grower base in aligning to a business with control of their supply chain in Australia as well as New Zealand.

Just Avocados will look to commence packing on 3 August for Asia and Australia and anticipate the season running into mid-February from a harvest perspective. ●

## MARKETING ACTIVITY IN ASIA

**COVID-19 has seen consumer shopping habits change worldwide. In general, supermarket purchases are up, dine-in food service is down, and online shopping and home food delivery have seen the biggest surge. How does that affect the New Zealand avocado industry and our consumer promotions in Asia this season?**

According to a June 2020 report from Facebook and Bain & Company, the online shopping sector grew nearly three times during the outbreak in Southeast Asia, and one in three users who were surveyed said they planned to continue buying their groceries over the internet in future.<sup>1</sup>

There will be a new normal going forward. Many of the behaviours that consumers have been forced into during the pandemic will be here to stay.

We may face challenges from consumers in Asia who may have a heightened uncertainty around imported product, a fear of leaving the home to shop for groceries, and who may retreat to purchasing only the essentials if incomes become affected due to a recession or unemployment.

Trends that positively influence our sector are the increase in focus on health and wellbeing and consumption of products perceived to boost immunity.

Indications from recent research are that these health considerations will endure.

In a March 2020 survey by Nielson, 80% of mainland Chinese respondents



said they would pay attention to eating healthy after the pandemic is over.<sup>2</sup>

The move to more home cooking has seen a surge in purchases from grocery chains. Indications of the impact of in-store foot traffic through this channel varies between markets. While spending at grocery chains is up, foot traffic is generally down as consumers across Asia are shopping less often during the pandemic, purchasing more per visit and opting for 'click and collect'.

According to an April 2020 survey by McKinsey & Company, the major factor in determining store choice and satisfaction of experience for in-store purchases across Asia during COVID-19 is the availability of hygienic services for customers, and store staff demonstrating cleanliness practices. This mentality also extends to the safety practices of the food purchased with consumers indicating they are more conscious of product safety and the environment now.



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## CONNECTING ONLINE

As well as the physical and perceived attributes of the avocado that we can push to meet changing consumer needs with regards to health and wellness, we also need to evolve the way we connect with consumers.

The need for contactless shopping during COVID-19 has pushed a new group of users online and expanded the number of app's those already proficient in online use are engaging with. Like many of the trends seen during the pandemic, this new group of online users have indicated their behaviour will continue after the pandemic is over.

We are working closely with our customers to understand the changing dynamics in the market caused by the pandemic.

This season, our key retailers in Asia will be provided with a suite of display materials supported by education for their staff and competitions to draw consumers to our online brand information. We will support this with



Example concepts for Darling Avocado in-store display material for Asia.

information for retailers to use on their social media and online shopping channels. Where possible, we will roll out in-store tasting which

gives a great opportunity to verbally advocate the benefits of our avocados, educate consumers, allow the consumer to try before they buy and also to collect information from consumers on the taste experience and branding.

The brief for our marketing material is for it to "Jump off the shelves", which you can see by the concept example on this page is achieved with bright colours and fun imagery and text. ●

<sup>1</sup> Southeast Asia digital consumer trends that shape the next normal <https://www.facebook.com/business/news/digital-consumer-trends-next-normal-southeast-asia>

<sup>2</sup> Reimagining food retail in Asia after Covid-19, <https://www.mckinsey.com/industries/retail/our-insights/survey-food-retail-in-south-korea-during-the-covid-19-pandemic>

<sup>3</sup> Asian consumers are rethinking how they eat post Covid-19 <https://www.nielsen.com/nz/en/insights/article/2020/asian-consumers-are-rethinking-how-they-eat-post-covid-19/>

## ON THE ORCHARD

### JOHN'S JOTTINGS – ORCHARD NEWS FROM NORTHLAND AND SOUTH AUCKLAND

**Maturities have in general been struggling to reach the required 23% for local consumption; however, the first small picks are coming off the large orchards in both Kaipara and Far North districts. With good values from the domestic market the fruit is initially being placed there.**

#### MATURITY TESTING

A new way of testing maturity in the field without having to pick fruit is with the Felix F-571 Avocado Quality Meter. I have been trialling this device recently.

The machine uses NIR, Near Infrared Spectroscopy, technology to determine dry matter via a beam of light. Results are stored on the device and then can be downloaded to a computer for analysis and sharing. The machine also has a GPS feature which plots where on the orchard the samples have been taken. This can then be transferred to a mapping system which shows the different dry matters across an orchard.

The more scans a single piece of fruit has, the more accurate the result will be. Two to four scans is the recommendation as the dry matter

is different at the base of the fruit, the middle (where the scan is performed), and the top.

Standard dry matter testing in a dehydrator is required initially to compare the results the machine is giving versus industry standard practice. You are then able to enter a corrective number into the unit and calibrate it against the dry matter results. The machine we did this with then gave results that were virtually identical to the dehydrator method.



The new Avocado Quality Meter from Felix Instruments allows the user to test fruit maturity.



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The advantage with the Felix is that you get an answer immediately on your dry matter and no fruit is wasted. It will also give you the map of maturities across your orchard to identify earlier maturing areas. I will be using this on our growers orchards so please let me know if you would like me to come along and collect some data for you. Please see the Felix instrument website for more details on the machine -

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<https://felixinstruments.com/food-science-instruments/portable-nir-analyzers/f-751-avocado-quality-meter/>.

### IN THE FIELD

Flower buds are forming and harvest is getting closer, so start planning for

these events now. Contact your bee keeper and check on your boron levels in the leaves. There is plenty of time to lift boron levels with ground and foliar applications. Book in a picking contractor if you use one, and assess your crop for fruit size, and work out the best strategy to

return maximum income for your fruit. The export market will be dynamic and rewarding this year. ●

## ORCHARD NEWS FROM THE BAY OF PLENTY

**We can finally dust off our raincoats, stomp into our gummies and get flicked in the face by glorious rain! Although it has been horizontal rain lately, it is better than no rain at all!**

With our new season proposal sent out in June, I have been meeting with a number of growers to discuss outcomes of last year and what is ahead. If you would like a meeting with me to discuss your options around harvesting and pools for the season ahead, please let me know. We look forward to another year of working alongside you in your business.

### GEARING UP FOR HARVEST

Trees have been under immense stress through the long extremely dry period and we are still seeing the effects from this on orchard.

In general, fruit size is on the smaller side again this year in the BOP so start thinking about your harvest strategy and keep us up to date with any changes to timing. Also, if you have any windfall, please estimate the loss so we can update your crop estimate throughout the season.

When considering your harvest strategy, there are many aspects to factor in; consistent return crop, crop load, pruning, tree health, wind events, budgeting and withholding periods. Call me to discuss your options.

Quality is a factor in your profitability and harvesting around wet weather can have an impact even when best practice is followed. We strongly advise that you have your own rain gauge in the orchard as rainfall in BOP can be very isolated and relying on weather reports is not accurate enough when making decisions on your valuable crop. If rainfall is checked daily 1-2 weeks prior to harvest it takes a lot of guess work out of decision making when it comes to harvest and best practice around rainfall on your orchard.

Speaking of rain, with wild weather events starting to happen, be careful

out there - check for hazards when heading into your orchards after storms with fallen tree branches and changes to the grounds surface posing potential issues for you and contractors.

### WHAT TO DO ABOUT SIX SPOTTED MITE

There are a number of orchards that were seemingly perfectly healthy several weeks ago that are now being severely affected with leaf drop from *Eotetranychus sexmaculatus* six spotted mite (6SM) population explosion.



6SM live on the underside of the leaf, are very small and hard to see with the naked eye, they are from the arachnid family so are closer related to spiders and ticks than they are to insects.

Growers are reporting less chemical spray efficacy when dealing with all major pests including mites and thrips, we need to start thinking outside the box and start working with the amazing army of biological organisms we have right at our feet and all around us including in our trees!

Leaf damage signs from six spotted mite attack are discoloration and



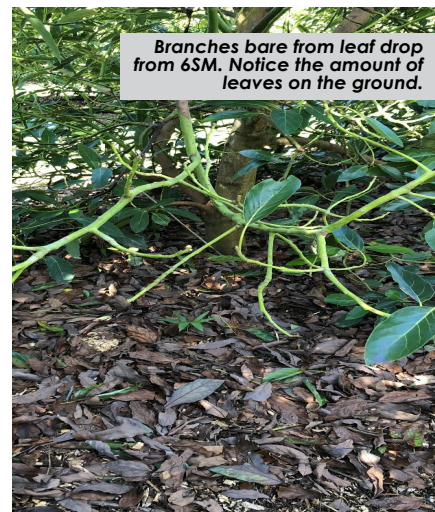
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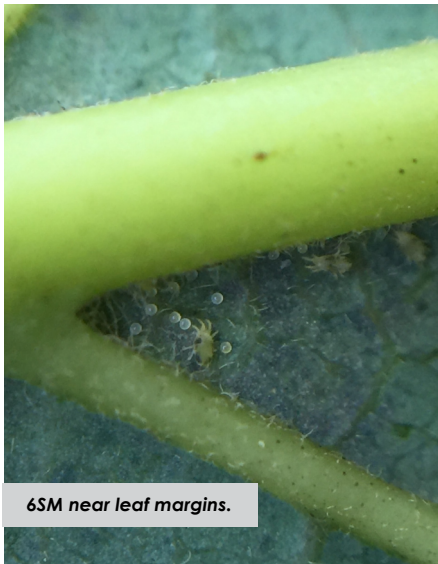
purpling down the margin of the leaves and leaves dropping prematurely from infestation.

If these signs are showing on trees, 6SM has already achieved major damage by sucking leaf cells and rendering tree leaves inefficient to work as a solar panel for photosynthesis, or to be a sink for nutrients and water for fruit development and tree survival.

Leaf damage effects are exposure to sunburn due to leaf drop, poor flower and fruit development for the coming season, risk of severe biennial cropping, poor fruit size development, and increased access for disease in dieback of branches.



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6SM near leaf margins.

### CONDITIONS THAT MITES LOVE

- Dust
- Drought
- Stressed trees
- Broad spectrum pesticides (natural enemies are removed)
- Winter – During lower temperatures they breed faster than their natural enemies
- Spring – Trees are under stress again due to carrying their current crop load, working towards flowering and setting fruit for the coming season and new vegetative growth
- Monitoring reports that have been misread or population readings un-noticed. The reports do not have a threshold as such so are not highlighted, so it's easy for numbers to move from low to medium un-noticed. If mites get up around 10-20% they will start to have an effect on leaf efficiency and numbers at this height leading into winter could easily explode

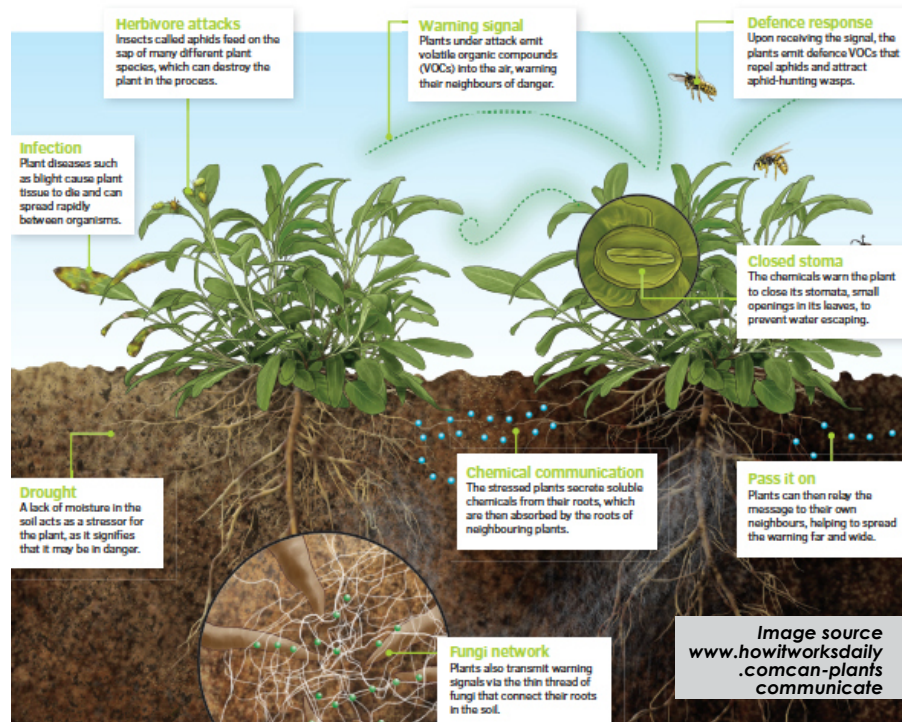
Our long hot dry summer, dry autumn and late winter has provided mites with the perfectly stressed host to attack - our avocado trees.



Spider Mite.

## The internet of plants

How do plants warn each other of impending dangers?



### HOW TO COMBAT ATTACK FROM MITES

There are no easy answers, however prevention is better than cure and providing avocado trees with enough support so they are less exposed to stress will help prevent major effects from 6SM. This should be no surprise coming from me but it starts with the soil!

- **Mulch, mulch, mulch** - Build plenty of active organic matter to provide healthy soil for trees.
- Fertile soil, balanced nutrients specific to avocado production and health, good levels of calcium to build strong cell walls
- **Monitor and boost mycorrhizal fungi populations** - Use Soil Foodweb <http://www.soilfoodweb.co.nz/> or Linnaeus <https://www.linnaeus.co.nz/> for soil biological analysis. Mycorrhizal fungi tap into more soil surface area for moisture and nutrients. These amazing fungi have been caught in the act of communicating between plants by transmitting warning signals to help fight off attack from pests by repelling pests and attracting enemy species. Plants communicate constantly using volatile organic compounds (VOC's) through the air, scientific research is proving these amazing connections on other plant types, it would be great if we can start monitoring the effects

of this happening in our avocado orchards and utilising them effectively.

- **Disperse Mite-E™** - Have a chat to Bioforce <https://www.bioforce.co.nz/> about some options to disperse Mite E™ into your orchard coming into winter months or leading into flowering to increase predator populations. More work needs to be done here but it's worth thinking about and giving a go. Lab trials were carried out over 10 years ago showing Mite-E™ didn't predate on 6SM in a petri dish, however there are findings of natural populations of Mite E™ in our avocado orchards and the belief is there isn't much else they could be surviving on other than 6SM. If you are keen to carry out some trial work, please give me a call and we can start working with Bioforce to get some trials happening in our orchards. Check out Mite-A™ while you are on their site for thrip control as well. Costings are around \$350.00 per application, generally only one application is normally applied each year. <https://www.bioforce.co.nz/products/Mite-E.html>
- **Effective microorganisms** - Inoculate leaves and soil with beneficial organisms to outnumber pest species, talk with EMNZ about their options <https://www.emnz.com/>
- **Build biodiversity** - Beneficial plantings of the wetland plant Typha or more commonly (cattail)

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or raupō will support feeding the predatory mite with pollen while pest mite populations are low. Other pollens may help to feed predatory mites as well.



*Raupō provides a habitat and food for beneficial insects such as a predatory mite to 6SM. (image source - Landcare Research)*

- **Irrigation** - I am cautious about irrigation due to the obvious, a drain on resources. When it comes to the crunch if we all use resources at a time when it's at its lowest, can that resource sustain demand? I think, when installing irrigation don't forget to mulch as well! This will continue to build active organic matter and if there is a time when water restrictions are enforced your trees will be better equipped with abundant organic matter and a healthy layer of mulch will help contain moisture more efficiently.
- **Finally, chemicals** - If you're using chemicals get to know what they are, how they work, at what time of the year it is best to use each one, if it should be used on new flush, at what stage of the pest species

life cycle the chemical works best. If there is a follow-up spray required in a certain number of days after the first one, book it in at the same time so it doesn't get missed.

**BENEFICIAL ORGANISMS**

Food and shelter for beneficial organisms are scarce in winter so remember to leave pasture species to flower through this time to provide bees, other pollinators and species a place to feed and reside over winter. Rows can be mown alternately so the length doesn't get out of hand while allowing other areas to continue flowering. More root mass from strong pasture sword will help retain moisture from heavy rainfall and reduce risk of erosion through the winter months, the longer the pasture the deeper the roots grow building organic matter deeper in the soil at the same time. ●

**ORCHARD MANAGEMENT WITH ERICA**

**WHAT'S HAPPENING IN WINTER?**

**While many horticultural crops experience dormancy during winter, the avocado tree keeps going. No slowing down for our chosen crop as this is the period one could argue that the tree is gearing up to run a marathon.**

During winter, stored resources are being reallocated to size and mature fruit, develop flower buds, maintain winter leaf health and endure winter abiotic stresses. It is the time most critical to tree health and ensuring improved as well as more consistent production. As anyone training for a marathon will tell you, the success of the marathon lies more in the preceding months and not the day of the race. So, with that being said, winter is a time to be monitoring your trees and ensuring optimum management.



*Flower buds in July in Northland.*



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*Flower buds in July in Bay of Plenty.*



*Fruit in July in Northland.*

**RESOURCES**

Ensuring nutrient levels during winter are maintained and do not tank out prior to fruit set is important. Correct levels of available resources (carbohydrates and minerals) will determine the success rate of fruit set and of the vegetative flush in spring which ensures flowering wood for next season. The cooler soil and air temperatures result in a reduced uptake of nutrients through the roots which in turn combined with the reduced rate of photosynthesis and assimilates produced, means that the probable net resources are not enough to support all the metabolic functions, flower production etc at this phenological stage especially on heavy cropping, cooler orchards. >>

Let your autumn leaf analysis guide you as to what nutrient levels need to be corrected through foliar fertiliser applications. There is also more of a draw down on certain nutrients required for flower development and the maturing of the fruit. These fertilisers can be combined with your insecticides, miticides or fungicides. However, always check compatibility with your supplier or advisor.

As you walk around your orchard, take note of branches carrying a heavy crop load. Examine the flower bud development and leaf colour and health. These branches will be exhibiting deficiencies first especially as the flowers continue to develop. If you start seeing the leaves closest to your more advanced flower buds start to become mottled, distorted or yellow then be proactive and ensure your next spray includes the nutrients to correct the deficiency symptoms you are noticing.

The blotchy or mottled interveinal yellowing and smaller, rounder cup shaped leaves are a typical symptom of Zinc deficiency which may be noticed this time of year. Other trace elements that are in higher demand at this time of year are also Potassium, Phosphorus, Boron and Magnesium. Ensure that these trace elements are part of your foliar fertiliser programme. Although Nitrogen is also required applying too much can negatively impact both production and fruit quality. Fruit quality issues as a result of high levels of Nitrogen include higher levels of anthracnose, vascular staining and browning and grey pulp. Balance here is the key.

### Root health and tree decline

Winter is also the time to monitor root health and any signs of tree decline. Increased soil moisture increases the prevalence of Phytophthora Root Rot (PRR) as well as decreases the soil oxygen levels. As trees endure the stress of winter while carrying crop and producing flowers, they become more susceptible to any disease. Healthier trees with well balanced crops are more able to withstand the increased disease pressure which is why regular testing, monitoring and orchard health observation is so important. If you have applied any phosphorous acid by injecting or foliar sprays for the control of PRR, then make sure you sample the roots from your sample trees for testing root phosphite levels. Your target levels need to be between 25 and 40mg/kg to ensure adequate control. Should you have trees that are showing



decline, then use the CIBA GEIGY chart to rate the tree health and follow our Remedial programme for trees with poor health which covers fruit removal, disease control, root health, soil fertility and a nutrition program to regain tree health and performance. This programme can be accessed through our members-only Facebook group – [www.facebook.com/groups/justavocadosgrowers/files](https://www.facebook.com/groups/justavocadosgrowers/files)

### Winter care for new plantings

As we progress into winter, newly planted trees may also be showing some signs of stress with the colder, wetter weather as well as the development of flower buds. Follow our guides to Winter care for new plantings

[www.justavocados.co.nz/winter-care-of-young-trees/](https://www.justavocados.co.nz/winter-care-of-young-trees/) as well as our guide to Orchard establishment and young tree management - [www.facebook.com/groups/justavocadosgrowers/files](https://www.facebook.com/groups/justavocadosgrowers/files). This will also be useful for any growers getting ready for spring plantings.

### Additional links to refer to for winter management

- Autumn and Winter management practices for flowering and fruitset  
[www.justavocados.co.nz/autumn-and-winter-mngt/](https://www.justavocados.co.nz/autumn-and-winter-mngt/)
- Frost management  
[www.facebook.com/groups/justavocadosgrowers/files](https://www.facebook.com/groups/justavocadosgrowers/files)



## FEATURE

### TAILORED PROGRAMMES IMPROVING AVOCADO ORCHARDS

**Just Avocados' orchard management programmes lead by Technical Manager Erica Faber are taking avocado orchards and growers to the next level.**

Kyra Fielden, Grower Services for Bay of Plenty and Gisborne, says growers who come into a programme with orchards in poor health can bring them into production within four years.

"Over the first two years we focus on improving the tree health before pushing productivity, by the third year to fourth year they come into full production again, that is a fairly quick turnaround, but it takes time and investment."

For established orchards with good tree health Kyra says the focus is on pruning and maintenance of required nutrient levels to boost production and get the tree out of alternate bearing.

"Achieving consistent cropping is an important part of Just Avocados' programmes which starts with bringing tree height down which also reduces harvesting and spraying costs.

"From there, consistent pruning every year helps to bring the tree into consistent cropping which achieves cashflow year-on-year."

Kyra says that traditionally there has been a one size fits all approach to managing avocados.

"Our use of foliar fertilisers and evolving our programmes to the age and stage of the orchard is definitely different to what has been done before."

John Emmett, Just Avocados Grower Services for Northland and South Auckland, says Erica comes with considerable experience in developing large avocado orchards, originally in South Africa, and has a unique perspective on avocado orchard management.

"Erica's approach to and philosophy on nutrition was something new and not what growers were used to and particularly her foliar programme is something that other providers don't necessarily prescribe to but has had fantastic results for our growers.

"Just Avocados' take on avocado management programmes,



particularly nutrition and pruning is different, people do talk about the Erica prune now," says John.

Just Avocados Technical Manager Erica Faber says that there are many factors to consider when creating and managing a programme.

"You have to understand what the specific orchard conditions are, what the tree health is, what the bud strength is, what percentage of flowering wood there is, are they irrigated or are they not.

"In a season like the current one you have to then manipulate the programme to try and push certain things if the tree isn't taking up nutrient like it should or the fruit is not sizing or the root mass is not there."

Erica says once growers have the balance right on their orchard then they can move to a base programme.

"When your PH is right, your soil is balanced and your tree health is at a certain point on the tree health chart then you can, depending on crop load do the base programme, working on knowing so much crop is going to withdraw so much nutrient and that you need to top up by so much."

Erica says that management programmes in New Zealand historically have not pushed pruning and its effects well.

"We need decent pruning to renew fruiting wood because it gives us better flower buds and stronger return crop, there has never been any of that focus.

"Our programmes have been quite

a learning curve for the growers and a change of how everything has been done."

Erica is also very passionate about passing on knowledge and working with growers to develop their skills in the orchard.

"The more intuitive growers get with their orchard, the more they start understanding and can read the trees, and then the better they can manipulate their own programmes.

"When I do orchard walks the whole thing is about teaching, training, learning, showing - it doesn't help if we hold all the cards, growers are the ones that need to understand so they can straightaway pick up if they are looking at a vegetative bud or a flowering bud or if a leaf isn't looking right and then act on it. Even being able to scratch under the trees and see when a root flush is happening and know how this impacts the decision of fertiliser timing - all these things that you start asking that you didn't ask before."

#### PRODUCTION PHASE AFTER REJUVENATION

Chris and Jenni Shallard were previously farming in the South Island before moving north and purchasing a 2ha orchard with a mix of 6 and 10-year-old trees in Te Puna in the 2013-14 season.

They have seen a marked improvement in their Te Puna orchard's performance since coming on board with Just Avocados and a programme managed by Erica.

"We've been working with Erica now for three years and have seen a massive boost in quantity," says Chris.

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In the 2019-20 season, the Shallards harvested 70 bins.

Chris says the established 2ha orchard purchased in 2013 came with a crop of 30 bins. From there, volumes fluctuated to lows of 15 bins and never achieved higher than 45 bins.

Erica says the main concern when she stepped onto the orchard was tree health, consistent productivity, and a lack of consistent pruning.

"I completely reworked the fertiliser programme and changed the way they were pruning."

One part of the Shallard's orchard is low lying and existing trees have struggled. Chris says they have ordered new trees for this area under Erica's advice to remove what was there.

"We have cut out a heap of trees because they were not performing, we tried quite a few things to rehabilitate in this one area but Erica said we were better to chop them out as they were not producing anyway so it was better for the long term to start again with a tolerant rootstock."

Chris says Erica has helped him gain knowledge of the physiology of the avocado tree and the specific requirements of their orchard.

"Now we are doing soil and leaf testing every six months and lots more analysing of what we are doing and then getting the right application."

A foliar fertiliser programme was the main feature of the rehabilitation phase of the programme for the Shallard's trees.

Chris says there was a high cost to this type of programme, but he can see the benefits of it now

"Everything has improved, lots more leaf, bigger leaf, and better colour.

"We had quite a bit of Phytophthora in here, we injected for about 3-4 years in a row and now we have moved away from the injecting and are using foliar and root applications instead as we are in a maintenance phase now."

Erica says that initially it is important to focus on tree health and structure rather than pushing production.

"If trees are in a decline state, pushing production will stress the tree further."



Shallard's trees showing good return flush beyond fruit.

Chris says that now the trees are looking good they can work on pushing consistent production and improving fruit quality to drive up returns.

Erica says that even though the Shallards have been doing significant pruning, they are still seeing good production levels with an estimated 40 plus bins of crop on for the 2020-21 season.



Shallard's orchard showing healthy white roots just under the mulch layer

### STICKING TO PLAN GETS RESULTS

Ngataki growers Grant and Samantha Kokich have been growing avocados for over 10 years on their two orchards – Waikopu Avocados and Henderson Bay Avocados. Grant was previously a dairy farmer in Hukerenui. After deciding to move on from this industry he got the advice to look further north for land to plant avocados.

"My banker at the time suggested the

Far North was the best place to grow them in New Zealand, so I jumped in the car and went up there for a look around."

Grant purchased 66 hectares which he then contoured 20 hectares of and put in good drainage ensuring the water table was 1.5-2 metres deep.

They then purchased a further 12 hectares which they proceeded to develop into an orchard.

Samantha's background was sales and marketing, but she had a love for working outdoors and with plants.

"I probably have more of an affinity to the growing side of it and Grant likes the development.

"I'm particular and pedantic, and Grant likes the big jobs, it works for the two orchards and you often find that with a husband and wife team."



Grant and Samantha Kokich.

From 2008, they planted approximately 2700 trees on Waikopu and 1000 trees on Henderson Bay Avocados.

As the trees matured production was erratic, they had good fruit sets followed by a few disasters.

"I kept on using too much nitrogen and was blowing all my fruitlets off," Says Grant.

The Kokichs started working with Erica when she first joined Just Avocados four years ago.

Grant says that while their orchards looked healthy, they lacked consistency of high production.

"We had a good programme, but we weren't applying it as advised

Samantha adds that pruning was something they had struggled with, especially on the older trees. "We did do some pruning, but we really

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**Developing ground for planting on Waikopu Orchard in Ngataki.**

didn't know what we were doing a lot of the time."

"Just Avocados has helped us a lot with the pruning through their field days and now the online workshops and John and Erica coming on to the property.

"After their advice we now have a better understanding of how to prune the older and younger trees," says Samantha.

A foliar fertiliser programme was the first major change to the programme for the Kokich's orchard.

"I think some people are not convinced of the foliar aspect - they think it's a lot to apply," says Samantha.

"Foliar sprays make a huge difference; they seem to be a lot stronger and look healthier which is setting them up for the next step of producing, says Samantha.

The Kokich's across their two orchards had experienced low production of never more than 10-12 tonnes per



**New plantings on Henderson Bay Avocados**

hectare but in 2019-20 they achieved 23.4 T per hectare on Waikopu and 24.5 T/hectare on Henderson Bay.

Grant estimates Henderson Bay will do 30 Tonnes per hectare in the coming season.

John says the results are a true show of what can happen when growers

stick to the programme.

"I like having a plan and that's what I like about these programmes, you know what you are doing and when," says Samantha. ●