



# WE'RE ALL ABOUT AVO'S!

NEWSLETTER: JULY-AUGUST 2018

[www.justavocados.co.nz](http://www.justavocados.co.nz) | 54 Woodland Road, Katikati | 07 549 3027

## Welcome to the July-August Newsletter,

This edition is a biggie! We've got lots to share as we make a start on the season; Erica begins her series on plant nutrition focusing on Nitrogen, John talks about the large scale Far North developments and how this may change the landscape for all growers, Greg is gearing growers up for harvest in the Bay of Plenty, Helen touches on the ever increasing importance of providing a healthy and safe work place and what the term 'overlapping duties' means, Dale focuses on AvoGreen, Nathan updates us on Avoworks activity, and with the 2018-19 season start upon us, Jacob shares exciting news about our upcoming activity in the export markets.

It's come around fast - the season has just commenced and the team is excited to build on our achievements of last season in what we anticipate to be another rewarding year

## New season proposals

We delivered the Just Avocados 2018-19 season proposal in June. When returning these to us, please just double check you have

completed all of the forms, specifically, if you are interested in exporting to China this season. Note that the China form differs from the Thailand form as signing this form and providing you meet the required compliance specifications registers your current hanging crop for the 2018-19 season (the Thailand form covers your crop set this season for export in 2019-20).

On the Grower Details form we ask you to provide us with your preferred harvest timing. We are committed to providing a model that allows flexibility around harvest whilst also delivering value via our time premium payments – talk to your grower services rep about your harvest timing and how our model can best benefit your goals.

## Just Avocados Grower Service Programme

We have recently reviewed the service we provide to our suppliers. The aim of this review being to develop a programme that adds structure to our service and sets out exactly what you will receive in terms of technical advice, events and information. Your grower services representative will catch up with you in the coming weeks to chat about your specific service benefits.

## New Zealand Avocado International Industry Conference 29-31 August, ASB Arena, Tauranga

The industry conference is coming up at the end of this month and we are excited to be a sponsor of this event. We are sharing an exhibition space with our friends from Zeafruit and promoting our one stop shop for all of your avocado needs. We hope to see you there.

Regards,

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**SEE YOU AT THE NEW ZEALAND  
AVOCADO INTERNATIONAL INDUSTRY  
CONFERENCE 29-31 AUGUST.**

## IN THE MARKETS

### SALES AND MARKETING UPDATE

**People often say to us in the avocado industry that between seasons we must have an opportunity to take a break but we all know it's just not the case! It has been as busy as ever and we have utilised every moment completing customer visits, season planning, confirming market commitments, and this year we have had the added task and excitement of developing a new brand for our avocados and other lines for Darling Group.**

### BOOST TO VERTICAL INTEGRATION

JH Leavy & Co has recently been approved as an inspection and treatment facility for Fresh Produce, Nursery Stock and Cut Flowers. This is another step in Darling Group's vertical integration strategy.

From an avocado perspective this will help us significantly around clearance delays, whereby we can now control the movement of stock from the wharf right through to the customer. This is a huge plus when looking at the need for efficiency at the end of the season where we are presented with a large volume of high maturity fruit.

This will take out significant time delays and costs in the supply chain for our New Zealand avocado growers.

### MARKET OUTLOOK

Overall the market outlook remains positive for the start of the New Zealand season. Our strategy is for a heavy push early in the season into the Asian markets and then optimising the late season Australian window.

The east coast volumes out of QLD and NSW remain strong with the

Australian market currently trading around the AUD \$30.00 - \$34.00. Our market intelligence suggests this will firm over the coming weeks, which we have worked our harvest plan around.

Californian fruit remains in Korea which is expected considering the early start date of New Zealand harvest however, demand for New Zealand fruit is beginning to lift as the Californian volume drops.

China is a fantastic opportunity for Darling Group and Just Avocados. This opportunity allows us to access another premium market that is capable of taking significant volumes at premium prices.

### TWELVE-MONTH SUPPLY STRATEGY

As shared with you at the Just Avocados season review meetings in May, Darling Group has embarked on a strategy to get closer to the retail chains and deliver our customers with a 12-month supply of our key lines of avocado and citrus.



We have made our 12-month supply strategy possible through securing a network of partnerships in Australia and North America (adding to our already established



**Jacob Darling**

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New Zealand base with Just avocados). The most recent partnership developed is with avocado specialist, GreenFruit Avocados in North America.

This partnership means we can source from the popular Mexican growing regions Jalisco and Michoacán. On August 1, GreenFruit opened a new packhouse in Mexico, and it is here where it will commence the supply of avocados to our programme.

We believe through offering a consistent standard of quality under the same brand for 365 days a year we have a significant point of difference and can offer a service that returns our growers a premium.

### DARLING AVOCADO BRAND

We are excited about our new brands which have been a hit in the international market so far. They have resonated with our in-market partners who are enthusiastic about our premium offering and the fun brand >>

characters. The range includes Darling Avocado, Darling Lemon, Darling Mandarin and Darling Orange.

The brand line-up also includes the variations Jake's Avocado, Lucus lemon, Nathan's Mandarin and Tippa's Orange which have been

developed specifically for China (and USA) and are based on the essence of Darling Group's family values. ●

## ON THE ORCHARD

### GREG'S CORNER - ORCHARD NEWS FROM THE BAY OF PLENTY Mid-year already! 2018 seems to be flying by!

#### KEEP UP YOUR NUTRIENT PROGRAMME

The cold wet weather at this time of the year can limit your time in the orchard but don't take your foot off the pedal. We want your trees well prepared for the coming spring, so ensure you are keeping up your nutrient programme.

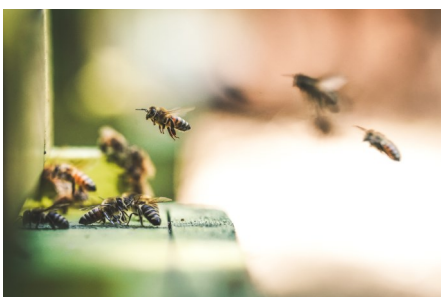
Looking at trees in the BOP, I'm encouraged to see the strong flower bud development and most orchards are holding their condition coming through the winter months. As usual, some orchards have had a fair amount of autumn flowering and those trees are showing signs of yellowing and will require nutrient support.

#### TIDY UP BEFORE HARVEST

Most orchards have completed their winter pruning and thinning and the orchard floor has been cleared of branches and logs in preparation for harvest. Not only is a tidy up of branches and logs essential for orchard health but also for health and safety and accessibility for pickers and machinery.

#### MATURITY LEVELS

On that note, there has been some



**A quick reminder here** - make sure you have been in contact with your bee keeper and have ordered enough hives for your block - 8 to 10 hives per ha is recommended.



*All large prunings should be chipped and put back under trees or removed for the health of your orchard and also to allow safe and easy access for pickers and machinery in your upcoming harvest.*

limited harvesting taking place in the BOP, obviously on very early maturing orchards, so I decided to take random samples for dry matter testing to track maturity levels amongst our grower group. At this stage it looks like it is going to be an early maturing season. Growers will be itching to get their fruit off and we will endeavour to accommodate growers' requests on harvest dates while working into the marketing plans to achieve the best returns.

With health and safety becoming more and more important in our industry can I ask growers to have a good look around their orchards for any potential hazards and remove them well before we get the harvesting teams in, we want to keep everyone safe in the busy picking months ahead. Also a request from me, please ensure your load out areas are easily accessible for our trucks to make their bin drop offs and collections hassle free.

#### NEW SEASON PROPOSAL

You will have received a copy of our supply proposal and I'll be making



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contact with you all over the next few weeks to discuss your harvest requirements.

Export registrations are open and one of the requirements on the form is to estimate how many export and local market trays you will have available this season - our grower details form asks for the same number so take a little time to walk your orchard and let's see if we can get an accurate estimate this year. ●

## JOHN'S JOTTINGS - ORCHARD NEWS FROM SOUTH AUCKLAND TO THE FAR NORTH

### DEVELOPMENTS IN FAR NORTH

Further to my comments in the last newsletter about the large scale expansion in Northland, there is also expansion happening on a smaller scale too.

Virtually all of our suppliers in the Far North are expanding their existing orchards. While modest compared to the big blocks, the expansion is still significant when compared to that happening in Bay of Plenty orchards. The photo at right is of a two hectare new planting site which is only part of the expansion plans for the growers.

Within the next three to four years these new plantings in the mid and far north will come into production and the supply base will shift onto a more equal footing with the BOP. However, the BOP supply base is made up of a number of much smaller orchards. If you look at other crops, say kiwifruit or apples, most of the smaller orchards are now managed or leased by bigger companies - collectively many small orchards having the same dynamic as one large one in terms of lower costs of production – which orchards of scale are able to achieve.

Just Avocados are well placed with Avoworks' orchard management division to develop this concept and discuss the options with growers who perhaps enjoy owning a small avocado orchard but struggle with some of the day to day duties and costs.

### HARVEST

On 17 July, the first orchard was away harvesting and was packed 19 July by our new partner Far North Packers. Growers are excited about the opportunity to support a local business and we look forward to working with

### PEST PATROL AND COMPLIANCE UPDATE

#### AVOGREEN MONITORING

Generally, Green House Thrip (GHT) has declined, although it is still being sighted on some orchards in the juvenile stage. I haven't seen any adult GHT for some time. Hopefully the series of frosts we have had in



Prepared site for the expansion of an existing orchard in the Far North.

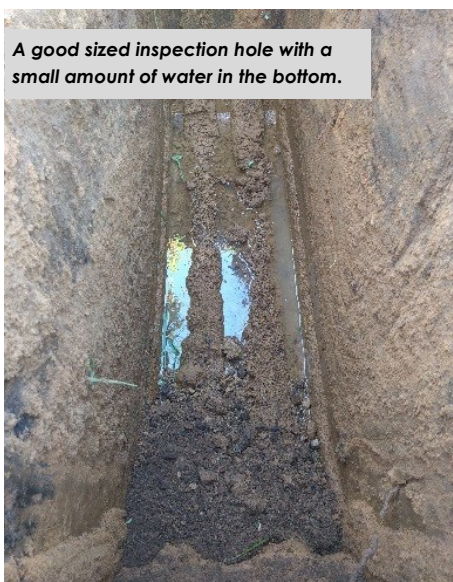
them to deliver field days in the near future.

Maturity levels are running a week to ten days ahead of other seasons. Fruit is clean and of a good size so we anticipate very good export percentage pack outs to kick off the new season.

### WET FEET

All growers struggle with tree health at some stage of the orchards life. One of the more common ailments is excessive water, leading to root die back and tree health decline. If you are really wanting to find out what is

A good sized inspection hole with a small amount of water in the bottom.



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going on in problem areas of your orchard it is a good idea to dig several pilot holes to see where the water does and doesn't pool and how long it takes to drain away. From there you can plan a drainage system to improve the conditions the tree is growing in. Make the holes over a metre deep and about a metre wide. A small digger is ideal for the job.

You will also be able to see the soil profile and identify any wet layers or evidence of previous soil contouring. ●

Katikatiki recently has dealt to these little 'sweeties'.

Six spotted mite (SSM) is the pest of pressure at the moment – they seem to thrive in the colder weather and their numbers have been climbing over the last month or two. They do not affect the 'fruit' but can cause leaf defoliation, so vigilance is required. If you have trees that lose

their leaves unexpectedly, SSM may be the cause.

As you are all well aware, AvoGreen compliance is part of your compliance requirement to be eligible for export. Please ensure you have the following in place, and that the information is up to date and you are able to provide it if required for audit. Documentation includes >>

(but is not restricted to) a monitoring agreement with an accredited operator or licenced owner operator and accredited monitor, a monitoring plan, records of all monitoring (also when no pests are found) and an orchard map.

To help ensure you have everything in place paperwork wise - Just Avocados has planned to issue to suppliers folders that include the required information and templates for your monitoring.

### SPRAY DIARY ROLLED OVER

A reminder: the AIC spray diary has been rolled over for the year. Your spray diary will need to be 'registered'. This is an electronic registration only – follow the prompts, it will only take few moments, and check that the blocks on your spray diary correspond with those on your

maps etc (e.g. block 1 not back block). All blocks need to be either numerical or alphabetic – AIC plans to phase out descriptive names (i.e. back block).

Ensure your spray diary is up to date – don't forget helicopter applications if applicable. This information needs to be current so we can ensure you are AvoGreen compliant.

### NZ GAP INSPECTIONS

NZGAP inspections are underway; expect a call from me to set up a suitable time. Remember, inspections need to happen before you harvest, either for export or local market. An area for focus is Health and Safety – both on orchard and having the appropriate paperwork to support actions taken such as staff/worker training.



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Just on AvoGreen, if you are using a third party monitor and wish to discuss using the Just Avocados service then please contact me. ●

### ORCHARD MANAGEMENT WITH ERICA

*A number of growers have voiced an interest in gaining a deeper understanding of plant nutrition so in this newsletter issue I'll be kicking off a nutrition series with Nitrogen.*

### FERT 101: NITROGEN

**As we go into this period of flowering and fruit set, nitrogen management is critical. This is the time where correct timing and rates have the biggest impact!**

Nitrogen is one of the most abundant elements on Earth and is an essential nutrient for plant growth and reproduction. However, despite its abundance much of the nitrogen in soil is not readily available to plants. The sources of nitrogen, what it is required for, as well as the application rates and timing are often misunderstood. As a result of this confusion, nitrogen has become the most misused of all the essential plant nutrients.

Just like humans, plants need a number of nutrients to survive and thrive. There are 17 identified nutrients essential for plant life. These



nutrients are divided into two groups: nine macronutrients and eight micronutrients. Macronutrients are needed in much greater quantities than micronutrients, which

**“We assume that most of our crop’s nitrogen requirements come from a bag, but this is not the case. A large percentage of the nitrogen utilised in crop production is supplied by biology”**

are only needed in minuscule amounts but are as important for optimum plant performance.

Nitrogen is classed as a primary or macro nutrient together with Carbon, Hydrogen, Oxygen, Phosphorus, Potassium, Calcium, Magnesium & Sulphur.

### FUNCTIONS OF NITROGEN

In plants, nitrogen is essential for plant reproduction, cell division and growth. It is the main component, found in the green pigment called chlorophyll, which is needed for photosynthesis, the most important of all the plant processes, which converts the sun’s energy into carbohydrates. It is also needed >>

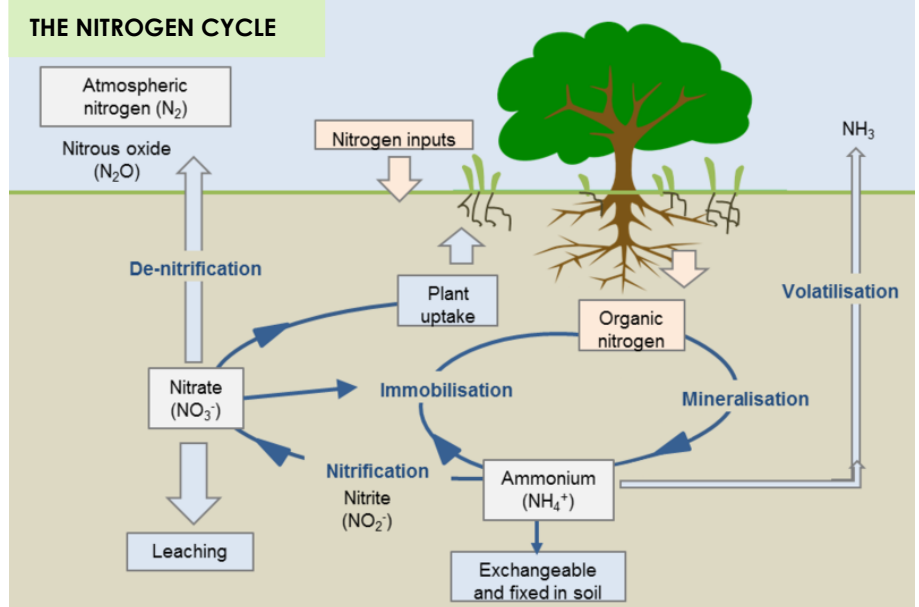
for the formation of amino acids (the building blocks of proteins) as well as DNA and RNA, which is the genetic material that allows cells (and eventually, plants) to grow and reproduce.

### THE NITROGEN CYCLE

Nitrogen can cycle between the soil, the plant and the atmosphere. These transformations are often grouped into a system called the nitrogen cycle. A basic understanding of the nitrogen cycle is necessary in order to understand the management of nitrogen and nitrogen fertiliser application.

In essence, the nitrogen cycle is the conversion of inorganic nitrogen to organic nitrogen, and vice versa through various processes called immobilisation, mineralisation, nitrification, denitrification and volatilisation.

As inorganic nitrogen is not in a form that can be taken up for use by plants, these processes are important to ensure the availability of nitrogen in a form that can be.



As most of these processes are conducted by microorganisms, it follows that ensuring a prolific and balanced microorganism population and a healthy soil environment for them, is important for optimum nitrogen efficiency.

The nitrogen cycle contains several routes by which plant-available nitrogen can be lost from the soil. Significant losses occur through

denitrification, volatilization, crop removal and leaching. Nitrate-nitrogen is usually more subject to leaching than ammonium-nitrogen.

### FORMS OF NITROGEN

#### Atmospheric Nitrogen

The air we breathe contains almost 79% nitrogen. Atmospheric nitrogen is a major source of nitrogen in soils. In the atmosphere, it exists in the very inert N<sub>2</sub> form and must be converted before it becomes useful in the soil by nitrogen-fixing bacteria. For example, Rhizobium bacteria form a symbiotic association in the

root nodules of legume plants. The plant supplies the Rhizobia with carbohydrate in exchange for the soluble Nitrogen "fixed" by the bacteria from the atmospheric N<sub>2</sub>.

In New Zealand, fixation by Rhizobia associated with clover is the dominant biological fixation process.

**Organic Nitrogen:** About 95% of the potentially available nitrogen in the soil is in organic forms, either in plant and animal residues, in the relatively stable soil organic matter, or in living soil organisms, mainly microbes such as bacteria. This nitrogen is not directly available to plants, but some is converted to available forms by microorganisms. Organic matter traps residual Nitrogen present in the soil and prevent its losses. It is also stored and released by organic matter in the soil as it decomposes, and then reverts to plant-available nitrogen.

**Inorganic/Mineral Nitrogen:** The majority of plant-available nitrogen that we rely on is in the inorganic forms of ammonium nitrogen and nitrate nitrogen (sometimes called mineral nitrogen). If any preference exists, it is usually for ammonium early and nitrate late in the growing season.

Research has shown that growth is optimized with a mixture of both ammonia and nitrate, with ammonium used preferentially >>



### OBSERVING NITROGEN DEFICIENCY

The reduction of chlorophyll caused by nitrogen deficiency leads to a loss of colour in the leaves. In the early stages a slight fading of normal colour and slight retardation of shoot elongation occurs. Later stages show uniform loss of colour. The dark green leaves turn light green to yellow. Foliage is sparse and leaves are smaller. Lack of vegetative growth, lower yields and premature defoliation can be experienced.

for synthesis of amino acids and proteins. The ideal is an equal amount of each in a 1:1 ratio but soil type and conditions affect availability of each and the decision on which is better suited and when.

Ammonium ions bind to the soil's negatively charged cation exchange complex (CEC) and behave much like other cations in the soil. Nitrate ions however do not bind to the soil solids because they carry negative charges and therefore exist dissolved in the soil water so are more readily available for plant uptake but leach easily beyond the root zone.

The ideal ratio between these two forms of nitrogen is different within the plant when compared to the soil.

In the leaf, a three-parts of ammonium nitrogen to one-part nitrate nitrogen is preferred. This different ratio in the leaf is partially related to an inflow of ammonium nitrogen from the atmosphere, directly into the leaf, via nitrogen-fixing organisms living on the leaf surface. Nitrogen-fixing organisms in the soil also constantly boost the ammonium component within the plant. This key 3:1 ratio between ammonium and nitrate nitrogen in the plant is a really important, but often overlooked

element in plant health and resilience. This ratio is often inverted and the excess nitrate in the leaf results in high insect and disease pressure.

The nitrogen in fertiliser applied from a bag actually accounts for much less than half of the nitrogen used to produce a crop, so it is important to manage the nitrogen cycle efficiently.

The forms of nitrogen fertiliser widely used today are used because they're easy to source in large quantities and are relatively cheap. They've been designed by chemists rather than biologists and haven't had the crop's physiology in mind. As a result, fertiliser uptake by plants is an inefficient process, with rates of recovery for nitrogen fertilisers in the region of only 25-35%!

We assume that most of our crop's nitrogen requirements come from a bag, but this is not the case. A large percentage of the nitrogen utilised in crop production is supplied by biology and by understanding this, we can optimise our nitrogen supply and efficiencies.

Globally, proactive companies and growers are coming to rely more on organic forms of nitrogen rather than the conventional inorganic with very rewarding results.

## UPTAKE AND MOVEMENT OF NITROGEN

Nitrogen is typically taken up by plants through mass-flow which is the movement of water with dissolved nutrients through the soil, into the roots, then through the plant until mostly evaporated through the leaves by transpiration. Acting like a water pump, the rate of transpiration affects the rate of mass flow.

Transport of Nitrogen from roots to shoots takes place in the xylem, while Nitrogen partitioning and remobilisation from source leaves to sinks occurs in the phloem. Sink organs generally display little xylem import as a result of their low transpiration rates. Simply put, this means that organs such as flowers or fruit or new vegetative flush pull or sink Nitrogen from older leaves which can become deficient and even abscise. You will therefore notice Nitrogen deficiency symptoms on old leaves first.

The significance of this is that Nitrogen reserves that are built up in the previous year are used to support early growth in the following spring. It also means that leaves are an important additional sink of Nitrogen during winter and that the remobilisation of internal Nitrogen reserves are therefore crucial for >>

## WAYS TO IMPROVE NITROGEN MANAGEMENT

Several orchard management practices can be implemented to improve both nitrogen efficiencies and tree performance. They include:

- **Application of organic materials** (mulches, compost etc) to enhance soil conditions that favour mineralisation and therefore result in an increase in Nitrogen in the plant available form.
- **Cycling of crop residues** (chipped pruning material). All the carbohydrates and nutrients stored in the branches return to the soil when broken down. It is a valuable source of nitrogen.
- **Improve water logged, compacted and poorly drained soils** as the lack of soil oxygen in these soils have the highest potential for denitrification loss. Denitrification is the conversion of nitrate nitrogen to gaseous nitrogen by soil microbes in low-oxygen, waterlogged soils.
- Nitrogen is required for growth and cell division but without **sufficient calcium** to strengthen these cells, crop quality, disease resistance and shelf life is compromised. These nutrients work in synergy and should be balanced.
- **Sulphur** is required to fuel the conversion of nitrates to protein and is also an integral component of two of the amino acids that combine to create protein. If there is insufficient sulphur to fuel this process, the nitrate-packed leaf becomes a magnet for insects.
- Excess magnesium antagonises nitrogen uptake. These tight soils also struggle to "breathe" and this impacts natural nitrogen fixation because the nitrogen-fixing bacteria are all highly aerobic. Additional nitrogen will >>

be required in these soils until they are balanced. **Application of Gypsum** (calcium sulphate) will help to “flush” the excess magnesium as the sulphate binds with the excess magnesium to form magnesium sulphate which then leaches beyond the root zone.

- **Humates** are powerful fungal stimulants. These fungi decompose organic matter releasing bound nitrogen into the soil and are also critical to the aggregation process that allows optimum gas exchange (oxygen in and CO<sub>2</sub> out).
- **An extensive, healthy root system is essential for optimal uptake of available nitrogen.** Plants infected with Phytophthora Root Rot or have a poor root to canopy ratio can show signs of nitrogen deficiency even when adequate nitrogen is present in the soil.
- Using an ammonium source of nitrogen acidifies the soil when the hydrogen ions (H<sup>+</sup>) are released during the nitrification process. Over time, this acidification and lowering of soil pH can become significant. To counteract this, **liming practices need to be followed.**
- The nitrogen management of young non-bearing trees is different to mature productive trees. **Proper rates and timing of Nitrogen fertiliser** is important for managing the delicate balance between vegetative and reproductive growth of fruit trees.

### IMPORTANCE OF FOLIAR NITROGEN

Foliar applications of nitrogen can be useful in the following conditions:

- To prevent or treat temporary Nitrogen deficiency after remobilisation has finished in early spring and root Nitrogen uptake is still low. This is important for fruit set, but be cautious as too much nitrogen will cause excess fruitlet drop.
- In Nitrogen deficient plants to overcome limiting conditions of availability or uptake via the soil.
- When poor root health or mass cannot take up nutrients adequately to support the rate of growth and metabolism.
- During periods of low soil temperatures.
- In the absence of rain or irrigation and soil moisture and consequently mass flow of nitrogen is limited.
- In conditions with poor soil aeration.
- To increase reserve accumulation of nitrogen in late summer to autumn for remobilisation in the following year.
- When the rate of transpiration is reduced by factors such as low temperatures or leaf abscission i.e. through mite damage, and the resultant pull on nutrients from the roots is low.

*Remember though that the rates and timing of foliar applications are critical and should be recommended by your advisor.*

optimal shoot growth, flowering, and fruit set since bud break occurs when conditions (end of winter) are not optimal for root Nitrogen uptake.

Maintaining good winter leaf health and nutrition is important - do leaf sampling for accurate nutritional status of these leaves.

### TOO MUCH OF A GOOD THING

While it is always important to ensure sufficient nitrogen supply for optimum performance and yield, it is equally important that we do not assume that, more is better (especially for all my ex-dairy farmers out there). Nitrogen is the nutrient most often abused in terms of this 'more-on' approach. Excess

nitrogen can cause a multitude of problems.

#### Uptake of other minerals

When nitrogen is overapplied, it negatively affects the uptake of other minerals. The most notable of these is potassium - the most expensive of all fertiliser inputs. Fruit size will also be affected due to the poor uptake of Potassium.

The second major mineral affected by too much nitrogen is calcium. Reducing the cell-strengthening potential of calcium will negatively impact not only disease resistance but also fruit quality and shelf life. Boron uptake will also be affected thereby affecting optimal fertilisation after pollination.

Excess Nitrogen also results in an increase in fruitlet drop from November to February as well as mummified fruit that remain hanging on the trees.

#### Insect proliferation

The impact of nitrogen on plant-feeding insects is well known – excess nitrogen leads to increased insect populations.

#### Susceptibility to rots

Research also shows that there is a correlation between high nitrogen leaf levels and fruit susceptibility to rots as well as a negative effect on postharvest storage potential.

#### Foliage proliferation

Excess nitrogen fuels fast foliage growth but the consequence is >>



that energy for flower growth is redirected to foliage proliferation rather than production. In extreme cases this can result in no or very little crop.

### Root stress

The energy used for this large leaf growth also stifles the root system below. The roots slow their naturally spreading habit since they do not have the necessary nutrients to use as energy as it is being redirected upward. Additionally, stressed roots invite disease through soil pathogens as well.

### Compromised immunity response

Nitrate nitrogen is always carried into the plant with water and there is an associated dilution factor involved. High nitrate nitrogen always spells low mineralisation because of this dilution effect. A broad spectrum of minerals is involved in the plant's immune response and the levels are compromised by excess nitrates.

### Leaching

Plants cannot absorb all the excess nitrogen in the soil and extra nitrogen levels will slowly leach out of the soil. As a result, groundwater

and drinking water become contaminated from the nitrate levels.

When irrigating from ground water remember to get your water tested for nitrate levels as this will have an effect on your nitrogen fertiliser application.

Nitrogen management plays a significant role in determining your bottom line so ensure you manage this nutrient well in order to keep tree performance, production and fruit quality up as well as costs down. ●

### PRODUCT AVAILABILITY - ALGA600

ALGA 600 is one of the seaweed options recommended in my nutrition programmes which has been available through Farmlands Co-Operative Society; however, supply is coming to an end and the current stock on hand is the last that



Farmlands will have. If you are in need of this product please contact

Toni Morrison who is arranging a bulk order to get stock up from the South Island.

**Orders need to be made by 13 August.**

The deal is: ALGA600 in either a 20kg bulk bag for \$440 +GST, OR

a box of 15 X 1kg sachets for \$330 +GST - these configurations both equate to \$22.00 +GST per kg (RRP \$31.96 +GST per kg). Toni can deliver within the WBOP area to Farmlands shareholders. Buyers who are not Farmlands shareholders can arrange for pick up and cash sale at the Te Puna branch. Please call 0276050891 or email [toni.morrison@farmlands.co.nz](mailto:toni.morrison@farmlands.co.nz). ●

## JUST AVOCADOS FIELD DAYS

### HARNESSING THE POWER OF MICROBES IN THE ORCHARD

Dr Jerome Demmer, BioStart\*

Dr Jerome Demmer, BioStart's R & D Director, spoke at our 22 May 2018 Whangarei field day on harnessing the power of microbes in the orchard. BioStart's biostimulants are widely used in horticulture throughout New Zealand. Below are some key points from Dr Demmer's presentation:

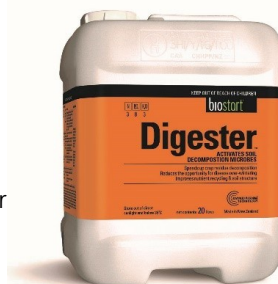
#### About soil microbes

- Beneficial soil microbes are key to providing plants nutrients and protecting them from disease
- Your indigenous soil microbes have evolved over time to your climate and soils
- By maximising your soil microbial populations, you can help optimise plant health and crop quality
- BioStart Digester and Mycorccin are biostimulants which activate

beneficial soil microbial populations in your orchard

#### Digester - reduces the opportunity for disease to over winter

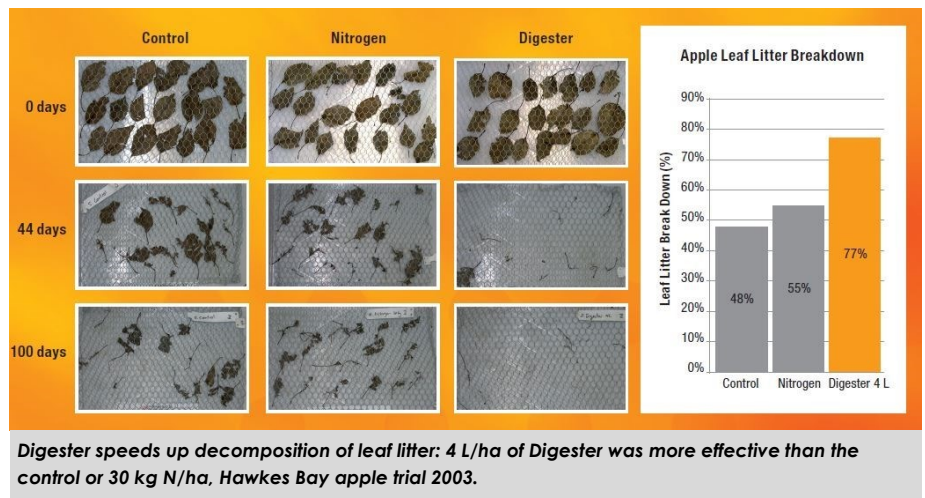
Digester activates the soil microbes responsible for



decomposition of dead leaves, prunings and old roots.

Digester speeds up the decomposition of this crop trash so that there is less host material for disease inoculum. Breaking down dead and diseased roots also reduces disease inoculum in the soil.

By improving the breakdown of crop trash, Digester promotes nutrient recycling into the soil, creates soil organic matter and improves soil >>>



structure. Increasing soil organic matter improves soil water-holding capacity and reduces soil compaction.

Apply to leaf litter and prunings at mulching.

### **Mycorrhin – activates mycorrhizal fungi**

Mycorrhin activates mycorrhizal fungi and other beneficial soil bacteria present in your soil.



Soil microbes perform essential roles in making nitrogen, phosphorus and sulphur available to plants from fertilisers and soil reserves.

Mycorrhizal fungi are beneficial fungi that form a symbiotic relationship with the plant's roots. In exchange for simple sugars, the fungi pump phosphate and trace elements into the roots. Mycorrhizal fungi have also been shown to stimulate plant immune systems.

Mycorrhin increases root growth and improves plant establishment, stimulates soil microbes to mineralise

N, P and S, and improves drought tolerance and increases nutrient uptake.

Apply at root flushes, planting & replanting and during the growing season. Can be mixed with herbicides.

For further information you can call BioStart 0800 116 229 or go to [www.biostart.co.nz](http://www.biostart.co.nz).

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

## **AVOWORKS UPDATE**



Since April we have expanded the services we offer which now includes orchard management, technical consultancy, orchard development, foliar spraying (big tree and young tree) and mulch application. An updated pricelist showing these services is now in place and will be sent out to Avoworks and Just Avocados clients.

Over the past few months, the team has been flat out pruning and chipping on orchards. This task has been made more efficient with the

addition of a new tracked chipper to our fleet of equipment.

We've also been busy refreshing staff and upskilling newcomers - all staff have updated or received their forklift, first aid and chainsaw certifications.

With health and safety in mind, we are implementing an app-based sign in and out system on one of the larger orchards we manage. This system operates off GPS location and workers must sign in when they are on the orchard. This system is also great for tracking job tasks and hours. If you are interested in the technology I am happy to chat to you about our experience.

With harvesting approaching there may be orchard work that you



**Nathan Darling**  
Orchard Management  
Avoworks  
[nathan@darlinggroup.co.nz](mailto:nathan@darlinggroup.co.nz)  
027 278 7714

would like taken care of. Please contact either Brian Lankshear (027 585 6410) or I to discuss your needs. ●

## **FEATURES**

### **HEALTH AND SAFETY: OVERLAPPING DUTIES**

**Providing a healthy and safe work environment for employees and ourselves is always a concern but even more so now with the 2015 Health and Safety at Work Act stating very clearly where responsibilities lie. Given the recent farm and orchard accidents, this area is coming under scrutiny.**

The focus of this article is Overlapping Duties conducted by

PCBU's = Person Conducting the Business Unit.

Businesses have duties to all workers and others affected by their work - not just those they directly employ or engage.

When the work of two or more businesses overlap such as when they are working together at the same location or through a contracting chain, they must communicate, consult, cooperate and coordinate activities to meet their health and safety responsibilities to workers and >>



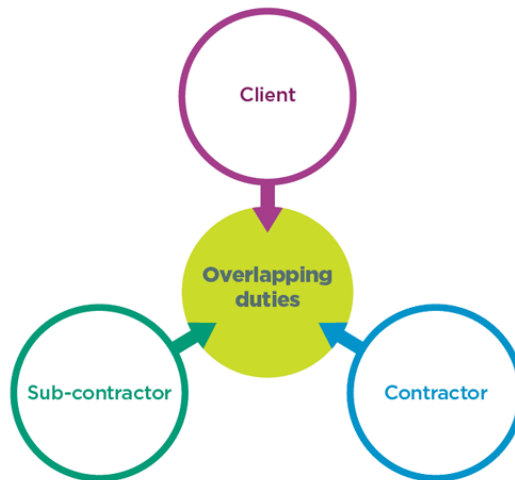
**Helen Gray**  
Quality and Compliance Manager  
[heleng@justavocados.co.nz](mailto:heleng@justavocados.co.nz)

others. Think of this consultation and communication as a triangle between the facility/contractor, the harvester/contractor or sub-contractor and the grower/client. For example, Just Avocados as the packing facility and Avoworks as the harvest contractor have overlapping duties that need to be understood and responsibilities assigned. This covers Just Avocados arranging maps where required, bin arrival, and harvest coordinating. The contractor arrives with machinery, harvests the crop and loads bins. The grower is to ensure they are prepared for the harvesters by way of communication of maps with hazards noted/register of hazards on the property, loading areas, mowing and other information. Importantly, everyone needs to be engaged to ensure the harvesting is completed safely.

All businesses should:

- discuss what work activities are being carried out

**REMINDER WHEN VISITING US** - Growers are always welcome to visit the Just Avocados packhouse and it is our pleasure to show them around. Please always remember to come wearing appropriate footwear (closed in), sign in at the packhouse office, wear a hi-vis jacket - which we will ensure you are given, and stay with the person escorting you on site.



- agree on the degree of influence and control each business has
- agree on who will manage what and how it will be managed
- monitor and check how things are going on an ongoing basis.

To quote Worksafe – “Health and Safety legislation provides for a web

of overlapping responsibilities to make sure coverage is complete, and responsibilities are applied consistently. In particular, the Health and Safety at Work Act 2015 aims to improve workplace Health and Safety by placing an explicit duty on PCBU’s to cooperate, co-ordinate and consult with others in the workplace.”

I will be preparing more information around this which will be conveyed to everyone involved in this area. In the meantime if you want to know more about “Overlapping Duties” Worksafe have information on their website, [worksafe.govt.nz](http://worksafe.govt.nz) or I can supply you with print outs.

As a company we will continue to inform and assist our growers with health and safety concerns. ●

## MEET THE TEAM

**We are delighted to announce that Tracey Heyward has joined the Darling Group team in the role of Administration and Accounts Assistant.**



wider teams where she can.

“I am enjoying being part of a team which is growing all the time, I can see exciting times ahead!”

Tracey is a Katikati local and is enjoying the much reduced commute to work after travelling daily to Mount Maunganui with her role at Genus.

In her spare time she enjoys spending time with family and is learning to play the guitar - which she says she has mastered the basics of.

Tracey is based in the reception office for Darling Group in Katikati and is working across Darling Group, Just Avocados and Avoworks. Her main focus is looking after accounts for Avoworks, answering the main office line and meeting and greeting our visitors. Tracey is also helping out the

Tracey comes to us after six years with Genus (pest management division of Genera Ltd), where she acquired a range of experience in reception, accounts payable, health and safety, and most recently in the role of office co-ordinator.

“I’m currently very good at happy birthday, silent night, hallelujah and mull a Kintyre!”

Tracey enjoys avocados (job prerequisite around here!) and her favourite way to have it is simply chopped in a salad. ●

## EVENTS

**New Zealand Avocado International Industry Conference**

**From 29 to 31 August 2018, Tauranga will host avocado growers from all over to discuss**

**‘growing avocados for the world’.**

With plenty of opportunities for networking and connecting with fellow avocado growers, a full exhibition space offering growers



information and deals, and a great >>

line-up of speakers from China, Australia, Colombia and New Zealand - this three day event will be both entertaining and hugely informative.

The conference begins with the official welcome reception on Wednesday 29 August with the Ministerial welcome. This event will take place in the sold out exhibition space where you can network with fellow growers, companies and delegates.

Conference sessions begin the next morning with speakers across the day presenting on a useful cross section of topics including:

- Pollination and fruit set rates
- Using technology on orchard to improve productivity
- Innovation of avocado
- Competing on a global stage
- Journey of sustainability within avocados
- Mitigation for irregular bearing
- Pruning

Just Avocados Orchard Productivity

## Join us...

**New Zealand Avocado International Industry Conference - Tickets on sale now!**  
29-31 August 2018, ASB Baypark, Tauranga, New Zealand

### Featuring speakers:



**Loren Zhao**  
Co-founder, Chinese online fruit retailer, Fruitday.com



**Dr Nick Gill**  
Strength & conditioning coach, All Blacks



**Mike McRoberts**  
MC and television journalist

Manager, Erica Faber is speaking at the event as a technical advisor and will be part of a panel answering all of those burning grower questions during an 'on the couch' session alongside other avocado industry experts.

The conference dinner - proudly sponsored by Just Avocados, on the evening of 30 August will feature MC Mike McRoberts and an array of avocado dishes throughout the three course meal.

The conference also features a field day tour on Friday 31 August, 9.00am - 3.30pm.

During this tour, delegates will visit three avocado orchards and a packhouse facility where an array of topics will be discussed including:

- Pruning
- How small trees open up potential use of 'unsuitable' land
- Gem plantings
- Avocado tree water use
- Frost protection
- Cultivar monitoring results
- Technology and machinery on orchard

Special pricing for members is available until 10 August (\$239+GST). For a full speaker line up, programme, registration and further information please visit

[www.avocadoconference.co.nz](http://www.avocadoconference.co.nz)

For conference updates follow the event on Facebook: [facebook.com/avocadoconference](https://facebook.com/avocadoconference).

## SAVE THE DATES - UPCOMING JUST AVOCADOS FIELD DAYS

### FAR NORTH - 18 SEPTEMBER

### BAY OF PLENTY - 25 SEPTEMBER

Details will be confirmed in an email update

### ARE YOU INTERESTED IN ATTENDING THE NEXT WORLD AVOCADO CONGRESS IN COLOMBIA?

**Just Avocados has started planning for a group trip to the IX World Avocado Congress which is being held in Medellin, Colombia 23-27 September 2019.**



**WAC**  
IX WORLD AVOCADO CONGRESS  
- C O L O M B I A -

If you are interested in attending this event as part of a Just Avocados tour group, please register your interest by emailing [info@justavocados.co.nz](mailto:info@justavocados.co.nz).

### IF YOUR DETAILS HAVE CHANGED, PLEASE LET US KNOW

If any information you have given us on your grower details form has changed, can you please let us know so we can ensure we are posting, calling, emailing and paying to the right place.

Email any contact and payment detail updates to [tracey@darlinggroup.co.nz](mailto:tracey@darlinggroup.co.nz).

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@DARLING\_GROUP