



WE'RE ALL ABOUT AVO'S!

NEWSLETTER SPRING 2020

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

Welcome to our spring newsletter,

Our "big avocado" made its way to a new permanent spot in Katikati in August following our donation of the sculpture to Open Air Art. The new home is in front of the Katikati Arts Junction and information centre. I had originally commissioned this piece by Katikati craftsman Todd Uttinger for the exit driveway of the Just Avocados' Woodland Road avocado packhouse which is where it has stood for the past five years. Katch Katikati, the local town promotions agency approached me to donate it to raise awareness of Katikati's positioning as the "Avocado capital of New Zealand". We hope the community and visitors enjoy this new addition to the line-up of murals and sculptures in the Main Street of Katikati.

Onto the real avocados, there has been a lot of communication from our team and from the industry about small fruit and select picking. Small fruit, 28 CT and smaller remains challenging with 54% of industry volume packed to date sitting in this bracket. Just Avocados growers are tracking better than that figure. We are managing small fruit volumes well, balancing the need to get fruit off pre flowering but also accommodating those orchards with smaller fruit to size a portion for better values closer to Christmas. John mentions in his update on the next page the need to irrigate before you think you need to this coming summer as the effects of last summer's drought are evident in the widespread small fruit issue this season.

The team has put together some great resources over the last months for harvesting after rain – a decision tree and how to guide and video to assist you, contractors, and us in making decisions that will help maximise quality at harvest time. Please ensure you review this material which can be found in the articles section of our website.

The brand new JH Leavy & Co. premises in Brisbane is complete and in full use. Reports from Ben Bartlett (JH Leavy & Co. CEO) are that the facility is exceeding expectations and has increased our efficiency of receiving and handling avocados. Even amid the various shipping and port delays, we are receiving our avocado containers faster than our competitors. Ben has also reported that the quality of Just Avocados fruit on arrival into Australia is the best he has ever seen – so well done everyone for a great start to the season.

Inside the following pages, John and Kyra give a roundup of what's happening in Northland and the Bay of Plenty; Jacob and Midge catch you up on our export market activity; Erica talks about how to ensure you have good pollination and fruitset for our imminent flowering period; we catch up with Nathan Darling from Avoworks; and guest contributor Jerome Demmer from Biostart talks about the use of Mycorrhizae in an avocado trial in Maungatapere.

Happy reading.
Regards,

Andrew Darling



Nathan and Jacob Darling with the "big avocado" sculpture donated by the Darling family to Open Air Art in Katikati.



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ON THE ORCHARD

ORCHARD NEWS FROM THE BAY OF PLENTY

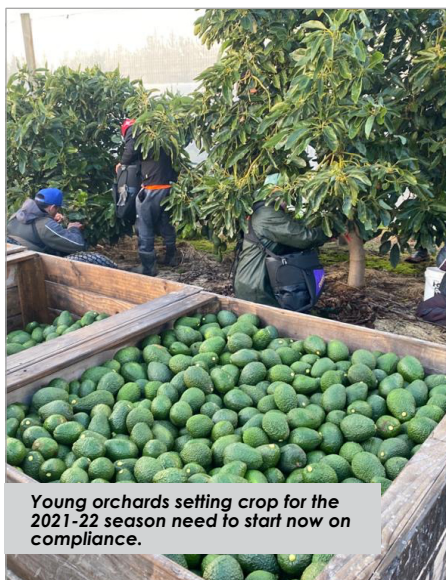
Making decisions on your harvest strategy this year has come with challenges regarding fruit size and the increased portion of small fruit this season. We are well under way with harvesting and many growers have had to work within the parameters of minimising harvesting small fruit and getting enough fruit off the trees to ensure return crop and continue optimum tree health for the coming season.

HARVEST

Consider harvesting 60-70% of your crop now (early part of season) and allowing the rest to size and realise the potential for more value in increased fruit size into the later part of the season. Exposed fruit or branches marked for pruning, can be strip picked, with the remainder of the tree to be select picked. Trees with a heavy crop load or orchard under 1.5ha where split picking costs need to be considered as well, talk to us about your options.

TASKS FOR NEW DEVELOPMENT ORCHARDS

If you are new to growing avocados, or your young trees are setting fruit for the first time this spring, there are a couple of things to tick off before 31st October 2020 if you want to export fruit for 2021-22 season. There are a large number of new development orchards coming into their first fruit set this year with fruit being harvested in the 2021-22 season. Listed below are some key processes and documentation you need to do and have in place in preparation to sell your fruit for 2021-22 season.



Young orchards setting crop for the 2021-22 season need to start now on compliance.



Consider harvesting 60-70% of your crop now (early part of season) and allowing the rest to size and realise the potential for more value in increased fruit size into the later part of the season.

Compliance

AvoGreen

If you are using chemical sprays on your avocado trees, then you need to justify the usage through AvoGreen monitoring. If you plan to export your fruit you need to have one of the following in place:

- Signed an AvoGreen contract with your AvoGreen pest monitor of choice by 31 October 2020 (Just Avocados Ltd can do your pest monitoring for you); or,
- Be AvoGreen accredited yourself by 31 October 2020 this means having received your certificate by this date. It can take 3-6 months to become certified. Go to www.industry.nzavocado.co.nz/about-us/compliance/avogreen/ to find out more.

If your fruit is destined for local market only, your orchard still needs to be monitored if you are using sprays, so you can prove you have the pest you have sprayed the chemical for.

GLOBALG.A.P./NZG.A.P.

When exporting avocados, your orchard will be audited under GLOBALG.A.P.. For local market you must be GLOBALG.A.P. compliant or NZG.A.P. compliant for clearance to harvest. Just Avocados Ltd can GLOBALG.A.P. audit your orchard. If you want to be NZG.A.P. compliant you will need to be independently audited.

There is an array of processes and documentation to work through for your GLOBALG.A.P. audit. This can be overwhelming if left to the last



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minute; however, if you start keeping documentation records from 31 October 2020, the audit next year will be shorter and much easier. In preparation, from 31 October the year prior to when you want to harvest, keep all receipts, labels, MSDS documentation for products purchased for that coming year. Also keep documentation from when first starting an avocado development such as resource consents, soil and water tests, and your fertiliser programme.

Growsafe Certificate

If you plan to apply chemicals including fungicides, insecticides, and herbicides you are required to have one of the following:

- A contractor to apply the product, they must provide you

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- with a copy of their Growsafe certificate; or, If you plan to apply chemical yourself, you will need to do a one-day course and get your Growsafe certificate. Go to www.growsafe.co.nz for the details.

NZ Avocado Quality Manual

Read and get familiar with the Quality Manual on nzavocado.co.nz, in particular:

- Part 2 Grower Responsibilities
- Part 3 Agrichemical Manual
- Part 8 Export Maturity Standards
- Part 10 NZ Market Guidelines

Registrations

NZ Avocado registrations for China and Thailand markets are normally only open for a couple of months in spring prior to the year your fruit is being sold into that market. This year registrations for these two markets are open now until 31 October for the 2021-22 Season.

Export registration is usually open by the start of winter in the season of your harvest. Early bird prices are offered, or you can wait and pay (more) closer to your harvest date.

Agrichemicals

Two to three months out from harvest, consider the withholding period of the chemicals being applied as this can clash with your decided harvest timing. Get to know the chemicals your contractor is using, and their withholding periods as detailed in the NZ Avocado Quality Manual. Ensure your contractor knows your harvest date.

Dry Matter testing

A few weeks out from harvest, you can drop a ten-fruit sample into the packhouse to see what the dry matter percentage is. A local market pass is 23% or more and an export pass is 24% or more. More detail regarding further requirements and detail around this are in the NZ Avocado Quality Manual Part 8 found on at the NZ Avocado website www.industry.nzavocado.co.nz/downloads/quality-manual/. If the results from the packhouse dry matter test show the percentage is above these figures, we will consult with you to book a test with an independent verification agency appointed by NZ Avocado. Fruit will then need to pass more specific requirements to be given clearance to pick.

Harvesting

Harvest timing needs to be carefully managed if you are harvesting for



Flourishing cover crop planted in June by Just Avocados growers Wayne and Karina Johnson. Cover crops were a topic at our regenerative growing workshop - check out the recording at the Just Avocados Grower Facebook group.

local market only. A general rule of thumb is to harvest on the shoulder months of the export season. This gap closes in more and more every year and every season dictates changes and challenges around decision making for harvest timing.

You can choose to harvest fruit yourself with friends and family or you can get contractors in to harvest for you. Avoworks runs a great team of people who can harvest your entire orchard for you or can work with you and show you how to harvest your own fruit. Avoworks can transport your fruit or you can transport your own fruit. To find out more go to www.avoworks.co.nz

Equipment required for harvest are fruit snips with a curved or closed in blade, harvesting bag and buckets.

If the orchard has less than 300-500 trees, it can be tricky when it comes to harvesting in its first year when weighing up the costs of harvesting and how much fruit is produced. I often get asked, *how much fruit is needed to make it viable to harvest?* Have a think about the following questions as there are a few factors that play into this; however, the fruit needs to be harvested and compliance is a requirement whether you are

exporting fruit or selling into the local market no matter how much fruit you have.

- Will you be paying contractors to harvest?
- Can you harvest the fruit yourself or help your contractors to reduce costs?
- What is your crop estimate?
- What are the costs including compliance, contractors, packing and packaging?
- What are the indicative returns per tray?

Workshops

Our workshops are proving to be very popular; I would like to thank all growers that are attending these and making them the success they are! If you haven't attended our workshops yet I really encourage you to as these are a great opportunity to see other orchards, talk with growers and learn and develop on your current practices on your own orchard and share your growing techniques. ●

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

I have been involved in the avocado industry for close to twenty years now and I am still amazed at some of the old wives' tales" that are around and some new ones that are coming out. I guess it may be to do with the avocado being an ancient fruit and surrounded in a bit of mystery.

Here are some of them; avocados don't fruit on the south side of the tree; you can't prune avocado trees; they will drop all their fruit if they feel like it; hang dead fish in the trees it will help with fruit set; don't irrigate over flowering to help with fruit set; they don't take up foliar fertiliser sprays through the leaf; there is a male and female tree; there is a dwarf variety of Hass; I am sure you all have ones that you have heard as well – for the record, these statements are all false!

IN THE FIELD

In a year of small fruit size, there are still orchards with excellent fruit size that can be strip picked. From my observations, growers with these orchards were diligent with their irrigation through the summer, fed the trees adequately, and some used plant growth regulators. I was on two South Auckland orchards, which is a challenging district to grow avocados in, and the fruit size (as observed in September) is an absolute credit to

the growers involved. They will be strip picking probably with an average count size of 24 or greater. If you have irrigation, make sure you start earlier than you think you need to. Waiting for the rain is never a good idea.

A question that I get asked often is "What is the best planting distance". My answer to this has been unchanged for about ten years now, "20 tonnes per hectare". It does not matter what distance your trees are apart, it is about kilos or tonnes per hectare that go out the gate, and what it cost you to grow that fruit. Certainly, planting distances



Jumbo fruit in South Auckland.



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have changed from the traditional 7m x 7m over the last few years with most growers opting for something closer. There is a brave developer in the mid north planting 10,000 trees at 1.2m x 5m. This gives roughly 1,300 trees ha when you allow for shelter and headlands. I will keep you posted as to the progress and observations of this development. ●

ORCHARD MANAGEMENT WITH ERICA

SPRINGTIME ON THE ORCHARD

Understanding avocado flowering can be confusing and can have a significant impact on your orchard's production. For our newer growers, as well as our seasoned growers, I thought I would use this opportunity to revisit and feature a topic that is arguably one of the most important stages of growing avocados - flowering, pollination, fruit set and ultimately orchard productivity.

Pruning, moisture management and nutrition are also important at this critical time. It is also the time of year we are harvesting and planting out new orchards so I have included links to plenty to read up on below to support your actions.

FLOWERING

A mature avocado tree can produce more than one million flowers with fruit



Improve pollination by ensuring you have adequate beehives present from 5-10% flowering.

set ranging from 0.3-0.5%. The avocado flower is very unique in that each flower has a distinct male and female phase which is nature's way of encouraging cross pollination between different cultivars and ensuring species diversity. This however does not preclude self and close pollination within the same cultivar as is demonstrated in orchards of only one cultivar or individual trees in home gardens.

Briefly explained, avocado cultivars can be divided into either A or B flowering cultivars.

For A-flowering cultivars e.g. Hass, the flower will open for the first time (day one) functioning in the female phase with only the female parts being receptive. The flower then closes after two to six hours and

This synchronisation however seldom occurs perfectly and is mostly only synchronised at warmer temperatures of minimums of 15°C and maximums of 25°C.

The cooler New Zealand climate and variable spring weather result in delayed and irregular opening in the female phase with a greater overlap occurring between the female and male phases.

The pollen transfer within the same tree or neighbouring trees of the same cultivar during this overlap period result in close pollination. Isozyme analysis of fruit has supported this and shown that most of the fruit (up to 85%) is fertilised with pollen from the same varieties' own pollen i.e. Hass pollen for Hass fruit.



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Flower in female phase with stigma exposed and stamens lying flat against tepals



Flower in male phase with stamens upright and anthers releasing pollen.

reopens in the afternoon of day two in the male phase, with the male flower parts now being functional and shedding pollen. The flower remains open and finally closes for the last time the next morning. If pollination and fertilisation was successful, the flower will remain on the tree and begin to form a fruit. If fertilisation was not successful, ethylene will be produced at the base of the ovule and the flower will abscise (fall off).

For B-flowering cultivars e.g. Zutano, the flower opens in the afternoon of day one in the female phase, closes and reopens from the morning to afternoon of day two in the male phase, synchronising with the opening of the A-cultivar in its female phase. Pollen transfer from the B cultivar to the A cultivar can then take place.

In higher temperatures with lower humidity, the stigma viability is short lived and it will appear brown or shrivelled on day two but in climates with high humidity and/or cooler temperatures, the stigma is still receptive and viable on day two when the flower is in the functioning male phase making self-pollination possible.

Regardless of the flowering behaviour or rather misbehaviour, without pollen transfer, pollination and fertilisation cannot take place.

POLLINATION

Pollen is transferred by a variety of insects, by wind and even by gravity. The honeybee however takes the lead role and is the principal pollinator. To ensure the best possible pollination and fruit set we need to ensure that there are enough bees

within the orchard. With heavy flowering and cooler climates, more hives per hectare are required and eight to twelve hives in these instances are advised.

Bumblebees come in at a good second place as an effective pollinator for avocados and are less averse to cold, windy, and wet weather conditions. A 1:4 ratio of bumble to honeybee hives is recommended for optimum pollination.

The story does not end there. Once pollen is transferred, many conditions must be met before fruit set can occur.

FERTILISATION AND FRUIT SET

To ensure optimum fertilisation, research has shown that the more pollen that is transferred to the stigma the better the chance of fertilisation.

At least 20 golden pollen grains appear to be the magic number as some pollen doesn't germinate, some pollen tubes don't have the "vigour" to make it all the way to the ovule and some pollen tubes grow too slowly and the ovule loses its viability.

Once the pollen grain adheres to the sticky stigma, it starts to germinate, producing a pollen tube which grows down through the style, enters the ovary, finally reaching the ovule. It can take anything from a few hours to 24 hours from germination to fertilisation. Fertilisation then initiates the development of the ovary into a mature avocado fruit and the ovule into the seed.

There are also various other factors that affect fertilisation.

The cooler the temperature, the slower the pollen tube growth rate. Temperature and humidity also affect the viability and receptiveness of the stigma to receive pollen. The higher the temperature and lower the humidity, the quicker the stigma will shrivel. If the stigma shrivels before the pollen tube has finished its growth to the ovules, fertilisation will not occur.

The starch content of the floral tissue and nutrient status also has an influence on the capacity of the flower to develop successfully into a fruit and has an influence on early fruitlet abscission.

Many flowers are also not capable of developing into mature fruit due to abnormalities in the embryo or embryo abortion. Water stress, nutrient imbalances, carbohydrate reserves and levels and ratios of different hormones also influence fruit set and abscission.

It is no wonder that the flower to fruit ratio is so low in avocados, but there are some steps we can follow to ensure optimal flowering, pollination, fertilisation and fruit set:

What you can do to improve fruit set:

Application of nutrients

This is a period of very high nutrient demand and withdrawal due to the existing crop as well as development of flowers, nectar production etc. You can optimise fertilisation and fruit set by applying foliar / flower sprays of specific nutrients. For example, boron is especially important for pollen germination, pollen tube growth,

fertilisation and fruit set. Zinc is important during reproduction for protein synthesis. If you don't apply regular foliar sprays on your orchard, then ensure you time at least one Boron, Zinc and seaweed foliar spray when 50% of the trees are at 50% cauliflower stage, 25% at earlier flower development and 25% approaching full bloom. Flowers are in fact more efficient at absorbing foliar sprays than leaves. Consider also applying foliar sprays to support any heavy/over flowering or stressed trees with products high in amino acids and enzymes.

Read your trees!

By now, the fat round flower buds that were sitting tightly in the leaf axils have extended and developed into panicles full of flowers ranging from closed, open or "spent". In some orchards, depending on your region or microclimate, flowering may be more advanced and you will want to regularly assess your flowers from the beginning of September to gauge when to get your bees in. Do not go off historical dates as each season will differ.

petals fall off.

Beehives in by 5-10% flowering

Improve pollination by ensuring you have adequate beehives present from at least 5-10% flowering. The bees take time to settle in and resume full activity and strength.

Growers are often conservative on the number of hives per hectare. Depending on your planting density and flowering intensity, aim for eight to twelve hives per hectare.

Place hives in small groups spread throughout the orchard, in sheltered, sunny areas.

The only way for fruit to occur is to move pollen onto flowers and lots of it so to encourage your bees to stay busy pollinating your flowers, place a source of water close to the hives so that the bees do not have to travel far in search of water. Place a branch or something that floats in the water trough so that the bees can safely drink and not drown.

Pruning improves bee activity as more open canopies and orchards result in



Find a warm sunny spot in your orchard and examine the flowers on the Northern quadrant. Closed flowers does not mean that flowering hasn't commenced. Examine the shape of the bud closely. Unopened buds appear round and have a greenish yellow tinge. Flowers that are in their first or second day of opening are more oval and slightly more yellow and spent flowers become elongated and are elliptical in shape and more of a mustard yellow. These spent flowers are no longer viable and will in time fall off or if pollinated, pin head fruit will start to appear as the outer

warmer orchards and easier flight paths throughout the tree and orchard.

Contact your apiarist if any spraying needs to be done and use bee friendly products or spray at night.

If, over pollination the weather conditions are not favourable for bee activity, consider applying a pheromone spray like Bee-Scent™. Bee-Scent™ is a pheromone-based liquid formulation that attracts honeybees to treated blossoms and encourages foraging behavior. The bees stay focused on working the blossoms harder. This increase in



Regular pruning

A regular pruning programme will ensure adequate light into the canopy which in turn results in flowers and fruit throughout the canopy and a more even crop load on the entire tree and not just predominantly the top or the periphery. It also results in better bud quality as by pruning you essentially are also “reducing” the crop load by removing limbs that would flower and fruit. A form of flower pruning before the tree expends the energy producing the actual flowers. Production performance is also higher on renewed wood.

Early season harvest

In heavy flowering on years when the tree is also carrying a crop, it is perhaps advisable to reduce the crop load on the tree. Fruit and flowers on a tree are a massive energy and nutrient drain on the tree and a stressed tree will decline further if its crop load is not well managed.

Encourage spring flush

Monitor your flowering to ensure a good proportion of both determinate and indeterminate flowering. Without adequate spring flush, not only will you leave fruit exposed to sunburn and less resources for optimal fruit sizing and general tree performance, but you will also compromise next year's crop as there will not be enough flowering wood to ensure consistent yields. In this case, consider revising your nutrient programme to push

foraging intensity improves crop pollination.

Monitor and manage moisture levels

Any water stress over fruit set results in higher fruitlet drop and consequently lower production. Although our rainfall is high, we unfortunately often have dry periods over this critical time.

Should you be fortunate enough to have irrigation, now is the time that this investment will pay off. Use moisture meters to measure soil moisture levels to ensure that you are applying the required amount of water.

The correct placement of irrigation meters is important. Position your meters on the northern quadrant halfway between the trunk and dripline. Use a tree that is representative of the irrigation block.

When irrigating, regularly check for blocked or missing nozzles, leaks in the lines or poor water pressure. Remember to do seasonal maintenance and check that the irrigation system is working properly before you need to start up irrigation for the season again.



more flush or shed more fruitlets or alternatively fruit or flower thin. A dry season without irrigation will exacerbate the problem.

PRUNING

The pruning window is closing so ensure you have booked your contractors to get your pruning done. Pruning ensures better production and more consistent cropping. Marking the limbs before the contractor arrives will save time and money and the job can get done quickly. Alternatively ensure your contractor has a good understanding of what pruning method you are following.

Remember that pruning is not just about getting light into the canopy but also ensuring good regrowth that will optimise future production.

Ensure pruning cuts are made at an angle so that rainwater runs off and also treat pruning cuts to avoid infection and secondary rots.

The pruned limb as well as any exposed limbs will need to be treated against sunburn. Sunburn on exposed branches and new pruning cuts as well as secondary rots and cankers can cause irreparable damage affecting tree health, performance and yield. Apply a 1:1 ratio of water and acrylic white paint (a cheap contractor grade will suffice) if painted on or dilute it down further if spraying it. Be careful of overspray and ensure that no paint is sprayed onto any fruit. Alternatively Surround can be used and sprayed onto any exposed limbs/branches. If using Surround, overspray onto fruit will not be a problem. Although the easier option, Surround however will not have the persistence of the paint/water option.

Remember to manage the pruning regrowth by selecting and tipping the shoots you want and thinning out the rest. This will not only improve and optimize the bearing structure and capacity of the tree but also ensure quicker return to production as well as improved flower bud quality.

NUTRITION AND FERTILISER APPLICATION

Nutrition management is important going into fruit set as any deficiencies or imbalances will compromise the percentage of fruit you set. If you have managed winter nutrition well, you will have managed to maintain or elevate nutrient levels especially

important for fertilisation and fruit set.

With increased soil moisture levels and temperatures, roots should be actively flushing and nutrient uptake increasing. You should have already applied your first solid fertiliser applications of the season, starting with lighter applications at the beginning of the season and building up the applications as the season and demands increase. Remember also that balanced application is critical. Avoid high nitrogen levels that result in excessive fruitlet drop, high pest pressure, reduced calcium uptake and an increase in post-harvest diseases and shorter shelf life. Foliar applications over flowering as mentioned above is especially beneficial.



MANAGING TREE DECLINE OR WINTER/FLOWERING STRESS

Winter, flowering progression and intensity as well as holding crop, can all have a detrimental impact on tree health. If you have noticed tree decline, then assess your tree and rate it according to the Ciba Geigy chart found in this article - <https://justavocados.co.nz/phytophthora-root-rot-control/>.

This will enable you to understand what remedial action to take to gain back tree health and performance and improve production.

Click on the link below to refer to our Remedial programme for avocados with poor health for managing any stressed or poor health trees: <https://www.facebook.com/groups/justavocadosgrowers/permalink/1384501125080255>

NEW PLANTINGS / DEVELOPMENTS

Spring is also the time where new

plantings, replants or interplants commence. Soil sampling, land prep, corrections, pegging out and irrigation should have been completed in anticipation of planting. On receipt of your trees, check to see that you are happy with the quality and that your trees are uniform and comply with the Industry High Health Scheme preplant checklist. Refer to our guidelines for detailed information on land preparation as well as preplanting and planting advice: <https://www.facebook.com/groups/justavocadosgrowers/permalink/1385204891676545>

HARVESTING

Harvesting is well under way with blanket clearances been issued in most of the regions. To ensure you maintain

your best possible packout, please refer to our harvesting guidelines: <https://justavocados.co.nz/harvesting-packout-and-fruit-deformities/>, and our recent decision tree and video for harvesting around wet conditions: <https://justavocados.co.nz/harvesting-around-rain/>.

Although spring is a busy time on the orchard, take time to marvel at how wonderful nature is. Converting the energy from the sun and using all your orchard inputs and hard work, a tiny pinhead starts to develop progressing to the fruit in your hands as you harvest - what an awesome industry we are in!

For any orchard support or contracting work during this time, please contact our Grower Services Team or Avoworks www.avoworks.co.nz ●

IN THE MARKETS

JUST AVOCADOS MARKET UPDATE

Week 40 marks 34% of volume shipped to date for Just Avocados, with our figure tracking slightly ahead of industry data highlighting our return production focused model.

Just Avocados continues to be focused on achieving our market split strategy of 20% into Asia and 80% into Australia which is a significant contributor to successful grower returns. Our retail focus in Australia, ability to manage the size profile, and continued delivery of a premium product key factors in delivering a good result for Just Avocados' suppliers.

ASIA

As we get deeper into the season, our volumes into Asia will begin to wind down from a sea freight perspective.

To date, we have shipped 13% of all volume sent to Asia with the primary markets being Thailand, Taiwan, Korea, and China. Our focus remains on these key markets where we see consumers who have adopted a premium health conscious product into their lifestyle.

Pleasingly, in Thailand we have out turned our fourth sea freight container with positive results. With transit times of over 25 days, the outcomes have highlighted the benefit of the improvements we have collectively made to the supply chain.

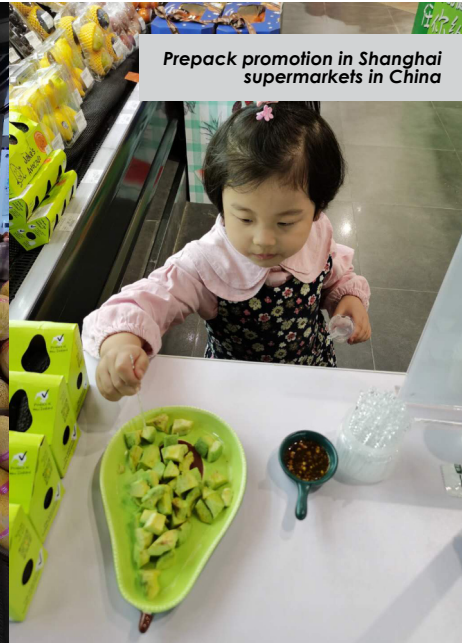
Korea is yet to receive any sea freight arrivals, but all air freight volume has been consumed with positive commentary to the NZ quality this season.

Our China programme has commenced with out turns being successful to date inclusive of promotions at all online and offline channels.

However, we are keeping our feet planted with regards to our quality outcome to date as we recognise we are only one-third through the season and need to continue the good work to maintain this level through to the end of the season.

PROMOTIONS

Just Avocados has invested in promotional work across a range of key markets through Asia this season. Including point of sale material, in store demonstrations and the improvement of our QR code content which is accessible on all our labels across Asia. We are also engaging with NZTE and in market agencies to provide advice on how to development of our story, brand and product and market this in the best way.



PREPACK PROGRAMME

We have also had great success to date with the prepack programme which has now advanced to customers receiving this in nearly all key markets across Asia. This has been extremely valuable as it has allowed us to access a component of the market, we previously have not had the ability to access. It has also allowed us to develop customer segments that were challenging to gain traction in previously.

AUSTRALIA

Volumes into Australia have exceeded our flow plan, with volume shifted from Asia to ensure a competitive outcome as the Australian market strengthens.

To date, 70% of our total Australian volume has been placed into retail which has enabled us to maintain values without oversupplying the Australian wholesale market.

Size profile remains a challenge and will have an effect on the outcome from Australia this year. To date, 54% of all industry volume packed has been smaller than 28 CT. We continue to manage this issue at Just Avocados and our collective efforts show with our size profile sitting at 41% of fruit packed at 28 CT and smaller.

The focus of size picking remains important as we need to allow these currently smaller sizes the opportunity of increasing along with being able to improve returns for these sizes season to date.

GROWER RETURNS

Values and grower returns are still



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sitting firm across all markets which is pleasing to see.

We believe that Asia will sit somewhere between a \$18.00 - \$23.00 OGR and key sizes in Australia 16 CT – 25 CT will sit between \$25.00 - \$28.00 OGR.

We remain optimistic about the outlook for the balance of the season; however, we need to note the importance of ensuring a manageable size profile, continuing to deliver a premium product, and not understating indicated volumes.

From growers, through to our grower services rep's, to the packhouse and beyond to our international customers, we all have a part to play in delivering a fantastic outcome for the 2021 season. ●

EXPORT MARKETING ACTIVITY

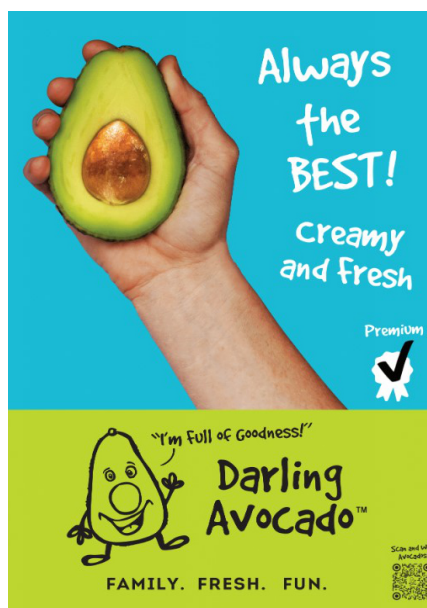
Our programme in Thailand has been a great platform to launch our new marketing material which has been received well by retail and consumers. Strong quality has also supported the impact of our in-store presence and the positive feedback received to date.

Earlier in the year, we engaged with an Asia-based marketing agency to further develop our avocado brands for presentation to consumers at retail. This activity has yielded a suite of multi-language material to complement our in-store as well as online promotion of New Zealand avocados.

Our marketing material focuses on the tagline of Family. Fresh. Fun. which covers the people/origin, the product characteristics, and the how-



In-store sampling and display in Thailand.



to aspects of engaging with our brand.

Thailand

We distributed display materials to all 129 of our Thailand retailer's stores to help our brand stand out and provide education and direction to shoppers as to how to choose and store avocados. We ran sampling in 13 of the retailers' more significant stores which resulted in 83% of shoppers who tasted our avocados during the sampling making a purchase of avocados in that store visit. Quality was reported by shoppers to be very good and display materials were reported to have made our display stand out from others. We will run more sampling sessions here later in the year.

China

In China we have been working with our importer to develop a one-piece pack for jumbo fruit which is being pitched as a gift. They have also completed a retail roadshow engaging with 2000 consumers in-store in

Shanghai where they promoted the Jake's Avocado brand and offered tasting and education.

Online

Supporting our in-store activity is promotion of NZ avocados online through social media and our website.

We have been working with NZ Avocado to provide general avocado industry story and recipe videos to our retailers to share on their social media channels. We have also started a Darling Group facebook page and have relaunched our Instagram page to support our NZ avocado season – please search @familyfreshfun on both platforms to follow our activity.

Consumers are also able to connect with us and seek information on how to handle ripen and use avocado through scanning the QR code found on our packaging, labels and point of sale material. This takes them to a landing page full of useful direction on avocados and a short survey



Midge Munro

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asking them to tell us a bit about what they think of our brand and what they like about avocados. ●

FEATURES

AVOWORKS EXPANDING WITH GROWING INDUSTRY

Avoworks is a specialist avocado orchard management and contracting service company based in the Bay of Plenty, acquired by Darling Group three years ago. The Avoworks team are becoming the go to people in the avocado industry for large scale developments, orchard management, and skilled contracting.

Avoworks General Manager Nathan Darling says the focus for the business is growth and orchard outcomes for their clients.

"Working towards better productivity and profitability for the orchards that we manage and for our clients is what motivates us."

Nathan returned to Katikati in 2016 after completing a Bachelor of Agriculture at Lincoln University and working in various other primary sector roles. He joined the family business in 2016 and then moved into a leadership role following the acquisition of Avoworks.

"We took on the business with two permanent employees and this has grown to twenty-five."

"Avoworks was previously mainly doing avocado harvesting and pruning. Now we are doing anything and everything involved with growing a crop of avocados, kiwifruit, or blueberries."

"In the peak season, like today, we have forty-five people working for us, and it can go up to about 60."

The business has grown rapidly in the last few years driven by the increase in large scale avocado developments and demand for skilled, knowledgeable, and reliable contractors in the avocado industry.

"Integrity is a big part of my approach, doing what we say, doing a really good job and also doing a job that is going to benefit them [clients] from a production point of view."

Avoworks operates across the growing regions but has a focus on the Bay of Plenty.

Nathan says his favourite project to date has been the management and development of Uretara orchard in Katikati.

"I took over the management of



Everything you need to grow your orchard to its full potential.



Knowledgeable and skilled team offering advice through to full management - from orchard establishment to harvest.



 027 278 7714  nathan@avoworks.co.nz  www.avoworks.co.nz

Uretara three years ago and at that point it was a mature orchard with big trees and sick trees.

"Darling Group then purchased some neighbouring land of 10 hectares and we are in the process of developing that. There has been a lot of earthworks, high density planting, and big irrigation systems on top of bringing the older existing orchard up to scratch and up to standard in terms of production."

"The orchard is doing really well now, every year the production is climbing. It had an average of eight tonnes per hectare when I started. This year we are sitting on about fourteen tonnes per hectare so it's still not great, but we have come a long way and it's going to continue."

Avoworks has a high performing and enthusiastic team.

"Cameron Byrom is operations manager for the contracting side of the business in the BOP, he sets up the crews and does the quality control. We have supervisors reporting to him – Hamish, James and Campbell, and a couple of truck drivers. We also have orchard managers and staff in Tapanui and the Far North."

"Erica Faber, technical manager for Just Avocados works with us as well. She takes care of the technical advisory for our clients and we can call upon her to give support when we are looking at orchard development and management."

Clients are also able to work alongside the Avoworks team.

>>

"It works well with the harvesting, it's good to have the grower on the tractor and it saves the client money as well. We sometimes have clients that help with the chipping or the chain sawing when we are doing the pruning."

Avoworks has a variety of equipment to tackle any job including fifteen elevating work platforms, ten tractors, three trucks, chippers, mulchers, mowers, and various sprayers for crops and weeds.

Current projects for the team are harvesting, pruning, and applying fertiliser, as well as setting up management systems for a 50 hectare orchard in Taporā.

Nathan says that pruning now before summertime is important and clients should be booking that in as soon as possible.

"We have a specialised pruning crew that we carry right through the busy harvesting season, which

is quite unique as other contractors are busy harvesting."

Nathan says the team have capability to take on further harvesting work and offer bin rates for this service and will also tailor programmes to suit a client's requirements across their range of services. ●

HEALTHY SOIL BIOLOGY: GET YOUR ORCHARD OFF TO A STRONG START

Recent trials in a newly established Northland avocado orchard, show how orchard establishment is improved and tree growth increased with the help of the right soil biostimulant to get the soil biology in optimal condition.

Microbial biostimulants contain substances and/or micro-organisms which, when applied to plants or the root zone (rhizosphere), cause specific beneficial microbes to multiply. The increase in microbes increases their beneficial effects.

These soil microbes, both bacteria and fungi, are essential for plant growth both directly and indirectly. The most important direct effect of beneficial soil bacteria for plant growth is providing anionic plant nutrients: nitrogen (N), phosphorous (P) and sulphur (S). Without the activity of soil bacteria these nutrients would not be available for plants to take up. N, P and S fertilisers are "locked up" by the soil into chemical forms that are stable in the soil soon after application. These chemical forms of N, P and S are not available to the plant until the bacteria's "mineralisation

activity" makes them available.


Some groups of soil bacteria that mineralise nutrients around plant roots have also evolved to produce plant rooting hormones. This causes the plants to grow more roots which benefits the plant as well as the other microbes living around the plant roots.

Microbes can also act as a biocontrol agent. In diseased soil the balance between bacteria and fungal numbers needs to be restored and an increase in good bacteria can competes with the disease-causing microbes to recreate that balance.

The presence of some bacteria and the exudates they produce in the rhizosphere stimulates the plants defence system called ISR (induced -systemic resistance). When ISR is activated the plant is more resilient against attacks from pathogens.

A healthy soil relies on all of the functions of the microbes in combination with the chemical components of the soil in balance.

In a newly planted avocado orchard trial in Maungatāpere (Northland), regular applications of the biological stimulant, Mycorrcin,



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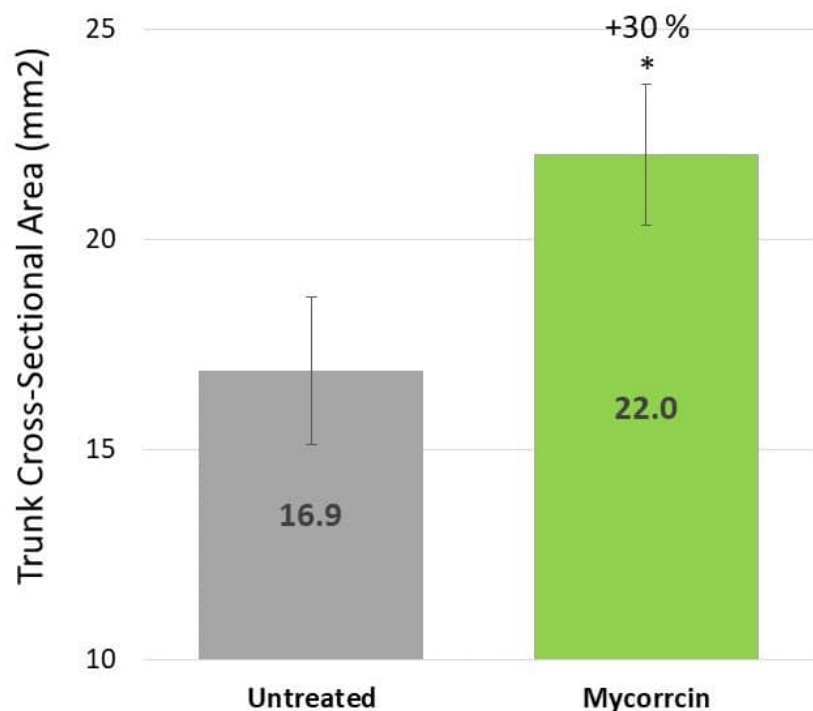
biostart[®]

began at establishment of the orchard in November 2018. Mycorrcin was applied to the Hass (on Zutano root stock) trees at planting, with further applications being made to coincide with the spring and autumn root growth flushes in avocado trees to maximise the impact of the beneficial soil microbes that Mycorrcin



Mycorrcin treated avocado trees on the right after one year

Effect of Mycorrcin on Trunk Cross-Sectional Area in Hass Avocado Trees at 18 Months, Northland



stimulates. Regular assessment of ten untreated and Mycorrcin-treated trees showed regular applications of Mycorrcin increased the trunk cross-sectional (TCA) of avocado trees by 21% and 30% at 12 and 18 months after planting, respectively.

These trials demonstrate that regularly applications of the soil biostimulant Mycorrcin in newly planted avocado orchards substantially sped up establishment, increased growth and improve tree architecture.

Mycorrcin is available in standard and certified organic form. To order call Biostart Ltd 0800 116 229 or visit the website at www.biostart.co.nz

**Just Avocados Limited takes no responsibility for the outcomes of using third party products, services, and information. ●*

UPCOMING EVENTS



WORKSHOP

Wednesday 4 November 2020
Arrive 10:15am for a 10:30am start.
Workshop ends at 11:30am

Topic: Irrigation and fertigation

Location in Bay of Plenty to be confirmed via e-bulletin and the Just Avocados Growers Facebook group.

CHRISTMAS CATCH UP

Friday 4 December 2020, from 3:00pm



PLEASE REGISTER

If you would like to attend either of these events, please register by letting Kyra or John know or email info@justavocados.co.nz or call 07 549 3027.

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