

N&G NEWS

Nursery & Garden Industry NSW & ACT



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5 Litre - Bottle	SG-5LTR	5	1	\$60.00	\$66.00
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Contact us:

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**ENVIRONMENTALLY
FRIENDLY PRINTING**





President's Report

by Malcolm Calder, President NGINA

Optimism is a word commonly used in reference to an expected bright future, entering into a better situation, hope for a new chapter in life, etc. In light of our journey through 2020 there's no doubt there have been challenges for our industry. Staying safe, complying to new rules and regulations, managing a COVID-safe plan in our workplaces and on sites, finding skilled staff when needed and managing growing cycles versus demand.

As the horticultural industry enjoys an overall upswing in recognition, driven by COVID restrictions and people wanting more plants and greenlife around their homes and businesses, the projected outlook for us all is optimistic. And recently gathered data suggests this environment will continue into 2021. As our members continue to manage the increased pressure to supply, it will be important to take a step back for some thinking time. Creative visionary

An overview of NSW

Key categories	This quarter	Vs decade average
 Dwelling commencements	12,190	-8.2%
 Unemployment	4.7%	-8.7%
 Population growth	1.27%	-8.1%
 Economic growth	\$552,241m	+22.8%
 Equipment investment	\$3,929m	+0.5%
 Housing finance	\$4,620m	+29.0%
 Retail spending	\$25,371m	+10.8%
 Construction work	\$15,683m	+15.4%



Source: CommSec's State of the States: October 2020 Economic Performance Report

discussions in every business—what does 2021 and beyond look like and how can we continue to improve and innovate our businesses? The old saying, “If you always do what you have always done, you will always get what you have always got.” Let’s move forward.

In my role as Marketing Manager of Transplant Systems I can report we have enjoyed a robust year in automation supply and commissioning across our customers nationally. We are having a great year in spite of the difficult logistical challenges—we have machines arriving into the country and we have had challenges moving our technical staff across the country to install, commission and carry out on-site training. None of this has been easy when state borders are closed.

This reflects where many of us are at. Enjoying a good and prosperous year but in the midst of all that business engaging much wisdom and management to enable the flow of greenlife through the many channels.

As your President, I have been fully engaged in forming a new season of upward growth in the Association, together with the steady increase of members and benefits being offered.

Our CEO, Anita Campbell, has leapt in with fantastic energy and wisely employed experience. The Board is engaged

with Anita in the implementation of the new strategic plan. We have seven directors who make up a well-balanced capability, bringing portfolio strength to their roles. The strategic plan will be available to all members. After hearing from a wide range of members through our member survey, and subsequently collating and analysing the data, there are four specific and strategic areas in the plan that will provide a direct result:

1. Member services
2. Professional development
3. Advocacy
4. Association sustainability

We have a good reason to be optimistic. We have some exciting challenges along the way. NGINA’s Vice President, David Jakobs, recently said at Board level and I quote, “While consumer sentiment for gardening is generally still very good we, as an industry, need to look at how we collectively engage and retain the new gardeners that have entered into gardening, some for the first time in their lives.”

This true statement reflects the challenge ahead for us as ‘Together We Grow’.

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CEO's Report

by Anita Campbell, CEO NGINA

As a new CEO, the first 100 days in the new job are crucial to success—not just personal success but that of the entire organisation.

My first 100 days as CEO has been a time for listening, for asking questions and for forming impressions. I have spent the last few months getting to know the organisation, our members, the NGINA Board of Directors, NGINA staff and many of our external stakeholders.

To that end we have conducted a comprehensive membership engagement survey. We asked nearly 30 questions about what products and services NGINA should be offering, and about the health of the nursery and garden industry in NSW and ACT. I must thank nearly half our members who took the time to complete the survey. Your answers will inform how the Association will evolve and what new services we will offer.

You can read a summary of the survey results on pages 18 and 19 but I'd like to highlight a few of the results that have spurred us into action already. When asked what are the most important services that are/could be offered to NGINA members, an astounding 80% of respondents said advocacy and representation at state and national levels.

NGINA has a critical role to play in the conversations and policy decisions impacting the nursery and garden industry in NSW and ACT. The NGINA Strategic Plan 2020–2023 prioritises developing clear policy positions on key issues, starting with water and biosecurity. A Board director will be given the portfolio of advocacy and will oversee the development of Board-approved policy positions and a comprehensive advocacy plan.

Interestingly, over 70% of respondents also indicated they want more professional development through educational courses. COVID restrictions have made face-to-face training difficult this year but NGINA-organised first aid and ChemCert courses are back in full swing with classes overflowing in Kenthurst. We are investigating training options for 2021 and our training calendar for next year will include a variety of both online and face-to-face training options, in various centres throughout NSW and ACT, and across multiple disciplines.

The third issue that members raised as being a major concern for their business, now and into the future, is finding and keeping good quality staff. To that end I have met with a labour-hire firm called Sidekicker that provides an option for helping you to source staff. You can read about Sidekicker on page 12.

Another solution to staffing problems and skills shortages in the industry is to hire an apprentice. Frankly there could never be a better time to do this. The newly announced Boosting Apprenticeship Commencements (BAC) plan will help pay the wages of new apprentices and trainees as part of the Federal Government's COVID-19 recovery plan. Under the new measure, employers will be eligible for 50% of the wages for a new or recommencing apprentice or trainee for the period up to 30 September 2021, up to \$7,000 per quarter. You can read more about this scheme and how to take advantage of the subsidies on page 8.

While we have spent the best part of my first 100 days laying the foundations for our next stage of development I think we are really well positioned to launch some exciting new initiatives and member services next year. I can't wait to explore all the options together.



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BTSO's Report

by Craig Perring, Business & Technical Support Officer, NGINA

There seems to be no relief for either our retailers or production nurseries. Every member (and non member) I visit is saying the same thing—supply is just, or in some cases is not, keeping up with demand. A ‘good problem to have’ is the sentiment out in the field and NGINA appreciates that everyone is running at full steam ahead (without any light at the end of the tunnel it seems). During these uncertain times, please remember to reach out if you need any business or technical support.

The following is an update on numerous projects NGINA is currently involved in.

GREEN SPACE ALLIANCE NSW

As reported in our eNews on 1 September, an MOU between NGINA, Turf NSW and The Landscape Association has now been formalised, resulting in the formation of Green Space Alliance NSW (GSA NSW), which will give the combined associations a stronger, unified voice when lobbying and advocating government on issues such as water policy, environmental issues, green space designs, etc.

GSA NSW submitted its first paper to the NSW Government, providing input into the draft *Greener Places Design Guide*, which provides information on how to design, plan and implement green infrastructure in urban areas throughout NSW. For those interested in reading the submission, it can be found within the Member Centre on our website.

PLANT SURE—WE NEED INDUSTRY HELP AND SUPPORT

Similar to the *Grow Me Instead* program (but on a much larger scale) and managed by NGINA, the Plant Sure Scheme is a responsible gardening initiative that will help growers, retailers and consumers of ornamental plants to grow, sell and buy plants that don't cause harm to the environment. It will be marketed to the general public using the tagline ‘gardening responsibly’.

Working with the Biological Sciences team at Macquarie University, which has developed a scientific tool to assess

plants on their potential to become invasive plants in years to come (think Lantana, think Privet), we are looking to identify those plant species now, phase them out of production over a certain period of time (5–10 years) and replace them with an alternative species.

As a result, we need retailers and wholesalers to help us develop a list of plants to be assessed (we need 600!) using this tool, including those that have been naturalised in Australia to new cultivars. For more information on nominating a plant for assessment, please read our article on page 30.

For further information on how your business can offer support to Plant Sure, please contact me or our independent project manager, Aimee Freimanis (aimee@ecohort.com; 0488 080 120). In addition, the Plant Sure website is up and running (gardeningresponsibly.org.au), and provides a two-minute video and roadmap explaining all about the Scheme and how it will be developed over the next 12 to 18 months.

PROPERTY IDENTIFICATION SYSTEM SURVEY

Thanks to those who provided feedback on the property identification system survey. Results are still being analysed, however, generally the industry is supportive of having some sort of identification code for biosecurity and plant traceability. More information will be shared as we work with the NSW Department of Primary Industries (NSW DPI) on this project.

BIOSECURITY

NGINA is participating in NSW DPI roundtable meetings to develop a biosecurity plan for NSW on invasive plant species. More information will be made available once the plan is developed.

For any technical or business support issues, or to arrange a site visit, please contact Craig Perring on 0439 661 368 or send an email to craig.perring@ngina.com.au.

You Don't Want to Miss This — Federal Government Announces Big Boost for Apprenticeships

Apprenticeships and Traineeships to be Subsidised Under New Federal Budget Plan

The Federal Government announced during the first half of October a new \$1.2 billion Boosting Apprenticeships Commencements (BAC) plan to help pay the wages of new apprentices and trainees.

Under the new measure, employers will be eligible for 50% of the wages for a new or recommencing apprentice or trainee for the period up to 30 September 2021, up to \$7,000 per quarter.

What we know so far:

- Any business or GTO that engages an Australian apprentice on or after 5 October 2020 may be eligible for a subsidy of up to 50% of gross wages up to 30 September 2021.
- To be eligible for the program you must be one of the first 100,000 apprentices or trainees who commences or recommences on or after 5 October 2020 and registers successfully for the subsidy.
- The subsidy is capped at a maximum of \$7,000 per quarter, regardless of geographic location, occupation, industry or business size.
- The subsidy is paid quarterly in arrears to the employer when they sign up an apprentice or trainee with a date of commencement or recommencement on or after 5 October 2020.
- BAC is not available for any apprentice or trainee receiving other wage subsidies, such as Supporting Apprentices and Trainees (SAT) or JobKeeper.

More information can be found at :

www.employment.gov.au/boosting-apprenticeship-commencements

Standard incentives may still apply for new entrant trainees and apprentices, if they are eligible under the program, the employer may be eligible for the below:

Certificate 2 Qualifications

Australian Government/Federal Incentives:

New Entrant Incentives **		
Full-time	Commencement paid after 6 months- \$1250	Successful Completion \$0
Part-time	Commencement paid after 6 months- \$1250	Successful Completion \$0
SBT (additional)	Commencement paid after 6 months- \$750	Retention \$750

Certificates 3 and 4 Qualifications

Australian Government/Federal Incentives:

New Entrant Incentives **		
Full-time	Commencement paid after 6 months- \$1500	Successful Completion \$2500
Part-time	Commencement paid after 6 months- \$0	Successful Completion \$1500

** Please note incentives are dependent on meeting eligibility criteria





What are the Benefits of Hiring an Apprentice?

Hiring an apprentice is a great recruitment option for businesses wanting to invest in their workforce, whether they're introducing new staff or looking to train and retain top talent.

Apprentices and trainees finish their higher-learning journey equipped with practical skills and a formal education that will add value and bring new skills into your workplace.

Utilising apprenticeships and traineeships as part of your hiring and training strategy enables you to:

- bring new skills into the business to increase your competitiveness.
- prevent future skills shortages and safeguard your business.
- access government funding, incentives and rebates if eligible.
- train staff to suit the unique needs of your business.
- drive a culture of success within your business.

There are more than 500 occupations across Australia that offer apprenticeships and traineeships, ranging from Certificate II to Advanced Diploma levels, including traditional trades and a number of emerging occupations in most sectors of business and industry.

What's the Difference Between an Apprenticeship and a Traineeship?

'Apprenticeship' is the Australian government's collective term for apprenticeships and traineeships that are available to anyone of a working age.

An apprenticeship is a structured training arrangement of usually 3.5 or 4 years' duration. The training combines practical experience at work with complementary off-the-job training with a registered training organisation (RTO).

A traineeship is a training agreement between the trainee and their respective employer whereby the employer agrees to train the trainee in a specific industry, and the trainee agrees to work and learn. Traineeships are available for people of all ages and usually last between 9 and 48 months, depending on the vocation and certificate level undertaken.

There are also specific school-based apprenticeships or traineeships which are available to all Year 10, 11 and 12 high school students in NSW and the ACT. They allow students to commence an apprenticeship or complete a traineeship while at school. A school-based apprenticeship or traineeship combines paid work, training and school, as well as an industry-recognised national qualification gaining credit towards a higher secondary or secondary school certificate (HSC/SSC).

Get started today!

Call Bree Hicks on **0477 366 839**





How is the Training Delivered?

All apprentices and trainees are required to attend and complete a formal qualification training component with a public or private RTO.

There are different methods of training available to suit different types of apprenticeship or traineeship roles.

Options include:

- Classroom-based training
- Flexibly delivered training, such as online or internet training tools, combined with instruction delivered using face-to-face, video link or teleconferencing methods
- Work-based training, allowing you to develop the knowledge and skills required as part of normal work with your employer, together with guidance and support provided by the training organisation.

Who Pays for the Study?

Apprenticeships and new entrant traineeships are currently fee free in NSW. There may be associated course equipment costs.

ACT training fees will depend on the training organisation you are enrolled with but they are usually heavily subsidised by the government. The payment of your training fees depends on the industrial award under which you are paid and your employment agreement. Speak to your employer and training organisation or to Apprenticeship Support Australia to find out more.

What if I'm unsure I'll always have the work for an apprentice or whether I can give them experience in all aspects of the curriculum?

Group training organisations (GTOs) facilitate an employment and training arrangement whereby they employ apprentices and trainees under an apprenticeship/traineeship training contract and

place them with host employers.

A GTO undertakes the employer responsibilities for the quality and continuity of the apprentices' and trainees' employment and training. The GTO also manages the additional care and support necessary to achieve the successful completion of the training contract.

The goals of GTOs are to:

- create additional employment opportunities for apprenticeships and traineeships that otherwise might not have existed.
- provide for continuity of employment of apprentices and trainees through to the completion of their apprenticeship/traineeship training contract.
- improve the quality and range of training available to apprentices and trainees, particularly within small and medium businesses.

Where Can I Get More Information?

Apprenticeship Support Australia offers expert advice on all aspects of hiring an apprentice. Their dedicated team can visit your workplace to conduct a skills assessment and identify training opportunities business wide.

Call or email NGINA's Account Manager, **Bree Hicks**, at Apprenticeship Support Australia, on **0477 366 839** or email **bree.hicks@businessaustralia.com**.

They can recommend relevant qualifications for individual staff and can assist you in finding an RTO and GTO that can accommodate the needs of your business and your employee.

They can also provide an initial assessment of your eligibility for incentives and benefits.

Their services are funded under an Australian government contract and are provided at no cost to you.





How Can I Find an Apprentice?

Advertise and access local candidates through Apprenticeship Support Australia's jobs board on skillsroad.com.au.

Post your ad for FREE today and have the cream of the crop pitch themselves for your next role!

Skillsroad's jobs board is Australia's leading youth-centric jobs board, putting you in touch with over 300,000 entry-level job seekers looking for work and career advice.

NGINA can also advertise your vacant positions through their eNews as well as posting the resumes of their student members.

How Do I Complete the Contract?

Apprenticeship Support Australia assists both you and your apprentice with completion of the national training contract. Their Industry Training Consultants are experts in all the requirements and will help you complete the necessary paperwork.

The Apprenticeship Support Australia team submits the national training contract on your behalf to the state training authority. State training authorities are government departments responsible for registering and administering apprenticeship training contracts.

Can I Get More Help Along the Way?

Apprenticeship Support Australia is committed to providing ongoing tailored support and assistance to your business. Through their dedicated Industry Training Consultants and innovative coaching and mentoring programs they can assist and support your team along the entire journey.

Once your apprentice has completed the apprenticeship the story doesn't stop there! NGINA offers a range of educational courses for members and staff.

Interested to find out the projected financial incentives for your business or to book a complimentary workplace assessment?

Call or email NGINA's Account Manager, **Bree Hicks**, on **0477 366 839** or send an email to **bree.hicks@businessaustralia.com**.

Where to begin?

Check out the full list of apprenticeships and traineeships available in the Apprentices section of their website, **apprenticeshipsupport.com.au**, or call NGINA's Account Manager, Bree Hicks, on 0477 366 839, she'd be more than happy to help.



Overcoming Staffing Challenges This Peak Season

As proven by the results of NGINA's recent member survey, staffing and staffing-related issues are among the biggest challenges facing horticulture businesses today, with one quarter of respondents listing them as their number-one challenge.

“...staffing and staffing-related issues are among the biggest challenges facing horticulture businesses today...”

And this is during normal times.

Unlike the impact COVID-19 has had on many businesses, where entire industries have been forced to stand down workers, the horticulture industry has just recorded its biggest autumn on record due to consumers' heightened interest in at-home gardens, plants and veggie patches.

This growth has resulted in an unprecedented demand for workers—one third of NGINA members reported an increase in staff numbers during the first half of 2020.

Hiring data on Sidekicker, Australia's largest temporary and casual labour platform, can confirm this showing a 300% increase in hours worked in horticulture roles over the past six months.

As the industry moves into peak season—where order volumes typically ramp up between 50% and 80% from now until December—businesses are even further constrained by the elimination of backpackers and international students due to the closure of international borders.

“Sidekicker data shows that there's been a 300% increase in hours worked in horticulture roles over the past six months.”

So, while the industry is booming, staffing challenges are being felt more than ever and are leaving many businesses unable to capitalise on the growth potential.

WHY STAFFING CHALLENGES EXIST FOR HORTICULTURE BUSINESSES

Horticulture businesses are prone to staffing challenges for a few core reasons.

High levels of seasonality mean that businesses need to quickly ramp up their teams to service demand spikes but, on the other hand, are unable to offer staff consistent work during quiet periods.

This causes high churn, meaning businesses are constantly recruiting new staff to top up their rosters. Not only that, when labour is required for only a short period, this time investment is a poor use of internal resources. Given it takes time to onboard and train staff, the constant stream of new casuals has a negative impact on productivity.

The horticulture industry is also heavily dependent on international travellers who arrive in Australia on working holiday visas and who are notoriously hard to reach through traditional recruitment channels, such as SEEK, which makes the task of sourcing experienced, available and qualified workers even more challenging.





AVAILABLE SOLUTIONS

The creation of ‘on-demand workforces’ is a potential solution for horticulture businesses looking to scale-up and hire extra staff for the upcoming peak season.

An on-demand workforce is a pre-screened and ‘work-ready’ pool of staff, available for businesses to hire as and when they need them.

Sidekicker (part of the SEEK group) operates Australia’s largest on-demand workforce across several industries including horticulture.

Using a simple online platform, businesses are able to post their staffing requirements online, and be instantly matched with available workers who have all the required skills, experience and qualifications.

Businesses are able to use detailed staff ‘profiles’, which display previous experience, a bio, and ratings and reviews from similar businesses, to hire the best workers for their needs.

Because Sidekicker is the employer of staff, businesses don’t have to worry about any employment or payroll admin, and are simply able to get the workers they need onsite and ready to work within hours.

Staff are then able to submit their hours via digital timesheets, which businesses can approve easily online. Sidekicker then pays staff weekly, ensuring they are paid correctly and alleviating the compliance burden from businesses.

Because staff can work sufficient hours across multiple production nurseries with different ramp periods, they’re able to continue working within the industry, rather than leaving to find more consistent hours elsewhere.

Through the Sidekicker platform, businesses are also able to post shifts directly to staff they’ve worked with before, allowing them to get the same staff back again and again.

Sidekicker is already providing on-demand staff to nurseries in Victoria, such as Mansfield’s Propagation Nursery, Ball Australia, Oasis Horticulture, JD Propagation and Tesselaar, which has allowed them to quickly scale and respond to the highly fluctuating demands of COVID.

“Before Sidekicker, we were spending a lot of time and money recruiting staff for our peak periods, but they’d quickly churn once the work dropped off and we’d have to do the whole thing all over again when production levels picked up.

The time taken to post jobs, interview and generally onboard staff was not filling our business needs quickly enough leading to roster gaps and higher overtime costs.

Sidekicker helped eliminate these challenges—giving us the ability to hire experienced and work-ready staff ‘on-demand’, i.e., when we need them, as fast as we need them, for the specific time we needed them for.

Sidekicker has saved us time and money, and consistently provides us with high-calibre staff whenever we need additional labour to meet production demands.”

David Jakobs, CEO, Oasis Horticulture

Sidekicker is providing exclusive rates for members of NGINA. If you want to learn more about Sidekicker and how they can support your business during the upcoming months, please call Penny on 0488 601 421, send her an email at penny@sidekicker.com.au or visit www.sidekicker.com.



Red Imported Fire Ant — One of the Highest Risk Exotic Insects Confronting Australia

by Martin Horwood, Senior Plant Biosecurity Officer, Greater Sydney Local Land Services (GSLLS)

Solenopsis invicta, commonly known as red imported fire ant (RIFA), is native to South America and is now widespread around the world including the USA, China, Taiwan, the West Indies, India, Malaysia, the Philippines and Singapore.

The USA is a worst case scenario of how RIFA can infest a country. Their experience shows us what happens when RIFA is able to establish and spread. Since being introduced to the USA in the 1930s, RIFA has infested 150 million hectares in 18 states, dispersing at a rate of around 48 km/year. Unlike most insect pests that have either economic (e.g., termites), health (e.g., mosquitoes) or environmental impacts (e.g., wasps), RIFA damages all three. RIFA is estimated to cost the US economy \$US7 billion annually through control activities and its negative impacts on agriculture, infrastructure, the environment, social amenity and animal and human health.

RIFA is known to have entered Australia in imported goods, e.g., containers, at least 18 times over the past 20 years. On several occasions it was not detected at the border and infestations were found at the Port of Brisbane (2001), south western suburbs of Brisbane (2001), Yarwun (2006 and 2013), Port Botany (2014), Brisbane Airport (2015) and Fremantle (2019). RIFA has been successfully eradicated from all sites except the south western suburbs of Brisbane.

A single RIFA nest was found in 2014 at Port Botany. DNA analysis of ants from the infested site showed the samples had not spread from Queensland but were the product of a new incursion from Argentina. An emergency response was declared which oversaw surveillance and control around the infested site. Actions were completed in 2016. No further RIFA detections were made. Genetic testing has proved invaluable by showing the origins of new outbreaks, for example, whether ant queens have flown in from a relatively nearby location (up to 5 km) or travelled in a different manner, e.g., product movements. Such knowledge helps achieve the optimal deployment of resources for control activities.

The National Red Imported Fire Ant Eradication Program in South East Queensland commenced in 2001 following discovery of RIFA in Brisbane. Up to June 2016, the nationally

cost-shared program attempting to eradicate the ants was estimated to have cost federal, state and territory governments more than \$329 million. Ongoing eradication efforts in the greater Brisbane and Ipswich areas are the subject of a National Ten Year Eradication Plan (https://www.daf.qld.gov.au/__data/assets/pdf_file/0010/1397134/fire-ant-10-year-plan-appendices.pdf). This proposal, estimated to cost around \$411 million, was endorsed by the then Deputy Prime Minister and Minister for Agriculture and Water Resources, Barnaby Joyce, in July 2017. The new plan has overseen innovative control activities such as the use of helicopters for aerial pesticide application and gathering thermal imagery, odour detection dogs and genetic tracing.

In 2017 I visited the headquarters of the National Red Imported Fire Ant Eradication Program in Queensland and conferred with members of the communications, compliance, policy and field operations (control and odour detection dog) teams. Due to the considerable time made available to me by staff and the wide range of activities I was briefed about and took part in, I was given a comprehensive understanding of the eradication program's policies and practices as well as future eradication plans. I was very impressed by the sophistication and innovation incorporated into the program as well as the high level of commitment showed by all staff.

Four years into the program there are no clear signs of eradication, nor an indication of how long the program will need to continue. Recently, over 30% of the infested area was subjected to eradication treatments and is currently under surveillance to find out how effective control efforts have been. In spite of these uncertainties, the extent of infestation in Queensland, and Australia, remains low thanks to the achievements of the eradication program to date. The hard work and investment is worth it—there are many countries that have tried and failed to eradicate RIFA and now pay a significant price to live with them.

CONTROLLING RIFA

Members of the public should not attempt to control RIFA themselves. The invasive species can only be treated by government biosecurity officers or authorised pest



Figure 1



Figure 2



Figure 3



Figure 4

Figure 1. RIFA worker ant; two-tone colour, copper-brown head and thorax with darker abdomen. Note also the dual segmented petiole (between thorax and abdomen) which is also found on native ant species. (Image source: Department of Agriculture and Fisheries, Queensland.)

Figure 2. RIFA swarming aggressively over an item in contact with a nest. Worker ant sizes range from 2–6 mm. (Image source: Department of Agriculture and Fisheries, Queensland.)

Figure 3. Pustules arising from a swarm attack by RIFA and repeated stings. Stings can pose serious health risks should they become infected or if the victim suffers from anaphylaxis. Over 100 people have died in the USA from RIFA sting related ailments. (Image source: Business Queensland.)

Figure 4. RIFA nests typically resemble mounds of dirt but can be in a range of shapes and sizes depending on the area where they are constructed. All five images are examples of RIFA nests. Regardless of the size or nesting materials, nests will still have loose soil with no entry or exit holes. Grass can grow through the loose soil. (Image source: Department of Agriculture and Fisheries, Queensland.)

controllers. The treatment strategy is well-defined, stipulating the types of chemicals that can be used and how they are to be applied.

The primary RIFA control measures used in Australia have been direct nest injection (DNI) and insect growth regulator (IGR) baits. DNI is inserting insecticide into the soil around the outside, and through the centre, of the nest and then showering it over the nest. The most efficacious active ingredient used is fipronil. As the chemical is tasteless and odourless, ants continue to walk through the chemical and absorb lethal doses.

While DNI is a single application control measure, the cost and labour to treat individual nests limits its viability to high risk areas, e.g., schools, parks, paddocks. A more practical,

widescale method is the distribution of IGR baits in high risk areas. IGR baits must be applied several times over two years. The active ingredient in IGR baits mimics naturally occurring insect juvenile hormone, causing disruption of normal larval metamorphosis and queen sterility. Due to their mode of action, IGR baits can take weeks or months to cause colony death. Treatment efficacy relies on the food sharing behaviour of ants, which spreads the bait's active ingredient throughout the entire colony.

WHAT TO LOOK FOR

The following are key features of RIFA:

1. Morphology

RIFA worker ants are coppery-brown in colour on the head



Martin Horwood, Senior Plant Biosecurity Officer, Greater Sydney Local Land Services (GSLLS) attending Sydney Trade Day in October 2020

and body, with a darker abdomen (Figure 1). A range in sizes from 2 mm to 6 mm is usually seen—not uniform, nor with the two distinctly dissimilar sizes like many native ants (see Figure 2). Antennae have 10 segments, the last two of which are enlarged (“clubs”). Some ant species of the genus *Monomorium* are similar in appearance, but their antennae have 11 or 12 segments with three clubs.

2. Nests

There are two social forms of RIFA: monogyne colonies with a single queen ant and polygyne colonies with multiple queens. Ants from monogyne colonies are territorial whereas polygyne ants can move between nests without any conflict. Furthermore, polygyne colonies have higher nest densities and reproductive rates than monogyne colonies, and are harder to destroy due to numerous queens and their ability to scatter and establish new colonies. They are inherently more detrimental to economies, environments and public health than monogyne colonies.

One of the most easily recognised and distinguishing characteristics for RIFA are the mounds they build at the top of their nests. RIFA mounds are typically 30 cm tall and 60 cm wide (Figure 3). Nevertheless, they are not always mound shaped. Designs will depend on the soil or resources they are nesting in, e.g., plants, as well the time of year and age of the nest. RIFA nests have no obvious entry or exit holes. Internally, the nest consists of many interconnected galleries. Ants enter and exit the mound via underground tunnels. RIFA are very versatile and adaptable as to where they can establish their nests. In urban areas RIFA mounds are often located on lawns, sporting fields, golf courses and along

roads and footpaths. They also commonly nest in pot plants and mulch in contact with soil.

3. Behaviour when disturbed

When a RIFA mound is disturbed, dozens to hundreds of coppery-brown worker ants crawl up the attacker as well as grass and other objects on and around the mound (Figure 2). This is another distinguishing feature of RIFA compared with native ants, e.g., *Monomorium* spp. which are not aggressive. Each RIFA can sting multiple times and ants will swarm and sting en masse—hence you usually don’t get a single RIFA sting (Figure 4). Stings are painful and blister coverings can take many days to heal. Secondary infection highlights the need for first aid and keeping the blistered area treated correctly. You don’t build up a tolerance to RIFA stings. Adverse reactions can worsen after each successive sting and individuals can develop an allergic reaction over time resulting potentially in anaphylaxis.

WHERE TO FROM HERE?

Climate modelling by CSIRO has shown that RIFA has the potential to inhabit most of the east coast of Australia. It is therefore essential that funding is ongoing for the eradication program. In Queensland, partnership with the community has a major contributing factor in the success of the program. Therefore in NSW community engagement needs to be established and maintained, especially in high risk areas for new incursions. These efforts would build collaboration and promote shared responsibility between government, industry and the wider community to achieve surveillance objectives. Even if nothing were detected, such practices would provide

confirmation of area freedom from RIFA, which can be good for trade.

The Queensland Government has put together a very useful video telling viewers what to look for and where, in different environments (e.g., urban, rural) <https://www.youtube.com/watch?v=UaTS1hoGcM>.

The value of the knowledge I acquired while visiting the RIFA Eradication Program in Queensland cannot be understated, neither can be the value of this information to the people of NSW given the threat posed by RIFA to agriculture, wildlife and our outdoor lifestyle. The knowledge gained has been used for the preparation of response protocols, surveillance activities and training of staff within GSLLS. For obvious reasons (i.e., past infestation and ongoing risk of incursions), Port Botany has been the target of most RIFA surveillance activities around Sydney. Since the Federal Government is responsible for pre-border biosecurity (which includes container terminals), I have focussed most of my attention on post-border areas, including lawns, parks, gardens and nature strips along footpaths and roads. Another key surveillance target are pipelines which are enclosed by fencing and therefore aren't subjected to casual surveillance by the general public. Surveillance activities have consisted of visual inspection for RIFA mounds and ant trapping (using non-toxic baits). Thus far there have been no RIFA detections at Port Botany. Interestingly though, 10 different species of native and established (e.g., coastal brown ant) ants have been detected. This information is useful because, in the event of a future RIFA incursion, it can be used to educate surveillance officers about ant morphology, help them gain understanding of key RIFA characteristics and reduce the number of ant specimens needing to be sent for expert ID.

In the future it is hoped that innovative remote sensing technologies can be utilised so that surveillance can be far more comprehensive and reliable. RIFA colonies have a heat signature which can be detected through thermal imaging in comparison to the normal ground temperature. Such systems are being developed in Queensland and we should be able to share this technology. This would greatly enhance the preparedness of biosecurity agencies for the detection and eradication of RIFA.

Luckily RIFA has not been detected in Sydney since the 2014 incursion. Nevertheless, this ant remains a constant threat and will inevitably be an ongoing cause for concern. Biosecurity is everyone's responsibility and it is essential the general public remain on alert and report any suspected sightings of this ant, especially in high risk situations such as when goods are imported from overseas. Plants and plant materials imported from south east Queensland, while heavily regulated, pose a moderate level of risk to us in NSW. The nursery and garden industry has one of the most important roles to play in this program. If you think you have seen signs of RIFA:

- take a photograph of the nest/mound
- gently prod mound with a long stick
- do not touch
- look for ants erupting from nest
- check for coppery brown colour of different sizes
- record location
- leave conspicuous markers near mounds
- contact the National Plant Pest Hotline on 1800 084 881.

The scientific advice is that new or young colonies of RIFA can remain unobservable above ground for 3–6 months. Also, mature nests are most visible in cooler weather but during warm months, and particularly during drought, fire ants move their nests deep underground as they need stable temperatures and soil moisture to maintain nest health and structural integrity. Accordingly, for many months of the year, fire ant nests may not be visible and property freedom is therefore not effective.

1. The NSW DPI decision to remove property freedom is based on expert scientific advice that property freedom is not a suitable mitigation measure for RIFA. NSW DPI remains committed to protect NSW from the risk of RIFA so as to enable our businesses to continue to trade freely with other jurisdictions. We are also supporting

the NRIFAEP (National Red Imported Fire Ant Eradication Program) in their eradication efforts.

2. We advised all jurisdictions in March 2020 of this decision and further advised that the basis for decision is due to the biology of the ants. With the risks increasing in the warmer months, we have given a proposed date of 2 November 2020 for the legislation amendments.

3. While we are removing the property freedom option for potted plants into NSW, the alternate option of chemical treatment remains. We are also working closely with Biosecurity Queensland to improve the chemical treatment options available to businesses.



Department of
Primary Industries

Member Survey — The Results Are In!

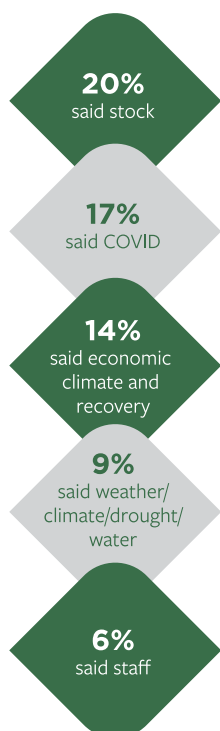
Our membership engagement survey has finally closed! Thank you to nearly half our members who took the time to complete it. We have collated and analysed the responses and your answers will inform how the Association will evolve and

what new services we will offer. The following is a snap shot of your answers. (Please note that for the majority of questions, members were able to select multiple answer options.)

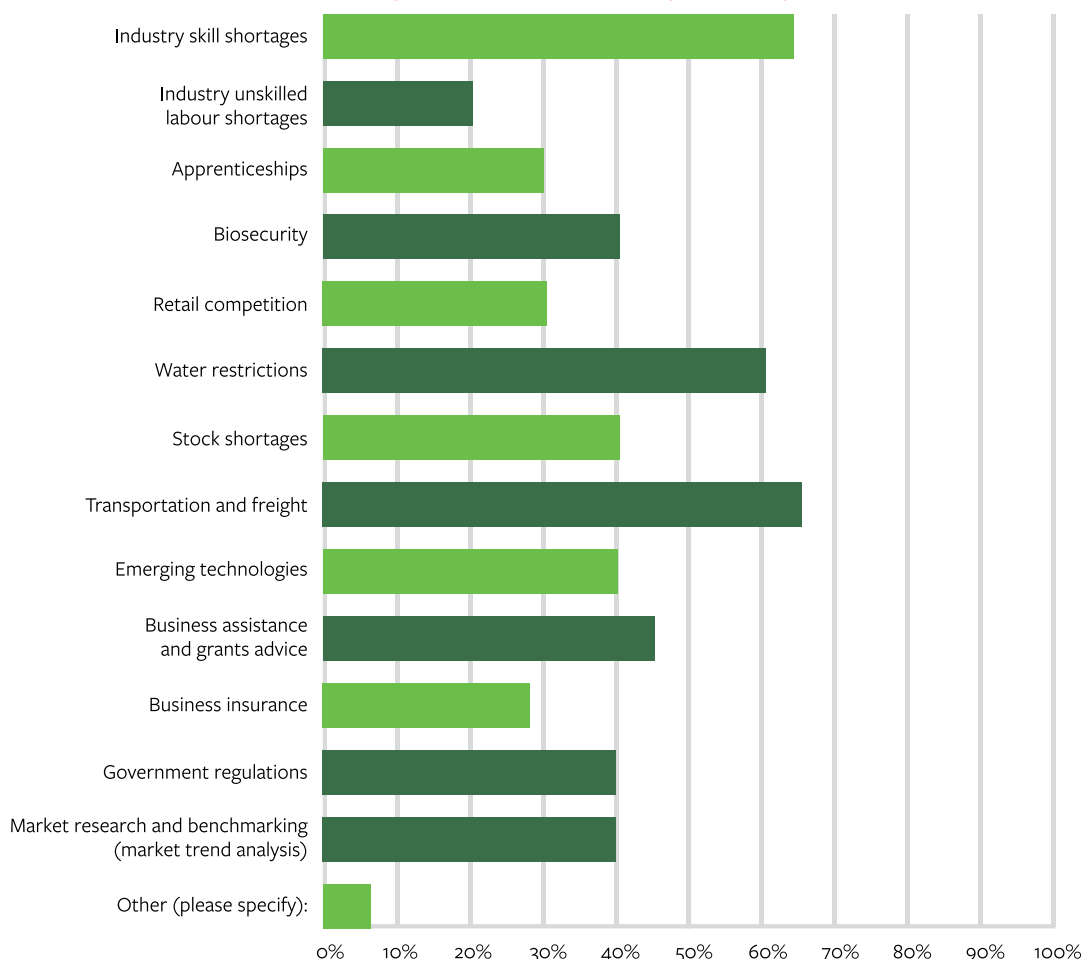
What are the most important services that are currently or could be offered to members of NGINA?



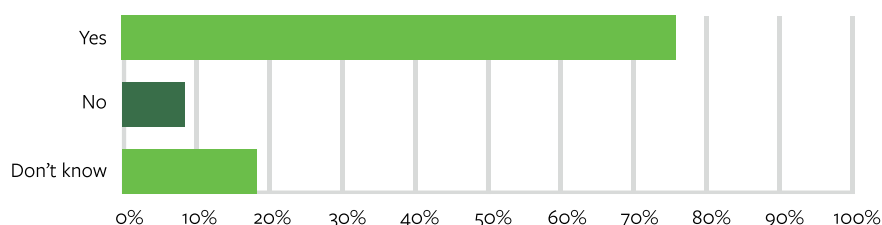
What are your biggest concerns for the nursery and garden industry over the next 18 months?



What issues are really important to both you and your business?



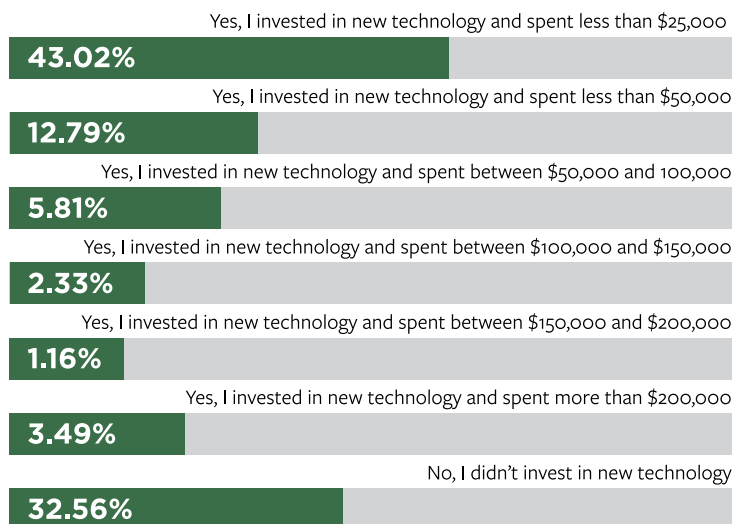
During the 2019/20 financial year, did your nursery business make an operating profit?



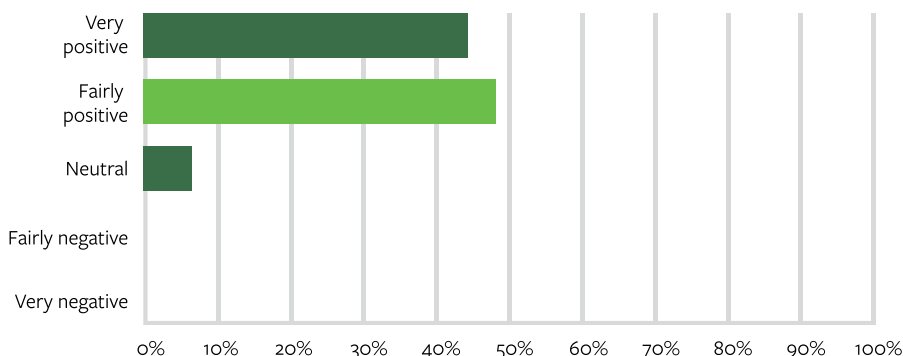
What are some of the biggest challenges for your business in the long term?



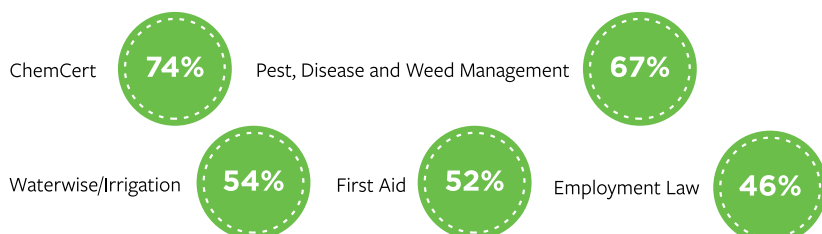
During the 2019/20 financial year did you invest in new technology for your business?



Overall how do you feel about the future of the nursery and garden industry?



What training courses would you like NGINA to run?

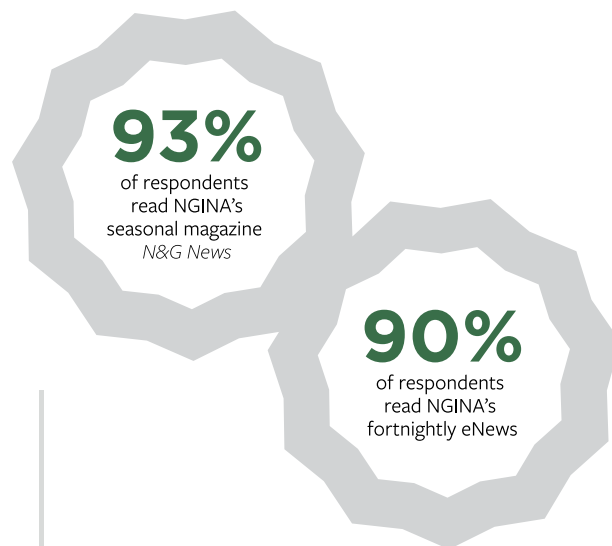


Social Media

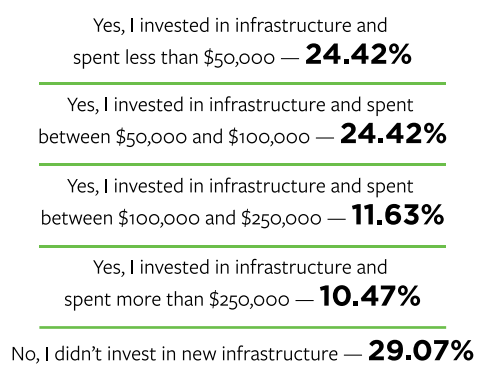
45% follow NGINA on social media,
49% don't and **6%** didn't know NGINA is on social media.

Facebook is still the most used social media platform
with **64%** saying they use it regularly.
Instagram was a close second at **57%**.

Interestingly **27%** don't use social media at all.
These results are similar for business usage of social media.



During the 2019/20 financial year did you invest in new infrastructure for your business?



What are some of the biggest challenges for your business in the short term?



Closing the PP5 Loop — Industry Recycling Discussions Underway

In October and following on from the Sustainable Packaging in Horticulture workshop held in June, NGINA took part in an industry-wide discussion striving to establish a national recovery and recycling program for polypropylene (PP5). Hosted online by the Australian Packaging Covenant Organisation (APCO) and supported by Greenlife Industry Australia (GIA), the workshop was attended by over 50 representatives from the horticultural packaging value chain.

Stakeholders (including representatives from Garden City Plastics (GCP), Immj and Astron, as well as interested government departments) and participants met to consider sustainable packaging in horticulture and to discuss a sector-specific approach to address packaging sustainability challenges particular to the Australian nursery horticultural industry.

Both workshops successfully established a collaborative forum in which to progress work to identify those resource recovery challenges unique to the sector and create a strategic approach to developing solutions. Framed around an initiative to establish an industry-wide recycling scheme for polypropylene plant packaging, this latest workshop was broken down into two parts:

1. A recap of the outcomes from the June workshop and an update on the activities carried out since, which include a joint APCO/GIA application for funding to the National Product Stewardship Fund to support the activities.
2. The creation of smaller working groups designed to consider the next steps in developing an ongoing sector-based work program and business case to drive action and improve packaging sustainability across the horticultural packaging landscape.

JUNE WORKSHOP RECAP

Matthew Mills, GCP National Sales & Marketing Manager, outlined GCP's motivation for driving the program. Through an increasingly prevalent dialogue with customers and suppliers, seeking ways to improve the environmental impacts of ornamental horticulture packaging on the Australian market, GCP identified an opportunity to close a loop around Australian PP5 plant packaging.

As a well-established family-owned Australian manufacturing business and significant end-user of recycled PP5 in its production processes, GCP focused on how best to improve

the circularity of the material for the sector as a whole. Identifying material collection as the weakest link in the chain, GCP took a product stewardship approach with a view to developing a nationwide collection and reprocessing framework for the sector, which would support the increased recovery and reutilisation of horticultural PP5.

Working with nursery retailers, packaging manufacturers and Victorian plastics re-processor, Astron Sustainability, GCP established pilot programs to provide consumer-facing collection points for PP5 plant pots, tags and stakes, and delivered a number of successful localised initiatives around NSW and Victoria.

“pp5.com.au provides a focus point for the horticultural industry, recyclers, packaging manufacturers, retailers and consumers to come together to close the loop on PP5 recycling.”

Seeking to drive expansion of the program to a national level, GCP engaged in a number of partnerships, including GIA and APCO, to amplify awareness of the program and to establish an independent platform through which to drive action and help industry deliver against the 2025 National Packaging Targets.

Jayne Paramor, Sustainability Partnership Manager at APCO, outlined the role that APCO plays in driving packaging sustainability across Australia, through the administration of the Australian Packaging Covenant, crystallised under the *National Environment Protection (Used Packaging Materials) Measure 2011*. The outline included:

- an overview of the 2025 National Packaging Targets and the Australian packaging landscape.
- an introduction to the APCO Collective Impact Model.
- the current state of play on Australia's progress towards a circular economy for packaging.
- APCO's strategic approach to delivering the 2025 National Packaging Targets, including updated polymer-specific recycled content targets.
- APCO's sectoral approach to addressing industry-specific packaging sustainability challenges.

Peter Vaughan, CEO of GIA, recounted the transition of

the organisation from Nursery & Garden Industry Australia (NGIA) to the current peak industry body, GIA, in the wake of a detailed four-year review, restructure and relaunch program. He then went on to outline GIA's 2020–2023 strategic plan and the role of sustainability as a key pillar of that strategy for the greenlife sector as a whole. Within the sustainability strategy, and in addition to a broad range of complementary initiatives across the sector, GIA has a stated intention to deliver ambitious waste reduction and emissions targets for the industry, which sets the scene for GIA's involvement in the sustainable packaging initiative.

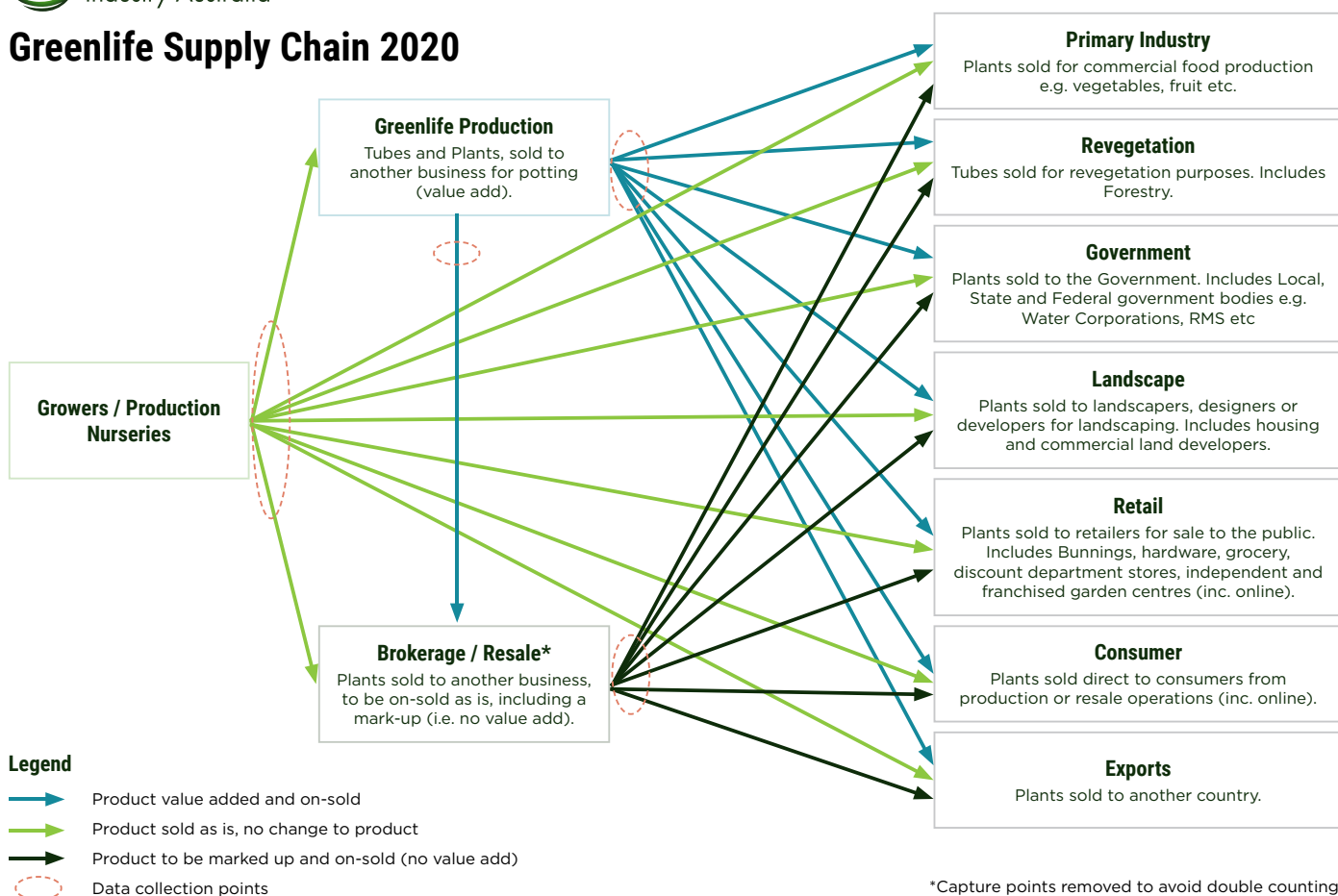
A shared resource, pp5.com.au, has been set up to support the establishment of a National Horticultural PP5 Recycling Scheme. The website will initially be an industry resource,

providing a base for communicating industry activities, and encouraging engagement and participation to drive the establishment of the program. The site provides a focus point for the horticultural industry, recyclers, packaging manufacturers, retailers and consumers to come together to close the loop on PP5 recycling. Ongoing enhancements to the site will include a collection point registration facility and an interactive searchable mapping tool to assist gardeners in locating their closest PP5 drop-off location. Please visit the website for further information.

To view the slides and final report from both the June and October workshops, or for other information, please contact Kobie Keenan, GIA Communications Manager, on kobie.keenan@greenlifeindustry.com.au.



Greenlife Supply Chain 2020





Rubus parvifolius, an edible native that makes excellent bird and small animal habitat



Thysanotus tuberosus, known as the common fringe-lily (bush tucker with a crisp edible root)

Best Practices for Bush Native Planting

by Frank Gasparre and Daniel Smart, Bushland Management Solutions Pty Ltd

There has been a refreshing swing back towards planting natives in recent years, particularly as both our cities and population are expanding and, in some areas, bushland is being lost. Replanting natives is a way to help minimise this damage.

But what exactly is involved in carrying out a native planting? Is it straightforward? Are there plenty of native plant options to choose from and are they available? The answer to these questions is both yes and no.

There was once a famous TV ad that had the tagline “Oils Ain’t Oils”. Well, when it comes to planting native species, the saying is “Natives Ain’t Natives”.

When planting for gardens or amenity landscapes, there are a range of native plants that come in all shapes, colours and sizes. These plants are usually selected for showiness, hardiness, colour and structure, height, amenity and many other aesthetic desires.

However, when planting for the ecosystem, it takes planning and time to make sure that you are able to get the right plants and the right outcome on the ground.

What Bushland Management Solutions is aiming to achieve with ‘bush restoration planting’ is a diverse native ecosystem, with all the elements of the real bush. That can include all the major layers of vegetation found in natural bushland—grasses, herbs, shrubs and trees, and sometimes specific plants for local native fauna.

People often ask what’s wrong with ornamental natives, such as Lomandra Tanika or Grevillea ‘Robyn Gordon’. There is nothing inherently wrong with these varieties but they are not providing the diversity of genes and ecosystem function of pure bush natives.

When you are planting for restoration, you are choosing plants that will best replicate what is found in the bush and these plants aren’t often grown in commercial nurseries, typically because they are hard to grow, hard to find, they may have limited seed or aren’t known well enough. When planting for restoration you need to start planning early and make sure that what you plant belongs there.

SO, WHAT’S THE BEST PROCESS FOR A BUSH NATIVE PLANTING?

1. Contact a native provenance nursery as soon as you know what will be needed later in the process. Do your research and don’t just base your decision on who will supply the plants on price. Talk to them, ask for references, check out their nursery stock for quality and, before signing on the dotted line, discuss the process they will adopt. Sometimes you may need to source plants from different specialist nurseries.

2. Understand the difficulties of supplying some species. For example, we have grown a threatened groundcover for a National Parks and Wildlife project that is now coming up at our nursery with the speed of a typical weed, so the

whole process has been relatively easy. However, some other species may not flower every year or they may be hard to find on site for source material or, in some instances, they may have disappeared locally already, all of which makes them extremely difficult to supply.

3. Try to work out a delivery time frame. Large construction projects, for example, rarely go under time but often go over time. Ensure your supply nursery is up to date with information on scheduling, and there is enough flexibility in your supply arrangement to have the plants in the right condition at the right time.

4. Sort out your size needs. To get the right plants, in the right condition and in a size ready to plant, the native nursery should be engaged at the outset of the project to make sure the plants are ready at the right time.

5. Ask who is going to install and maintain these plants.

Maintaining native planting is a specialist job that requires frequent on-site visits for inspections, and a crew both trained and experienced to deal with native plants. At the very least, the person doing maintenance must know what plants have been used and be inducted into their identification.

6. How long will the maintenance program last? A good native restoration planting will be maintained for at least two to three years. By completion, the plants should be well established in their new home and it will be easier to distinguish the weeds from the natives.

Just remember, “Natives Ain’t Natives!” Get started early, get the right contractor or staff for all stages of the job, and help do your bit for a diverse and beautiful contribution to our amazing natural world.



Photos 1 and 2: Saltmarsh replanting on the Parramatta River (Ryde Council area) following bank works

Photo 3: Daniel Smart, Bunya Nursery Manager

Photo 4: *Chrysocephalum apiculatum*, a species now very limited in occurrence in the Sydney region, however, still found at Rookwood Cemetery, Lidcombe NSW

Photo 5: Bunya Nursery, a range of ground covers and herbs, the often forgotten layers

Photo 6: *Pterostylis pedunculata*, an example of orchids that often disappear in bushland remnants

Biosecurity Act 2015 – Know Your Biosecurity Duty

by Craig Perring, Business & Technical Support Officer, NGINA

It is important for growers and retailers to have an understanding of their duty under the *Biosecurity Act 2015*, and therefore have an understanding of what plants have been declared a weed.

the whole of the ACT). I encourage all members to visit their local council website and familiarise yourself with their weeds lists.

What does the general biosecurity duty mean?

The general biosecurity duty supports the principle of shared responsibility, and means everyone is doing what is reasonable for them to do to prevent, eliminate or minimise biosecurity risks.

General Biosecurity Duty

What is my duty?



Prevent biosecurity risks



Eliminate risks



Minimise risks



As much as is reasonable

When do I have a duty?

If you deal with, or deal with a carrier of biosecurity matter, you have a duty

e.g., weeds, animals, plants, machinery



And if you should know that there is a risk

How do I fulfil my duty?

By referring to:



- State strategic plans
- Regional strategies
- Local plans
- Guidelines & advisory material
- Codes of practice & industry standards
- Mandatory measures



As NGINA's BISO, I sit on many biosecurity/weed committees representing the nursery sector to ensure plants that are of commercial value (and are not classed as an invasive species) are not mistakenly placed on any national or state weeds lists. However, councils can act independently and add plants to their own weeds lists based on their own local concerns about certain plants. It is important that you are aware which plants have been declared invasive in your local government area.

Below is an excerpt from Eurobodalla Shire Council regarding *Cytisus racemosus* 'nana' – Dwarf Spanish Broom, which is on their list of banned species. (It is also a declared weed in

SECTION 371 (1) (B) OF THE BIOSECURITY ACT 2015

This Weed Control Program is a council-endorsed document under Section 371 (1) (b) of the *Biosecurity Act 2015*, and describes how a person must discharge the person's general biosecurity duty for the biosecurity matter (weed) described.

PLANT SPECIES

Common name: Dwarf Broom; Hedge Broom

Scientific name(s): *Cytisus racemosus nana*; *Genista x spachiana*



Cytisus racemosus nana (Dwarf Broom; Hedge Broom)

AREA OF OPERATION

Local government area of Eurobodalla Shire.

SPECIES INFORMATION

Brooms are perennial leguminous shrubs in the Fabaceae (pea family) which have numerous, flexible, broom-like young branches that give rise to their common name. They commonly grow to 2–3 m tall but can grow to 3–6 m. All Brooms have bright yellow flowers, produce hard-coated seeds in pea-like pods and have seeds that are light brown to very dark, almost black, around 2.5–3 mm long, with an edible growth on the end of the seed (called an aril) that is attractive to ants.

Brooms have invaded over one million hectares of Australia and have naturalised in many other parts of the world. Seeds are naturally dispersed from the plant by explosive pods that can flick seeds up to 3 m, though the majority of the seed lands within 1 m of the parent plant. Once on the ground, seeds are readily moved long distances by water, humans or animals. Mature Broom plants can produce thousands of seeds each year, and these seeds can remain dormant in the soil for 30 years or more before germinating.

Brooms invade native vegetation, forestry and pastoral systems in Australia where they cause significant environmental and economic impacts. Brooms establish rapidly after disturbance such as fire, grazing or forestry harvesting, but can also invade relatively undisturbed areas. Dwarf/Hedge Broom is a cultivar of a Broom species that is known to be invasive in other parts of Australia, and as such, is a potential threat to the biodiversity and agriculture of Eurobodalla Shire.

LEGAL OBLIGATIONS

Any person who deals with biosecurity matter or a carrier and who knows, or ought reasonably to know, the biosecurity risk posed or likely to be posed by the biosecurity matter, carrier or dealing has a biosecurity duty to ensure that, so far as is reasonably practicable, the biosecurity risk is prevented, eliminated or minimised.

WEED RISK ASSESSMENT

Feasibility of control: Very high.

Objective: Eradication.

COUNCIL CONTROL REQUIREMENTS

- (1) The plant must be destroyed.
- (2) The landholder must prevent spread from their land.
- (3) The plant must not be sold, propagated or distributed.

ENFORCEMENT

A person who fails to discharge the person's general biosecurity duty is guilty of an offence. In the event that the general biosecurity duty is not discharged, Council may:

- charge a reinspection fee;
- issue a penalty notice (refer to *Biosecurity Regulation 2017* (NSW) Schedule 6—Penalty Notice Offences); and
- enter the property, perform weed direction works and recoup all costs and expenses incurred.



Green Is the New Black — Are You Maximising Your Opportunities to Secure Your Future Income?

by Brian Merrick, Retail Mentor and Consultant

One of the biggest trends to come out of COVID-19 is the resurgence of gardening. This has been a bonus for our industry. It has come at a time when garden centres and growers were wondering how they would recover from the droughts and bushfires. The last few months have seen unprecedented sales. Interestingly this is not just a local

trend, it seems to be happening the world over.

Last year we were beginning to see the rise of the plant parent. This year plant parents are driving an exponential growth of indoor plant sales.

Plant parents get love and joy from their plants and are excited about the challenge of their care. They delight in discovering relevant information and facts about their leafy friends. They love creating collections and will go out of their way to acquire rare and unusual plants. Price is not the focus; pride of possession far outweighs cost—just consider the outrageous price (NZ\$8,100) paid in New Zealand recently for a variegated Philodendron Minima. They are also avid users of social media with their leafy children featuring regularly on Instagram, Pinterest and Facebook. Plant parenting fulfils a need to nurture and care while providing a sense of parental responsibility.

The opportunities that plant parents provide is immense as they are predominantly younger and often first-time garden centre shoppers. While they will research and sometimes purchase online, they still long for the one-on-one instore shopping experience. Recent research shows that these tech savvy customers are fluent with online shopping, yet 80% of the time they still value the instore experience. Overall, they want the shopping experience to be convenient and integrated with their use of technology.

There are also studies suggesting that younger customers care about social issues, have a global mindset, appreciate diversity and like to engage on a personal and emotional level. They like to shop with businesses that have strong vision and integrity. They welcome friendly staff who are helpful and



focused on their needs. When it comes to merchandising—logical layout that is easy to shop is key. When it comes to loyalty, they see it as a two-way interaction. Your loyalty to them will be reciprocated with their loyalty to you. Quality is also high on the agenda. Mostly they know what they want—they just need to be able to find it and have staff available to assist with information. You have a chance to convert these new-found customers into lifetime patrons and proud plant parents.

Sales are also being driven by self-sufficient gardeners who are often establishing their first herb and vegetable plot. Children are also being introduced to gardening by parents who have been spending more time at home. We must not forget the older generation, some of whom will also be discovering the joys of gardening for the first time—while others will be lapsed gardeners returning to the fold. Catering for the older shopper is still predominantly a one-to-one interaction, however, they are also embracing technology and researching more before committing to purchase.

Plants are still the ultimate in-person sale. This puts garden centres in the box seat to capitalise on these extraordinary times. Engaging with this new enthusiasm for plants and

gardens is a positive way to transform this fresh interest in gardening into a long-term way of life for your customers. The challenge is to take control and drive the dialogue and not just follow the current narrative. Garden centres are ideally positioned to be the first port of call for advice and purchases. This will not just happen. You will have to work at it. If your cashflow permits—this is an ideal time to invest in your business. Examine your buildings and display units—renovate or renew as required. Review your systems, policies and procedures to make sure that they are inline with your business philosophy. Social media should now be an integral part of your marketing strategy. Engaging with your staff so that they are delivering the highest level of customer service must be a priority.

Providence has delivered through your doors an abundance of customers. As the song goes, “...in numbers too big to ignore.” Who knows how long COVID-19 will continue to drive new customers across your threshold? The sooner you take action to consolidate these newfound customers the better chance you have of retaining their loyalty long after COVID-19 ceases to dominate everyday life.



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Digging Into the Minds of Gardeners

by Angie Thomas, Yates Horticultural Communications Manager

Consumer insights are a vital part of understanding the needs of gardeners. From knowing the gardening challenges being faced at particular times throughout the year, to emerging trends and people's thirst for knowledge to get the best possible result and enjoyment out of their gardens.

Yates has been an integral part of Australian home gardens since 1887. Arthur Yates could never have dreamt about the ways in which information could be shared with and received from gardeners, beyond the humble beginnings of the Yates Garden Guide. Though Arthur would be rightly proud to learn that more than seven million copies of this beloved book have since been sold!

The word 'unprecedented' has been well and truly used to describe much of 2020, including the significant increase in people wanting to garden. The reasons behind this are varied, including people having more time on their hands to garden and wanting to beautify their outdoor and indoor spaces with plants. There has also been the massive upsurge in people wanting to grow some of their own food, in part driven by

images of bare supermarket shelves during the height of the pandemic and realising how dependent we are on other people to feed us. During a chaotic and unsettling time, gardeners are able to claw back some control over their lives and contribute some fresh home grown produce to their meals. Growing food is also one of the most rewarding (and healthy and tasty) things you can do, and it's been wonderful to see social media sites flooded with people excitedly showing off their very first (albeit wonky) home-grown carrot or bowl of lettuce leaves.

Matching this home-grown revolution, there has been a significant increase in people searching the Yates website (yates.com.au) for information on growing vegetables. Three times as many people have been investigating growing edible plants versus flowers, including details on how to grow vegetables and herbs from seed. Some of the most searched for edibles have been baby leaf spinach, snow peas, broccoli, carrots, sweet corn and cauliflower. Perhaps cauliflower 'rice' could be driving some of the interest in cauliflower?

The screenshot shows the Yates website homepage. At the top is the Yates logo and navigation links: YATES SHOP, COMMERCIAL, and YOUR COMMUNITY. Below this is a secondary navigation bar with links: Ideas & Plans, Plants, Products, Lawn, Garden Community, Where to buy, Ask an Expert, and More. The main banner features a large image of a yellow flower and a text box titled 'Growing With You' that says: 'To welcome spring, our latest edition of Growing With You is out now! Packed with gardening ideas, inspiration, projects and much more.' To the right of the banner is a thumbnail of the 'growing you' book cover, which highlights 'spring vegies', 'flower Wakeover', 'TERRIFIC tomatoes', and 'NAVEL gazing'. Below the banner are four content blocks: 'Garden Problem Solver' with an image of a plant, 'What to grow now' with an image of purple flowers, and 'Feature in our gallery' with an image of a colorful flower bed. The fourth block is partially obscured.



Continuing the edible focus, gardeners have been keen to learn how to transplant citrus trees and understand various problems with passionfruit, such as fruit not ripening on the vine. How to grow citrus at home is always a hot topic, and it's fantastic that so many gardeners want to enjoy their very own delicious citrus fruit.

Yates has also seen even further interest in indoor plant care. The indoor plant phenomenon was well and truly entrenched before COVID hit, however, with more people at home and having extra time to devote to creating a leafy retreat, there's been an escalation in web searches. Happy plants and Devil's Ivy have been two commonly browsed indoor plants.

Caring for Australian native plants has also been among the top queries, including controlling scale on lilly pillies and the best time to prune callistemon. People have been

keen to know how to grow magnolias and hydrangeas, and gardenias and daphne have also featured in the questions coming through to Yates, including 'Why are my daphne leaves turning yellow?', 'What's the black soot on my gardenia leaves?' and 'What's the best time to prune camellias?'.

Yates has a dedicated team of passionate horticulturists to answer these queries, helping all types of gardeners from the newbies to the seasoned green thumbs.

In general, Yates is continuing to see a huge demand for gardening information. This is despite lockdown restrictions being eased in many areas, indicating that for lots more people, gardening is not just a passing fad but an ongoing interest and passion. And after a tumultuous year, that's awesome news for the horticulture industry.

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Do you have great feedback from your customers and supply chain partners about the quality of your stock? The Plant Sure team is on the hunt for brilliant plants to recommend as part of the Plant Sure Scheme. Any beautiful ornamental cultivars, ferns, grasses, shrubs, trees, climbers, you name it, we would like to hear about it! We are seeking nominations for plants that you grow or sell in your nursery. Do you specialise in certain species? What are your best sellers? Or what are your favourite plants? Consider nominating them for an assessment.

WHY NOMINATE A PLANT FOR ASSESSMENT?

The Plant Sure Scheme is a responsible gardening initiative that will help growers, retailers and consumers of ornamental plants to grow, sell and buy plants that don't cause harm to the environment.

We want to celebrate the business people who are 'gardening responsibly'. That means anyone who grows, sells, buys or installs ornamental plants that don't 'jump the garden fence' and cause harm to natural environments. As part of the Scheme, we will assess the invasive risk of ornamental plants. We want to make it easier for people to garden responsibly by directing them towards good quality plants assessed in the Scheme.

HOW DO I NOMINATE A PLANT FOR ASSESSMENT?

Go to the home page of the Plant Sure website, gardeningresponsibly.org.au, scroll down a little and click on NOMINATE PLANT, then simply complete the web form. It will take less than five minutes. You can also upload a photo or additional information to support your nomination.

WHAT'S IN IT FOR ME?

Kudos to you! We want to recognise and reward people with great plants.

For the month of November 2020, each person who submits a plant nomination via the website will go into a draw to win a \$30 gift voucher*.

WHAT IF I AM UNSURE ABOUT A CERTAIN PLANT?

That's fine. Often plants get labelled as being problematic in natural areas, i.e., weedy. The Plant Sure Scheme will use robust scientific information to assess plants and share these assessments online, so that anyone can review an assessment and judge the risk for themselves. We will promote low-risk invasive plants similar to the Grow Me Instead program.

HOW WILL I LEARN ABOUT THE RESULTS OF THE PLANT ASSESSMENTS?

Plants are being shortlisted for assessment by Macquarie University researchers between September and November 2020. Results will be published on our website by March 2021. Anyone requesting an assessment is encouraged to sign up to the website to receive updates on events and the Plant Sure Scheme.

WANT MORE INFORMATION?

Contact the Project Manager, Aimee Freimanis, on aimee@ecohort.com, or NGINA's Business & Technical Support Officer, Craig Perring, on craig.perring@ngina.com.au.

* The competition is open to residents of New South Wales who are over 18 years of age and who complete an ornamental plant assessment nomination web form on the gardeningresponsibly.org.au website. Entrants must include their name and contact details on the web form. NGINA staff and Plant Sure Consortium members are excluded/not eligible to enter. Winners will be drawn by the Plant Sure Project Manager on Monday 30 November at 9:30 am at NGINA HQ, Kenthurst NSW, and contacted by email to make arrangements for collecting/receiving their prize. There are four prizes available, i.e., a Coles Group and Myer Gift Card valued at \$30 (valid for use between 10/2020 and 10/2024). The card can be used like cash for purchases at Coles, Myer, Kmart, Officeworks, Vintage Cellars, Liquorland, First Choice Liquor and Target. Contact details of entrants will not be published or shared.

TIM Helps Nurseries Become More Efficient

by Stuart Eason, Norwood Industries, and Craig Perring, NGINA

Labels are an integral part of any nursery business and often an area that requires a well thought out despatch area or shed and, as NGINA Life Member and industry stalwart Mal Morgan from Glenfield Nursery can vouch, if you don't get it right it can become a costly and frustrating area of your business.

Glenfield Nursery has been committed to designing great labels for many years and acknowledges the tremendous benefit gained from using Norwood's online label-creation software (eTag®) and online ordering system (Tagpic®) but felt there was still something missing.

In cooperation with Australia's leading label manufacturer, Norwood, and nursery software manufacturer, Passfield Data Systems, Glenfield Nursery has found the final piece of its label management puzzle—it's called Tag Inventory Management (affectionately known as TIM) and it's already having a profound impact on their business.

"We have been in the nursery business for over 50 years and continually strive to improve our nursery operation. For many years barcode readers and computer software were never our best friends but we like to think TIM has changed all that. We are so confident about the cost savings this technology will bring we have already invested in a dedicated label storage facility," said Mal.

And he continued, "There's no question that with lower margins we have been forced to look internally for greater operating efficiencies. An important area identified for improvement was our label management, which required a more efficient method of recording the receipt and withdrawal of labels via a perpetual inventory system. Until recently we relied on regular manual counting of labels, which was time consuming and, on occasion, inaccurate."

Adam Townend, Passfield's Sales Support Analyst for Australia and New Zealand, said that nurseries across most states, including NSW, NT, QLD, WA and VIC, are incorporating the technology.

"The technology has been designed by a nurseryman so it is designed specifically for nurseries. As we know, every nursery is different and therefore the system, although coming off the shelf, allows us to build in customised functions for each client. We want the nursery to have input into the data

system build so it suits their specific needs when it comes to categorisation or different sales channels and systems used by the nursery's various clients, including chain stores.

We like to think that with the base technology package starting around the \$15,000 mark, which includes inventory software, sales tracking, label management, barcoding and printing, a return on investment in nursery efficiencies is a year or less," Mr Townend said.

Mal highlights some of the key features of TIM:

AUTOMATIC LABEL ORDERING

When label quantities fall below their nominated stock levels, based on key parameters set by Glenfield, Passfield's software automatically updates a label ordering file. When the order is approved, the system initiates a seamless upload into Norwood's Tagpic online ordering system, with no manual entry of label codes and quantities.



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RECEIPT OF LABEL DELIVERIES INTO INVENTORY

When Norwood sends its labels to Glenfield, they also automatically generate and upload a label details shipment file into Passfield's software. Upon arrival, Glenfield confirms their receipt with a simple keystroke that immediately updates the labels into inventory. This literally saves Glenfield countless hours of administration in manually updating their stock records with hundreds of different varieties and ensures the complete accuracy of its inventory.

DEDICATED LABEL STORAGE

Glenfield's purpose-built label storage facility accommodates a new racking and shelving system where each label is assigned to one or more bin numbers. (Bin numbers are a combination of the rack and shelf numbers, i.e., "01-01" is located at rack #1, shelf #1.)

For ease of stock placement, Glenfield uses the box sticker customisation feature in Tagpic where the bin number of each label has been entered at the end of its name (see Norwood box sticker). This allows any staff member to easily place labels into their nominated bins without having to search for their storage address.



REMOVAL OF LABELS FROM INVENTORY

Labels can now be efficiently and accurately removed from inventory by scanning the label barcode on the box sticker and entering the quantity taken. This saves time by no longer duplicating the efforts required to write down label codes for subsequent updating on the computer. Similarly, any unused labels being returned to the label room can be scanned back

into inventory.

"Labels are a critical part of our business and shortages can cause a real headache, especially with the turnaround times of those labels. Equally frustrating are excessive inventory levels of labels, which compete against our working capital requirements. TIM has provided the perfect answer, with cost benefits and efficiencies that now finally align our label inventory to our sales without any out of stock occurrences," Mal concluded.

For more information about anything contained in this article, please contact Craig Perring on 0439 661 368 or send an email to craig.perring@ngina.com.au.



Local and Global Appetite for Automation

by Malcolm Calder, President of NGINA and Marketing Manager of Transplant Systems Pty Ltd

In recent years we have seen a steady upward trend within the production nursery world to explore tangible and workable ways for businesses to automate their growing processes. The two areas that are driving this are high cost of labour and the need for consistent finished product quality outcomes.

Nurseries and growers can engage automation at all levels of the production process. Return on investment (ROI) becomes paramount when purchasing machinery, which means our role as suppliers is dependent on clear consultation and is at the core of what we offer. It's up to us to help identify a machine operation match to the outcomes needed.

In this unprecedented time people are spending increased time in their homes and wanting to create a plant-based atmosphere. They want to grow it, admire it, eat it and enjoy the process. Everything from indoor plants and vegetable seedlings to potted fruit trees and ornamentals are in high demand.

In Australia and New Zealand this trend is creating a new level of production pressure on nurseries. This in turn has prompted an increased interest in automation and how that could work in a plant production environment. Is this behaviour being replicated globally?

Jack Ford, Sales Manager at Agrinomix in Oberlin, Ohio, says, "What we have seen in the 'woody' side of our business is most projects revolve around material handling as most nursery operations struggle to find labourers that are willing to do that type of work. So, growers are looking for ways to do functions where there is no human touch or bringing the work up to waist level so that workers do not have to bend over."

"While sales of potting machines have been steady, we see broader interests in conveyor systems, buffer tables and fork systems. All items we struggled with selling in the past but are an easy sale today.



TTA Vision Transplanter

On the more advanced side, we see nursery growers getting serious about using grading systems to ensure consistent quality from starter plants to finished. Labour rates keep going up, and there are fewer and fewer labourers."

Geert Maris, General Sales Manager at TTA BV in the Netherlands has a similar viewpoint, with growers struggling to find suitable labourers to keep up with the demand for plantlife, "What we are seeing is a trend towards data driven greenhouses for production of plants. This includes a scan management process that tracks plant movement and growth outcomes.

People have better control of their systems and it gives a new level of information that can be used to improve even more of the plant growing platform. This in turn saves a lot of labour cost. An example is a combination of sorting, grading and transplanting seedlings. The customers have the ability to do so much with the same machine now. The TTA Flexsorter provides the ability to transplant with vision selection, grading plants with multiple classifications, spacing and set them a bit wider apart and then packing into larger



containers. Plants grow, for example, 50% in the tray in the greenhouse then prior to despatch 50% having been transplanted into a larger cell.”

“Another trend is a machine that can actually mix different coloured plants into a single pot. So, as you can see there is becoming a lot more choice on using specific automation. The data generated by the machines can improve operational efficiencies.”

“During the COVID crisis a lot of growers are shocked because they cannot gain access to the labour needed in normal conditions. Being unable to calculate labour numbers has meant that we are seeing the best year in history at TTA for automation. Growers can accurately calculate growing cycles for small runs and large runs for herbs, forestry, bedding plants, potted colour and more.”

The continuing trend into containerised controlled growing has also seen consistently good results. In Australia and New Zealand, we have been privileged to be a contributor in injection moulded tray design, which is important for seeding line operation and bench space economics per plant mass in the nursery. The tray cell design is critical in the successful growing of a healthy plant with attention given to root development over a wide variety of species. A good example is in the forest sector where attention given during the early stages of growing determines the quality of the seedling being planted in the ground. Without a healthy root-system the tree will not perform, and this directly affects the profitability of the nursery.

When we look at a Transplant Systems TS45 cell tray most observers would not recognise the amount of careful time and effort put into the cell design to enable a specific, consistent seedling outcome.

This is major component in the automation process when growing from seed or cuttings.

We believe automation will continue to play a key role in plant production throughout the world. As demand increases, so too does the need for efficiency in production. We look forward, along with a number of key companies here in Australia, to offering and supplying, our industry with operational solutions to help them grow.



KG Systems' rolling benches



Forestry tray

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Welcome to Our New Members

Warren Downes Downes Wholesale Nursery



Address: 111 Stanhope Road, Theresa Park, NSW 2570

Phone: 02 4651 0999

Business email: info@downesnursery.com.au

Nursery size: 80 acres (over two locations)

Number of staff: 80+

Website: downesnursery.com.au

Facebook: @downesnursery

Instagram: @downesnursery



“Downes Wholesale Nursery was established in 1984 by Russell Downes on a five-acre property located in Rossmore, NSW. It did not take long for the nursery to quickly double in size, resulting in Russell purchasing the adjacent land. With the business expanding rapidly, in 1989, Russell’s sons, Warren and Graeme, decided to join the team.

With more family involvement, the business continued to grow over the next decade and a further two properties were acquired to expand the nursery further. A 20-acre parcel of land at Werombi and a further 10 acres at Tuckombil in the Northern Rivers region of NSW were now a part of Downes Wholesale Nursery.

In 2005, the family took a leap amidst some difficult times and sold the original Rossmore and Werombi properties to allow them to purchase a massive 145-acre lot at Theresa Park. This spectacular location came with over one kilometre of Nepean River frontage and a huge water licence. They moved over 150,000 cubic meters of earth and built a four-acre shade house, propagation facilities, racks for over 15,000 mature trees and lots more.

Fast forward to 2020 and Downes Wholesale Nursery currently employs over 80 staff members and stocks more than one million plants across their two nursery locations. They specialise in growing a wide range of plants, from tubestock to 400-litre trees, to supply commercial landscapers and infrastructure projects.

The Northern Rivers property is led by Peter Baron. Peter has been a founding staff member since the early years. The location of the property is in a superb growing region for plants, offering a year-round supply of many different species. A large number of stock is grown in this nursery, which helps to fulfil Downes Wholesale Nursery’s many commercial and private orders.

Warren Downes is the Chairperson of the Landscape Suppliers Group, which is a subgroup of NGINA with representatives from all the major nurseries in NSW. They meet regularly to discuss and collaborate on items that are unique to larger wholesale nurseries.

Today, Downes Wholesale Nursery still remains a family-owned business with the boys actively involved in the management and daily running of the nursery. The Downes family created a nursery and a working team that they are all extremely proud of.”



Emily Isaacs The Rusty Garden



Address: 12 Orange Road, Fountaindale, NSW 2258

Phone: 0452 191 844

Business email: hello@therustygarden.com.au

Website: therustygarden.com.au

Facebook: therustygardenau

Instagram: therustygardenau

“Prior to having children I worked in major construction for 15 years, 10 of these as an apprentice electrician. This meant long hours travelling to far flung sites, constant overtime and weekend work. But when pregnant with my first child and working on a site with a two-kilometre walk to the only female toilet, I knew it was time to call it a day. I spent some time bumming around doing odd jobs, riding horses and doing some work for people, but I wanted something more

permanent and with local work hard to come by I thought I would do my own thing.

I don't like to be unoccupied and one of the few things to make my skin crawl is waste. We have about half an acre of garden, which keeps me sane. I love growing my own cut flowers, like roses, hydrangeas and dahlias, but then I have a fairly good citrus grove where we grow a few varieties.

My husband has been in sheet metal for over 25 years and he was always bringing home odds and ends made out of metal, random items like dogs and pigs. And then, when he thought we should make our own pergola to go over our water tanks, I immediately thought 'steel art', people will love this.

I have a good friend who is an illustrator, so we utilised her talent to get us started. She has since moved to the UK and is doing other things now but we work with about four different artists to give us the style and speed that we are looking for.

I look after the day-to-day running of the business, from packing orders, assembly and timber work to invoicing, administration and concepting new designs. Some designs have been requests from customers where we discount the design fee with their agreement that we reuse/resell the design (we've acquired a lot of our dogs this way). Other designs have come via brainstorming with our artists or simple things from around the home. Our tree firepit and bench seats are based on a large Port Jackson fig I have in



Emily at Sydney Trade Day, October 2020



Our Port Jackson fig in our backyard, the inspiration behind our tree fire pit and bench seats

the backyard. After events, at the end of the day, we make notes on what people have been asking for. Some requests are pretty weird and wonderful, e.g., once when I was in Mudgee I was asked if I had any fish! If requests come up again and again, we will look at creating a new design.

We want our products to reflect a certain taste and style, they're certainly not based on what is currently on trend. The core material in our products is corten (a group of steel alloys that were developed to eliminate the need for painting and form a stable rust-like appearance after several years' exposure to weather) which means our designs will remain classically beautiful for many, many years to come.

Our core customer base strongly reflects where we've been selling to date—as we've mostly attended field days and garden festivals, we have a large customer base of older women who generate a large demand for our animals. Our firepits and bench seats, however, are very popular with men, who often give them the weight test! We have also found that due to an increase in brand awareness, thanks to Google, we are getting younger families purchasing our products.

Starting the business with young children underfoot has been hard. I remember the first few events we attended we had to drag our young daughter along with us as she was still feeding. One such event was held in a paddock typically used for sheep and our daughter spent the entire time crawling through and eating sheep poo! Trying to create that work life balance is also hard, particularly when our business is based at home.

I would like to expand the business to include more garden products. Whether structural or decorative or a bit of both. This could mean support for weeping roses but with a decorative aspect for those winter months when they can look quite ordinary. There is also a point where a physical shopfront could exist. This would be combined with another aspect though, be it a garden café with capabilities of hosting events, etc.

I'll round off now with a fun fact about The Rusty Garden. We won a second-place exhibitor award at the Sydney Royal Easter Show 2019. We beat the previous year's winner, RM Williams, and lost to Sydney Metro—both of which had huge marketing companies working for them. There I was with cardboard cut outs of straw bales, planning every square centimetre of working space to exhibit and store as many products as possible. I have my second-place sash on display in the outside loo!"



The Rusty Garden received a silver Commercial Exhibitor Award at the Sydney Royal Easter Show 2019, beating 2018 winners RM Williams and just losing out to Sydney Metro who received gold



The Rusty Garden's 'tree fire pit' that was inspired by their Port Jackson fig



NGINA Board Insights

by Samantha Birkwood, Director of NGINA and Owner of Bamboo World

In this edition of *N&G News* we are pulling back the curtains to give you an insight into happenings at Board level. Moving forward this will become a regular feature in NGINA's industry magazine.

Who makes up the Board? The Board comprises a diverse group of industry people who are all passionate about the direction of the industry body. Board members may have a background in retail, wholesale or even allied supplies. Consideration is also given to their experience outside of the industry to ensure a diverse range of skills and experience.

When? The Board meets a minimum of six times a year in the board room at NGINA HQ, Kenthurst.

How many people sit on the Board? The Board comprises seven elected members and up to three appointed members, all headed up by the President. Members of the Board are referred to as directors and take up their positions following their election at an AGM. They hold office for a minimum of one term—which is two years (up to a maximum of 12 consecutive years). The President is limited to a maximum of two consecutive terms (so a total of four years). Each Board director is assigned a portfolio, which is typically an area of responsibility where they might oversee a sub-committee.

Typical discussions? Topics and typical discussions include the general business of NGINA and the office (as reported by the CEO), financials, investments, operations, corporate governance, events, safety and training, engagement for members, marketing and more.

For each meeting the directors all provide a report that contains vital information and observations about the economy and the greenlife industry, which is something the Board thought would be a good idea to share with *N&G News*' readership.

OVERVIEW OF BUSINESS CONDITIONS

The 2020 Federal Budget will inject more funding into the agricultural sector. The government will invest \$328 million to grow the nation's food and fibre exports as part of the

2020 Budget. Minister for Agriculture, David Littleproud, says it is part of the Economic Recovery Plan, aimed at driving jobs and economic growth, cementing agriculture's role in the nation's COVID-19 recovery. The Australian agriculture industry is aiming to become a \$100 billion industry by 2030, from \$61 billion currently.

The nursery and garden industry in NSW and ACT is in a fairly healthy place having had a number of robust months of stock volume throughout. Because of increased sales volume through the channels, available stock in the region has decreased, thus putting pressure on growers to fast pace production and potentially release plants earlier resulting in younger stock in the market. The ongoing stock shortage is expected to continue for some months.

However, on the downside, the field grower sector and our production nursery members supplying that sector are starting to feel the pinch when it comes to staffing—from full-time to part-time, casual and holiday workers. The COVID-19 pandemic has severely impacted the seasonal agricultural workforce, posing major challenges for the 2020–21 summer harvest. Mr Littleproud says through the Budget, the Australian government is investing \$17.4 million in relocation assistance and \$16.3 million to incentivise young Australians to take up farm work by temporarily changing Youth Allowance (for students) and ABSTUDY independence eligibility criteria. (Source: [freshplaza.com](https://www.freshplaza.com).)

The above again prompts us to structure NGINA's position in promoting our industry to young people. Skill shortage especially in production nursery competence is a growing issue. How we lead and/or be a strong part of the careers and vocations offerings at every level will be critical.

Consumer spending 'horsepower' is a key indicator in our industry and it leads through to retail spending. It's still a strong fact that households inside and outside COVID lockdowns have demonstrated a need to live in a more plant present atmosphere and the industry seems to be in a position to continue high levels of stock demand. Retail,



large box, landscape, field growers and forestry will *hopefully* remain steady and strong. We also hope and trust that, as food prices have increased because field growers could not harvest their total crops through lack of labour, that this will be fixed for next season's harvest.

CONSUMER SENTIMENT

There is a sense of optimism in our industry with increased consumer demand for edibles and indoor plants to green the home. The average Australian wants to create their own sanctuary and screen out thy neighbour. And in our industry's favour, gardening and garden centres have featured strongly as an avenue to help with mental health especially during this pandemic, and allowed to continue to trade when other industries were shut down.

Sales during both August and September across the region are reported strong above budget and materially above last year (some nurseries reported that increase ranged from 25–45% up on last year). Sales in regional areas continue to be very strong (also trending at 30–50% up on last year). Overseas information indicates that there will be ongoing interest in gardening through most demographics, for at least the next two years.

While consumer sentiment for gardening is generally still very good we as an industry need to look at how we collectively engage and retain the new gardeners that have entered into gardening, some for the first time in their lives.

SPECIFIC ISSUES FOR DISCUSSION

The Investment Committee has been in regular talks with

our investment fund manager, JB Were, and has as you know taken a conservative protective approach with the investment. This is reflected in JB Were's advice that there are some real unknowns in what the local and global stock, equities and property market will do in the next 24 months.

1. Definition of a nursery—feedback was sought from members
2. Carbon is reportedly (re-) becoming a hot topic at national and state level
3. Staffing:
 - Staff shortages reported across the industry
 - Reduction in available casual staff felt by wholesale and retail nurseries
 - Online training courses are going to be established
 - NGINA forming relationships with Apprenticeship Support Australia to help members employ an apprentice and provide information on the various benefits and incentives available
 - NGINA also formed relationship with Sidekicker—a labour hire firm to help with staffing shortages
4. Plant Sure (gardeningresponsibly.org.au) an initiative to 'garden responsibly'
5. Healthy and safety—a full Sydney Trade Day WHS review was conducted by an external consultant and NGINA will make improvements to its safety management plan.



Phosphorus Sensitive Crops

Most Proteaceae plants originate in the southern hemisphere and have unique soil and nutritional requirements. They generally prefer well drained soils, are intolerant of frosts and are sensitive to moderate phosphorus (P) levels in the soil. As always, broad generalisations are not accurate for every species and variations between individuals (especially with seed grown stock) can be considerable.

For example, *P. grandiceps*, *P. repens* and *Telopea speciosissima* are frost tolerant; *P. grandiceps*, *P. exima*, *P. repens*, and *Leucodendron saligna* are relatively phosphorus tolerant.

In addition, the effects of some environmental conditions can be interrelated. For example, at two locations with the same phosphorus levels, the crop may perform quite differently due to influences of other factors. There are many relationships that will be discussed in this bulletin.

ICL has completed many studies in Australia that have broadened our understanding of the nutrition of Proteaceae species, including phosphorus sensitive Australian native plants. The following comments and recommendations are based on the results of these studies, literature reviews and experience.

Some major factors that can affect the success of Proteaceae production are shown in Table 1 and are discussed in further detail below

Table 1. Some factors that may affect the success of Proteaceae production.

Factors	Influences
A) Phosphorus toxicity	Total P in soil, soil pH, available Fe and Al, development of proteoid root clusters, nutrition
B) Root pathogens (e.g. phytophthora)	Soil drainage, soil pH, nutrition (general health and vigour)
C) Foliar disease	Planting density, pruning, nutrition
D) Other nutritional disorders	Nutrition, soil type, soil pH

A) Phosphorus Toxicity

In plants, phosphorus is used within cell membranes (phospholipids) and is critical for the transfer of energy (ATP) in the photosynthetic process. Phosphorus can therefore be a relatively mobile nutrient within the plant. Even P sensitive Proteaceae species require some available P for these essential plant functions.

Phosphorous toxicity is usually first seen as iron deficiency in new leaves with its characteristic interveinal yellowing, the veins remaining green. This is followed in the older leaves first by the leaf margins discolouring brown, black or grey taking on a 'burned' appearance and eventually dropping. Severe toxicity results in new growth yellowing and dying.

Phosphorus deficiency is also known in inert potting media or light sandy soils. Under P deficiency, leaves can initially turn darker green, followed by reddening of older leaves (Figure 2). An overall lack of vigour, thinner stem diameter, smaller leaf size and poor branching can also result.

Experiments with Proteaceae species culminated in the formulation of Osmocote Pro Low P 16-1.3-13.3+1.8Mg+TE (8-9 or 12-14 months) for optimal growth of P sensitive plants.

i) Influences on P Availability in Soils and Media

There are several factors that profoundly influence the solubility and availability of P to plants. There are also several test methods used to determine P availability in soils, each having different critical values. This should be remembered when interpreting soil test results and especially when trying to compare results from different test methods.

The soil type, its pH and clay content have a large influence on P availability. Phosphates can be immobilised in soils by microbes using the P or by adsorption of P with iron and aluminium oxides. Adsorption predominantly occurs in very low pH (acidic) clay soils. In high pH (alkaline) calcareous soils, calcium forms insoluble compounds with phosphorus, which reduces its availability to plants. While important in field soils, these reactions are typically unimportant in potting media because of the absence of clay, moderate pH and low levels of calcium carbonate.

When plants are grown in field soils, the risk of P toxicity may be marginally reduced by maintaining a low soil pH (e.g. 5.0-5.5). Low pH increases iron availability to the plant and can also reduce P solubility. The addition of iron sulphate to soils high in P may help to lower pH (depending on the rate applied and soil buffering capacity) to 'tie up' available P and increase Fe availability to the plant.

If plants are already exhibiting P toxicity symptoms, a foliar application of Micromax Iron or Micromax TE-mix may help (dilute in water to 0.5 g/L prior to application).

The generalised statement that Proteaceae prefer acid soils is likely due to the above.

ii) The Proteoid Root Cluster

Why is P toxicity such a problem with many plants from the Proteaceae family? The root systems of Proteaceae plants have highly specialised cluster roots that exude acids, dissolving mineral phosphates in the soil. Cluster roots have a high surface area that allows the plant to efficiently absorb the solubilised P.

Some Proteaceae plants appear to suppress cluster root development when P is readily available. This has commercial implications. For example, if cuttings or seedlings are grown initially in media containing some available P, few root clusters are produced. This means that when this plant is potted on or field planted into soils containing moderate P, phosphorus toxicity is less likely to result. This is a generalisation that is true of most Proteaceae. However, some very sensitive cultivars may not reduce cluster root development in the presence of P.

Propagation and CNS production using zero phosphorus fertilisers may inadvertently exacerbate the problem of P toxicity at plant out. Check with your propagator as to their practice and check your planting stock for the predominance of proteoid root clusters, recognisable as a 'starburst' of roots usually 1-2cm across on the outside of the rootball after the pot is removed (Figure 1).



Figure 1. Proteoid root clusters have an extremely high surface area that allows the plant to efficiently absorb P.

B) Pathogens

The greatest influence on the prevalence of soil borne pathogens is the ability of the soil to drain. Standing water or high soil moisture levels provide an ideal environment for the proliferation (water borne spore dispersal) of root fungi.

The general health and vigour of the plant is also important. You may notice that plants are often lost to root disease when the plant was looking poor already. Correct nutrition will help to ensure a healthy and vigorous crop better able to defend itself from and cope with root pathogens.

Banrot® 400WP and 80G are broad spectrum soil fungicides for the control of root and stem rot soil pathogens. They control Pythium, Phytophthora, Rhizoctonia and Chalara. Banrot 400WP is applied as a soil drench. Banrot 80G can be incorporated or top-dressed. They give long residual activity as a curative or preventative fungicide.

C) Foliar Disease Incidence

Open well-spaced bushes will encourage good air flow through the foliage. This will help foliage dry out faster in the mornings, creating an environment less conducive to fungal and bacterial reproduction and growth.

Adequate levels of all essential nutrients will encourage healthy leaf and stem growth that is less susceptible to invasion by pathogens. Nutrient deficiencies weaken cell walls and membranes, which markedly increases susceptibility to pests and diseases.

D) Other Nutritional Disorders

In trying to determine what may have caused a leaf symptom, it can be useful to note whether the old or new leaves are affected first.

If the older leaves are affected first there are two possibilities-

- a deficiency symptom of a mobile element as the plant translocates nutrients from the older foliage to supply to the new foliage (Figure 2), or
- toxicity of an immobile element due to excessive accumulation.



Figure 2. Typical P deficiency symptoms in *Melaleuca decussata* showing reddening of older leaves while new growth appears normal.



Figure 3. Symptoms of either Fe deficiency or P toxicity on *Banksia* sp., displaying severe chlorosis of young leaves while older leaves appear unaffected.

If the symptoms appear on the new leaves first, again there are two possibilities-

- a deficiency of an immobile element or
- a toxicity of a mobile element.

Fertiliser Recommendations

For in ground production, a comprehensive soil analysis is an essential prerequisite to guide management decisions and to fine tune fertiliser applications. The soil analysis will allow accurate adjustments to be made prior to planting or during annual fertiliser applications. It will dictate what liming material should be used (if any) but dolomite should be favoured as it contributes magnesium as well as calcium.

A water analysis will also provide useful information as regular irrigation of hard, very soft or saline water may affect soil chemistry and soil physical properties. Water analysis is also beneficial when growing plants in soilless growing media.

When the basic soil properties such as sufficient drainage, low salinity levels and pH are within a suitable range, the use of Osmocote controlled release fertiliser will provide excellent results. Osmocote Low P can be used exclusively or supplemented with either Peters or Universol as a regular liquid feed throughout the growing season. Fertigation adds complexity but may be helpful if you need to vary nutrient availability or adjust the nitrogen and potassium supply at different growth stages.

A) Field Plant Out

Apply Osmocote Pro Low P 16-1.3-13.3+1.8Mg +TE in the planting hole and to the side of the root-ball. Typical practice is to place Osmocote to the side or base of the hole away from the root ball. A layer of soil should be placed between the fertiliser and the root ball. The lower application rate is suitable when planting into relatively fertile soils and the higher rate for sites with lower fertility.

Typical Rates are:

- 150mm (6") pot, 30 - 50 grams per plant.
- 50mm (2") tube, 10 - 20 grams per plant.

Fertigation

Vigorously growing plants may benefit from additional liquid feeding with Peters or Universol. The above Osmocote Pro rates are generally adequate if there is no liquid feed capability.

Peters CalMag Grower (15-2.2-12.4 +5Ca +1.8Mg +TE) or Universol White (15-0-15.8 +6.4Ca +1.2Mg +TE), both low in P, can be applied once per fortnight after dilution in water to 0.7 g/L.

B) Mature Crop Fertilisation

At the start of each growth season, an application of Osmocote Pro 16-1.3-13.3+1.8Mg +TE will encourage good, sturdy growth, producing a more branched (and therefore more flowers) bush without resulting in soft growth associated with high nitrogen granular feeds (e.g. urea).

Typically, 10-20 g of Osmocote Pro Low P can be applied per 30cm of plant height, distributed equally around the drip-line of the plant.

Fertigation

1) Vegetative growth phase

If additional nutrition is required, Osmocote Pro Low P can be supplemented with a liquid feed in a fertigation system. The following can be applied from the beginning of the growth season up until 4 weeks prior to bud set:

- Peters CalMag Grower (15-2.2-12.4 +5Ca +1.8Mg +TE) or Universol White (15-0-15.8 +6.4Ca +1.2Mg +TE) at 1 g/L once per fortnight.

2) Flowering Period

From four weeks prior to bud set throughout the flowering period the following can be applied to encourage strong stems and good flower colour:

- Peters CalMag Finisher (13-2.2-16.6 +5Ca +1.2Mg +TE) or Universol White (15-0-15.8 +6.4Ca +1.2Mg +TE) at 1 g/L once per fortnight.

Phosphorus Sensitive Crops

C) Potted Crops

To an open well drained media that has been pH adjusted to 5.5-6.0 apply:

- Osmocote Pro Low P 16-1.3-13.3+1.8Mg +TE, 8-9M at 4-6 kg/m³ or 12-14M at 5-7 kg/m³. More vigorous species will benefit from the higher application rate and less vigorous plants the lower rate;
- Micromax Premium: 500-750 g/m³;
- Osmoform 38N: 0.5 kg/m³;
- Hydraflo 2 (Granular Soil Wetting Agent) at 1.5 kg/m³.

The recommended rate of Osmocote Pro Low P should be sufficient for most species. However, if additional nutrients are required, Peters CalMag Grower (15-2.2-12.4 +5Ca +1.8Mg +TE) or Universol White (15-0-15.8 +6.4Ca +1.2Mg +TE) can be diluted to 0.75 g/L in water and applied through fertigation or as a drench as required.

D) Propagation

A higher strike rate and subsequent potted growth can be achieved by selecting cuttings from mother stock that has received good nutrition. (See mature crop fertilisation (B) above).

By applying some phosphorus during propagation, the cuttings are discouraged from producing proteoid root clusters. When planted into the potting mix described in potted crops (C) above the plants should grow away with minimal check and produce a better plant for field plant out success.

Seedlings appear to be more sensitive to phosphorus inputs than cutting material, possibly due to the phosphorus content of the seed itself.

Propagation Nutrition

To a pH adjusted (5.2-5.6) propagation mix incorporate the following:

- Osmocote Exact Mini (5-6 M) (15-3.9-9.1+1.2Mg+TE) at 1-2 kg/m³;
- Micromax Premium: 300-500 g/m³;
- Coarse Gypsum: 0.3 g/m³ (calcium supply to cuttings and seedlings is crucial).

Liquid feeding can begin after root growth has initiated or when an initial growth response is seen in the cutting tops. Peters CalMag Grower (15-2.2-12.4 +5Ca +1.8Mg +TE) can be diluted with water to 0.3 g/l and applied once per week. For seedlings the application frequency can be reduced to once per fortnight.

E) Tube Production

Following the above propagation sequence the rooted cutting or seedlings can be tubed into an open well drained mix with a pH of 5.2 - 5.6 containing the following additions:

- Osmocote Pro Low P 12-14M (16-1.3-13.3+1.8Mg +TE) at 4-5 kg/m³;
- Micromax Premium at 300-500 g/m³;
- Coarse Gypsum at 0.5 kg/m³.

Liquid Feed

- Peters CalMag Grower (15-2.2-12.4 +5Ca +1.8Mg +TE) @ 0.5 g/L once per fortnight if required.

As some Proteaceae species have unique requirements we recommend that you trial before making any changes to your current fertiliser practice.



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