Australian Bananas



ISSUE 68 | AUGUST 2023

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Instore education PAGES 12-14

Embracing insects on farm PAGE 20-21

Social snaps at Congress
PAGE 43-45



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FROM THE CEO

Leanne Erakovic



In this industry, a few months can go by in the blink of an eye.

So much has happened since I wrote this column for

the April edition of Australian Bananas, and yet I know many of you will be grappling with the fact that our challenges remain unchanged. There have been periods of some relief in price and some fantastic opportunities to get together as industry, through Banana Congress and local shows. But still, costs are rising. Returns are diminishing. Workforce issues are ongoing. As your peak industry body, ABGC will continue to work, with you and on your behalf, to ensure growers get a chance at a better future.

Biosecurity

ABGC continues to advocate for growers on the new Biosecurity Protection Levy, which is due to come into place in less than 12 months (1 July, 2024).

At a meeting with Federal Agriculture Minister Murray Watt, ABGC told the Minister that any new biosecurity levy would essentially be slugging banana growers twice, as they already contribute money to fund banana specific biosecurity activities. Yes, biosecurity is a shared responsibility and everyone should fairly contribute. But the ABGC firmly believes we already do, and many growers are at breaking point when it comes to making ends meet.

We have also expressed disappointment over the Government's closure of the Cape York Biosecurity Centre, and the lack of prior consultation with the banana industry.

Membership and new website

In more positive news, I'm pleased to share that the ABGC has created a specialised role dedicated to getting better outcomes for members. While the position is new to the ABGC, it is the result of a strategic restructure, rather than an additional role. The organisation no longer has an Executive Officer, with the Stakeholder and Engagement Manager position created instead. This was done after careful consideration of efficiencies, both for the ABGC as an organisation and for our members, through providing better services and improved return on investment.

Kathryn Dryden, who has spent almost three years as part of our BMP team, has been appointed Stakeholder Engagement and Advocacy Manager after a rigorous, external recruitment process. Kathryn will be working alongside me on improving the value of ABGC membership for growers. You can read more about her role on Page 8 of this magazine.

If you're already an ABGC member, you've hopefully had a chance to check out our revamped website and access the Members' Portal. You can expect more in this space very soon, but currently you can find Transport Figures, the Weekly Wholesale Market Price Report, a weekly price review of supermarkets and a Cost of Production spreadsheet. Please get in touch at any time with your ideas and suggestions for ABGC membership via members@abgc.org.au

Cost of Production

I was interested, though sadly not surprised, to read the results of a recent international survey by the Global Coalition of Fresh Produce on the rising costs of fruit and vegetable production. The short story? Producers everywhere are feeling immense pressure. Almost 60 per cent of the global industry report selling at a loss or breaking even, with the majority claiming price is not keeping pace with high production and operating costs. I've no doubt this will sound all too familiar for many of you.

We've recently asked our members to be part of an informal Cost of Production survey to help inform our advocacy. In addition, you can read about the new banana industry benchmarking project on page 16, which will provide valuable, accurate information for our industry going forward (and provide plenty of useful data for businesses that participate).

I'd also encourage you to take a look at pages 12-14, which detail the latest results from the in store education and merchandising project. Anecdotally, we're hearing that it's having a real impact on the way bananas are sold. It's a long game, but it really has the potential to positively drive sales.

On the ground

Thank you to all those who've taken the time to say hello in person over the past few months, and for sharing your thoughts and ideas. From Congress to the Tully Show, and a few trips in between, your time has been greatly appreciated. I'm looking forward to seeing some New South Wales growers at the Roadshows later this year.

Years ending 30th June (in '000 tonnes):

341

371

371

Get in touch: ceo@abgc.org.au

2013

2014

2015

ANNUAL BANANA VOLUMES

The national banana levy collected by the Federal Department of Agriculture is compulsory for commercial banana growers. It is 2.19 cents per kilogram of bananas sold.

The dollars collected show an estimate of production for the previous financial year. Right is a table of the levy-based banana volumes. For non-industry participants, please note this is an approximation of production, but not all bananas grown are sold, i.e. some don't make the retailer-required specifications.

Also, there is a lag factor, in that levies paid on June sales (at least) are paid in the following financial year. Exemptions from paying the levy and other details are to be found at agriculture.gov.au/ag-farm-food/levies/rates/bananas

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The make-up and purpose of the various components of the Banana Industry Levy are as follows. **Levy Amount Purpose**

0.50c /kg Plant Health Australia (PHA) levy: The Department sends the funds to PHA, for the ongoing containment and management of Panama Tropical Race 4 disease, and to conduct activities that aim to improve biosecurity within the banana

1.69c /kg Hort Innovation (HIA) levy. The Department sends the funds to HIA for R&D and Marketing: 0.54 c/Kg is for Banana R&D, which is matched dollar for dollar by the Department and 1.15 c/kg for Banana Marketing

Total = 2.19c /kg* (32.85c per 15kg carton).

uction, but not all bananas grown are	2016	393
action, but not an bunding grown are	2017	414
ollowing financial year. Exemptions from	2018	388
	2019	372
	2020	382
	2021	403
	2022	375
	2023	317
e Banana PHA levy currently funds the containment of	the first TR4 infested fa	arm that the

The Banana PHA levy currently funds the containment of the first TR4 infested farm that the industry purchased and the industry's part of the cost-sharing deed with the Queensland Department of Agriculture and Fisheries for TR4 containment.

It also funds the pre-existing commitments — Torres Straight Exotic Fruit Flies Eradication

Response, PHA membership/meetings and Government levy collection.

Further information: Leanne Erakovic, leanne@abgc.org.au

Phone – 07 3278 4786. More info on the levy rate:
https://www.agriculture.gov.au/ag-farm-food/levies/rates/bananas

FROM THE CHAIR

Leon Collins



In my first column as ABGC Chair. I'd like to start by thanking all those who have openly

welcomed me to this new role.

Knowing the challenges this position will no doubt bring forth; your support is greatly appreciated.

After more than five years as Deputy Chair, I was happy to take over the reins from our exiting Chair Stephen Lowe, even though he left big shoes to fill. (He hasn't gone too far though, stepping into the Deputy Chair role).

Stephen leaves a legacy of strong leadership as Chair - spanning more than six years - including steering industry through some unprecedented challenges. Some of these continue today, including rising costs of production, the slow but sure spread of Panama TR4 and on-going regulatory changes. On top of this, his tenure saw a world-wide pandemic, growers impacted by natural disasters and consecutive years of low prices.

Stephen played an integral role in advocating for industry during the development and introduction of new Reef Regulations, ensuring the new legislative framework was as practical as possible and relevant to industry. As growers, we all want to protect our natural environment, including the Great Barrier Reef, but regulations also need to be workable, which I think Stephen helped to achieve. As challenging as the Chair role is, I'm looking

forward to giving back to industry and tackling some of our big issues, which right now include reduced margins and reduced incomes. At the time of writing this report, we may have recently experienced a bit of price relief, but whether this continues, or improves further, remains to be seen.

I am confident, however, that with a strong Board of Directors, and with the support of the wider industry, we can continue to strive towards a more profitable and sustainable future.

TR4 Transition

One of our biggest on-going issues continues to be the spread of TR4. On June 30, industry officially took over management of this disease from government; a transition more than two years in the making.

Developing a framework for the transition was not without its challenges, but I am confident as an industry we have the foundations from the previously successful Panama TR4 Program, and the commitment of growers, to lead a very strong control and containment program into the future.

Importantly, if you haven't already received an 'informed consent' form in the mail, you will do so very soon. It's crucial that all growers read, sign and return this consent form to ensure surveillance crews can continue their important surveillance activities under the new ABGC-run Program.

Instore merchandising campaign

I would encourage all growers to read Pages 12-14, where Supply Chain Engagement Manager Andrew Burns provides an update on the banana in-store education and merchandising program underway in Coles and Woolworths stores nationally.

The program is funded by Banana Marketing and R&D levies and is aimed at improving the quality of bananas instore and increasing demand through improved availability. It includes educating store staff on best practice merchandising and handling of bananas, with a team from Strikeforce reviewing banana displays around Australia each week.

This program is already showing some great results and will also provide some important learnings that will result in end-of-project recommendations.

Congress

Another successful Congress was held in May, despite challenging economic times. I'd like to thank all those growers, supply chain and other industry stakeholders who supported our 2023 event.

I, myself have never missed a Congress and I see it as a great opportunity to not only enjoy a few days away from farm, but to reconnect with friends and colleagues in a relaxed and fun environment.

The past year has been a particularly tough one, not only for growers but families and businesses Australia-wide. So, I think it is important to give a special thanks to the sponsors and exhibitors who supported Congress to help ensure it was a successful event. Without their contributions, Congress simply would not exist.

A special shout-out also to our Congress Management Committee and Congress Planning Committee for their dedication to ensuring a great program of events. I know I certainly enjoyed it, and many others did as well.

The ABGC will use feedback from post-Congress surveys to formulate the next event.

Number of Panama TR4 infected plants in Queensland detected to date 2022 207 195 Infected plants detected to date 159. (across eight properties) Surveillance is carried out The Program currently visits on approximately 274 properties 11.576 hectares Infested of banana production land for surveillance property totals infected 2,691 samples plants In In collected since March 2015 detected Data as at 30 June 2023

TR4 RESISTANT GM BANANA BEING ASSESSED BY REGULATORS

A genetically modified variety of Cavendish, developed by the Queensland University of Technology and known as QCAV-4, has been submitted to the Office of the Gene Technology Regulator (OGTR) and Food Standards Australia New Zealand (FSANZ).

OCAV-4 bananas, developed in partnership with government and industry, have been grown in field trials in the Northern Territory for over six years and have proven to be highly resistant to Panama disease TR4.

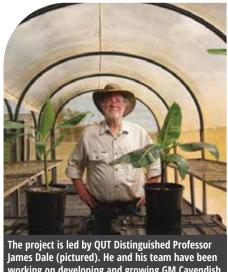
While regulatory approval by the OGTR and FSANZ would support the environmental and food safety of QCAV-4, QUT have advised that there are no plans to grow or sell QCAV-4 bananas to consumers in Australia at this time.

The ABGC represents all banana growers and has always supported any research that could potentially contribute to ensuring a sustainable and robust future for our growers and wider industry.

However, it is important to note that the Australian banana industry is well and truly capable of meeting consumer demands without a GM variety, at this time.



From left to right: A wild banana plant, a Cavendish banana plant, and a QCAV-4 banana



working on developing and growing GM Cavendish bananas for more than 20 years.

SURVEY HIGHLIGHTS GLOBAL COST OF PRODUCTION CONCERN

Almost 60 per cent of the global fresh produce industry are selling at a loss or breaking even.

Preliminary results from a survey conducted by the Global Coalition of Fresh Produce demonstrated that while selling prices have risen to some extent, they had not kept pace with high production and operating costs.

In addition the survey found:

- An unprecedented increase in costs during the COVID-19 pandemic, regardless of the region
- The rise in costs for production and operations has impacted respondents' investments not only in capital and equipment, but also in innovation and expansion
- While producers are often not making ends meet, rising costs are also reflected (in some cases) at the grocery store and consumers are having to make difficult choices about what they purchase

In Australia, respondents unanimously agreed that nearly all production and operating costs had gone up, by 37 per cent on average. The results showed that operators have been unable to command higher prices for various reasons, including a lack of bargaining power with retailers, who are unwilling to pay more and expect growers to increase efficiency.

In addition, for Australia in particular:

- 14 per cent of operators indicated that most sales are made at a loss; 43 per cent are mostly breaking even and 43 per cent are mostly selling at a profit
- A large majority of respondents (83 per cent) agree that rising production and operating costs have impacted their investments, of all types: mostly capital investments, but also investments in equipment, innovation and expansion

The preliminary report is available on the Global Fresh Produce website, with the data to be used to develop a global and national perspective on rising costs of production in North America, Europe, Africa, Oceania and South America.

"We conducted this global survey to shed light on the challenges experienced by the fresh produce supply chain worldwide," Ron Lemaire, Global Coalition of Fresh Produce Chair, said. "The narrative highlighted in this report will help the industry, its partners, and all government levels understand the current impact of the increase in production costs and work together to address them."

SAVE THE DATE FOR A FIELD WALK AT SOUTH JOHNSTONE

Put Friday, 22 September on your calendars!

The National Banana Development & Extension team is planning to host a field walk at the South Johnstone Research Facility.

The field walk will include a walk through the latest Cavendish variety block, where you will be able to see plant crop bunches of lines with some resistance to TR4. There will also be a tour of some non-Cavendish Ladyfinger types for those that are interested.

The latest bunch pest work investigating elements of managing bunch pests with currently registered chemicals and practices will also be shared.

There will also be a suite of other research on display. Stay tuned for more details which will be available in e-bulletins, text messages and via www.betterbananas.com.au.





GROWER SPOTLIGHT: SID SIDHU, WOOLGOOLGA

Varieties: Dwarf Ducasse and Dwarf Lady Finger

How long have you been growing bananas for? Do you have any other crops?

I have been growing for 40 years, 36 of those have been full time on the farm.

In 2005, because of bad prices and buyers steering away from NSW fruit in the Central Market, we decided to jump on the bandwagon and grow blueberries. It was a new learning curve. But over time a few acres of berries became 25 acres.

In 2012, I purchased another farm as the original property was too hard to develop into blueberries, and that's when I decided to try another crop which was very popular in the Woolgoolga area: hydroponic cucumbers. To make my life a little easier, I bought a state-of-the-art multispan greenhouse which was fully controlled by computer, including the fertilizer system. I still remember the day one grower came and said 'you're mad, you spent so much money'. Funny thing is, he followed two years later. The reason I diversified was to guarantee an income from each crop which would cover the bad times.

I also need to thank a special person who really pushed me to go back to bananas. Angelo Tarranto from AV Fresh in Melbourne, who I have known for 36 years and joined LaManna Bananas because of him.

Tell us about the family who work with you on the farm.

My biggest influence is my father. He taught me to grow good, clean fruit. He always said you should 'aim to have the best' and I have kept that with me, always. Even today, at the age of 87, my dad still helps out on the farm. He came to Australia in 1952 when he was just 16 and he's never missed a day on the farm.

It's an honour to have my son follow me as a banana grower and keep the Sidhu name in bananas. I am really proud of the effort he is putting in. I see him working and he has that spark that tells me he will be planting more bananas. Bananas are a part of our blood. I feel so relaxed working bananas compared to blueberries and cucumbers.

What are the biggest challenges facing your business right now?

The biggest challenge we face is high input costs. Fertilizer has been on top of the list, followed by diesel, cartons and chemicals. Labour shortages have hurt us and others. We need more money for our product and we're not getting it.

Why do you believe it's important to be active in the industry?

My dad's friend Ron Gray supported me when I was



Three generations: Sid Sidhu (on the right) with his son and father.

president of Woolgoolga BGA and further pushed me to voice my opinions. Ron played a big part in my involvement in the banana industry and shared his knowledge, which helped me greatly. I have a lot of respect for him and his family as they were a pioneer family in bananas. I feel disappointed that a lot of NSW growers who started banana farming have no recognition for all the hard work they put in to establish the banana industry in Australia. I truly hope the banana industry can reward these growers and provide something for future growers to admire and follow.

What do you see in the future for growers in your area?

The future in the Coffs area looks promising as some of the next generation are going back into bananas, following their fathers. I don't see a big demand to grow Cavendish but more Lady Fingers and Ducasse.

TOP EDUCATION TO SUPPORT DISEASE CONTROL

It's been a huge few months for the **Australian Banana Growers' Council Bunchy** Top team in reaching out to a wide array of banana growers to support its control and containment efforts.

The team not only assists and educates commercial growers, but they also play an important role in educating the broader community.

Bunchy Top is currently contained to Southeast Oueensland and Northern New South Wales, and in many cases commercial farms often border dense residential areas. And with many backyard gardeners keen to have a few banana plants of their own, community education is critical in detecting and destroying infected plants early to prevent further spread.

Bunchy Top Lead Field Officer for Southeast Queensland, Samantha Stringer, appeared on stage at the Queensland Gardening Expo, held on the Sunshine Coast in May. She also spent time educating more than 70 members of the Buderim Garden Club at their monthly meeting in June.

Additional community education events are planned in northern NSW with the team, where possible, looking for more opportunities.

Growers who attended Banana Congress in May also had the chance to catch up with project officer Carena Rose, who manned a booth with FNO Plant Health Inspector Carl Rickson as part of the 'multipest surveillance and grower education' program, funded by Hort Innovation.



Project Officer Carena Rose at Banana Congress





Check out the growing playlist of Bunchy Top video resources, designed for both commercial and backyard growers, by scanning the QR Code:

CHANGE OF CHAIRS AT ABGC

Far North Queensland grower Leon Collins stepped into the role of Chair of the Australian Banana **Growers' Council in late April,** taking over from Stephen Lowe. Mr Lowe had been Chair since December 2016 and has remained on the Council's executive as **Deputy Chair.**

As you may have read in the Chair's column (Page 5), Mr Lowe steered the peak industry body through an unprecedented time for growers. In his six-year tenure, the industry faced rising costs of production, the continued spread of Panama TR4, changing environmental regulations and a worldwide pandemic. Natural disasters and periods of low prices also made their mark.

Despite the challenges, Mr Lowe said there are some real positives for growers moving forward.

"Over the last six years, I've seen banana growers increasingly recognised for their work in the environmental space," he said. "I also think the industry's ongoing response to Panama TR4 has set us up well for the future."

Leon Collins runs one of the largest banana businesses in the country, family-owned since they started growing the fruit in 1971. In addition to



bananas, he farms sugar, cattle and avocados on his properties at Tully and Lakeland. Mr Collins has spearheaded the ABGC's feral pig control strategies in the Tully Valley, resulting in a significant reduction in the pests.

Mr Collins has served on the ABGC's board for more than six years, most recently as Deputy Chair. "You've got to give back to industry, that's what it's all about," he said.

"I know there are some big issues out there right now – reduced margins and reduced income are huge worries these days.

"We've also got Panama disease looming over our heads. Thank goodness for the work that's been done by growers, industry more generally and the Government to contain it to Tully so far."



Tayla Mackay formally joined the ABGC's Board of Directors in late 2022, bringing a

valuable skill set and a strong banana background to the role.

Ms Mackay holds a degree in Business Management (majoring in HR and Marketing) from the University of Queensland. She has worked as a recruitment consultant in Brisbane and has experience working in sales for Mackays Marketing. She is currently the General Manager – Corporate Operations at Mackays Group after spending time as the Business Manager.

In particular, Ms Mackay provides valuable insight into marketing, corporate governance and strategy development.

"I'm enjoying being able to give some time back to an industry that has given me so many opportunities. I'm passionate about bananas in Australia and believe we need a strong industry body to ensure a better future for growers. I'm looking forward to representing and advocating for growers, and being part of a strong, unified voice when it counts." Ms Mackay is part of the renowned Far North

Queensland-based banana farming family of the same name.

MORE FOR MEMBERS THROUGH NEW ABGC ROLE

The Australian Banana Growers' Council has created a new role dedicated to getting better outcomes for banana grower members.

After a rigorous, external recruitment process, Kathryn Dryden has been appointed as the Australian Banana Growers' Council's first Stakeholder Engagement and Advocacy Manager.

Over the past few years, Kathryn has heard firsthand the challenges and frustrations facing banana growers as an Extension Officer with the Banana Best Management Practice team.

She brings that experience to the new role, along with more than 20 years in communications and engagement across a range of sectors including agriculture and the environment.

ABGC CEO Leanne Erakovic said Kathryn has creativity and energy to burn, and will be critical in improving the value of ABGC membership.

"The recruitment process for this position was extensive, but I believe we've found the ideal person to not only add to our membership benefits, but also to better communicate what we are already doing 'behind-the-scenes'.

"We'll be working closely together and I'm delighted Kathryn will be on-the-ground in the major banana production area of Far North Queensland. I'm committed to ensuring our members have information and access to the ABGC and Kathryn will be crucial to that goal going forward."

While the position is new to the ABGC, it is the result of a strategic restructure, rather than an additional role. The organisation no longer has an Executive Officer, with the Stakeholder and Engagement Manager position created instead. This was done after careful consideration of efficiencies, both for the ABGC as an organisation and for our members, through providing better services and improved return on investment. Kathryn officially stepped into the position on 24 July and will bring a listening ear along with her suite of professional skills.



ABGC's new Stakeholder Engagement and Advocacy Manager Kathryn Dryden (left) pictured with ABGC **CEO Leanne Erakovic.**

"It has been a real privilege to spend time with so many growers over the last few years and gain an understanding of the different ways they manage their farms," Kathryn said. "I'm looking forward to continuing these conversations, to hear any concerns or challenges going forward, and to work with my colleagues at the ABGC to try and provide some solutions."

You can contact Kathryn via: kathryn@abgc.org.au

FROM THE PADDOCK TO THE CLOUD

In today's fast-paced world, embracing technology has become essential for industries to thrive, and the Australian banana industry is no exception.

The introduction of digital record keeping has streamlined processes and enhanced compliance management, and one exemplary solution in this domain is the agricultural compliance management app offered by Spades (spadesonline.com.au).

Digital record keeping in agriculture is a gamechanger, allowing banana growers to replace cumbersome paper-based systems with userfriendly, cloud-based solutions. By adopting these modern tools, growers can complete records in the paddock or shed, with access to their information at their fingertips, making data management faster, accurate, and more accessible. The app offered by Spades is at the forefront of this technological shift, providing simple-to-use features with tailored forms and checklists designed to meet the specific needs of individual farm businesses.

Spades will help banana growers prepare for audits and maintain impeccable records organisation. By centralising all critical farm data and records, the app ensures that farmers have easy access to essential information at any given time. This streamlined approach simplifies the audit preparation process, as all necessary documents and data are readily available, eliminating the stress of searching through stacks of paperwork. Additionally, the app's comprehensive features enable farmers to maintain accurate and up-to-date records for food safety, market access, biosecurity, workplace health and safety, government regulations (such as Queensland's Reef Protection Regulations), and more.

This level of organisation not only ensures compliance with industry regulations but also contributes to better decision-making and operational efficiency. As a result, farmers can focus more on the core aspects of their work, reducing stress levels and fostering a healthier work-life balance. With Spades, Australian banana growers can stay ahead of compliance requirements, minimise stress associated with audits, and ultimately, enhance their overall farming experience.

Another benefit of embracing digital record keeping is that it contributes to sustainability efforts within the industry. By efficiently managing resources, minimising waste, and optimizing supply chain logistics, the app offered by Spades promotes ecofriendly practices, reducing the industry's ecological footprint.



NEW IDEAS, NEW TECH FOR NSW NEXTGEN

NSW growers were given an insight into the future of farming as part of a field trip to the Northern Rivers earlier this year, organised by the NSW Department of Primary Industries.

The trip, attended by growers from the Nambucca, Coffs Harbour and Northern Rivers regions, kicked off at a macadamia farm east of Lismore.

The owner of the site, Ross Arnett, is a Macadamia farmer who is passionate about biodiversity and soil health. Ross shared his experiences in improved pastures and orchard floor management with over 10 years of commitment. For Ross, the journey has been successful, with improved resilience to extreme weather, increased biodiversity and a lower cost of production.

Subtropical Horticulture Development Officer Steven Norman, of the NSW DPI, said these conversations are about considering what the future of banana farming will look like.

"We all know the cost of fertiliser is huge. And stable and well-functioning soils are critical. Acknowledging that while macadamia farming is a different beast to the one we know (as banana growers), having someone like Ross share his experience gets us thinking about our game plan to look at different ways to maintain healthy plants and soil."

Drones specialist Scott Fisher was also on-site with his 'flying tractor', outlining — and then demonstrating - the potential benefits of using

drones as a seeder, spray rig or for collecting spatial information.

The field trip concluded at Ian and Lorraine Simpson's Uralba Valley Banana Farm, where it was boots off and new shoes on before heading into the packing shed. Ian and his brother Warren generously shared their farming set-up (which includes on-site ripening facilities) and their business story, from the loyal customer base that's kept them going over the years to the shared challenges facing growers across the board right now.

Woolgoolga grower Michael Singh said the field trip provided an interesting insight into other farming practices.

"At the end of the day, even if we can't implement something on our farm right now, it's nice to be aware of other opportunities and keep an open mind to new ideas," he said.

This trip was organised by Steven Norman as part of the NSW NextGen group. If you're keen to be involved, contact Steven on 0432 680 532. Growers of any age are welcome – you just need to be keen to be part of the future of banana growing in NSW.



HORT'S HUGE VALUE

A new report estimates the Australian horticulture industry will surge by up to 22.5 per cent in combined value by 2030, to reach \$21.8 billion.

Commissioned by Hort Innovation, the **Contribution of Australian horticulture industry report** recognises 25 horticultural growing regions nationally, revealing the current and projected economic contributions of the hort sector (including production and processing) at a state and national level.

Other key findings include:

- For every dollar of value the horticulture industry generates, an additional 27.6 cents is injected into the economy, amounting to \$12.96 billion.
- For every 100 jobs that exist in Australian horticulture, 21 more jobs are created in other sectors such as wholesale trade, retail, transport and construction.

The full report can be viewed on the Hort Innovation website www.horticulture.com.au

NSW ROADSHOWS NEXT MONTH



The NSW mini roadshows are coming to Coffs Harbour on Tuesday 5 September and Murwillumbah on Thursday 7 September.

The agenda for the afternoon events will include; Banana weevil borer management, chemical resistance fundamentals, mite management and an update on variety development activities. Research and extension staff from northern Queensland alongside NSW IDO Steven Norman are looking forward to meeting growers in person to discuss these topics in the context of subtropical banana production. The format of the mini roadshow will

provide opportunities for discussion and sharing of knowledge and experiences on these topics between growers, researchers, and industry stakeholders.

Keep an eye on ABGC e-bulletins, the ABGC Facebook page, the Better Bananas website (www. betterbananas.com.au), and text messages for updates on these events.

Contact: Steven Norman – steven.norman@dpi.nsw.gov.au or 0432 680 532 Tegan Cavallaro – tegan.cavallaro@daf.qld.gov.au or 0459 846 053



BANANA

The mini-roadshow events are part of the National Banana Development and Extension Program (BA19004), which is funded by Hort Innovation, using the banana research and development levy, to-investment from the Queensland Department of Agriculture and Fisheries, New South Wales Department of Primary Industries and contributions from the Australian Government. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.





SILAS AND SLATER A HIT ONLINE

It's hard to know who's got the most star power in this picture: Maroons coach Billy Slater, those delicious-looking bananas or young Silas Lizzio and his big grin.

Turns out the combination of all three was a huge hit online, with an Australian Banana Growers' Council Facebook post featuring the three reaching more than 400 thousand accounts.

It was Silas' second meeting with the long-time banana ambassador, thanks to dad Steve Lizzio, a Mission Beach-based grower.

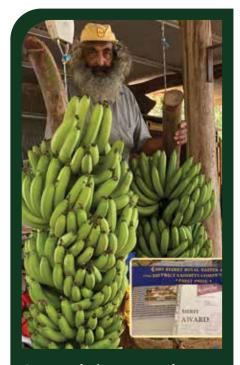
"We brought a carton with us as we know how much Billy loves bananas," Steve said.

"The response on Facebook has been incredible to see – of course, it's good timing with Origin but also just shows the impact Billy still has as a grower ambassador for bananas."

The NRL legend's passion for his Far North Queensland upbringing – including the banana industry - and his ongoing dedication to fans was clearly appreciated by Facebook users.

At the time of going to print, the post had generated 23,100 post engagements and almost 200 shares.





Congratulations to Northern New South Wales grower Sarvan Singh on his recent success at the 2023 Royal Easter Show in Sydney.

Sarvan was part of the Northern Districts display at the hugely popular event, and also took home an individual award for his bananas.

INDUSTRY BODY LAUNCHES NEW WEBSITE

The Australian Banana Growers' **Council has recently launched** a new-look website, with a renewed focus on growers and a view to showcasing the industry more broadly.

Growers can still access valuable resources from the homepage, including the Better Bunch app and BMP log in. In addition, ABGC members have access to an exclusive portal which hosts a growing range of resources and material. Grower members should have now received an email containing details of their log in, but please reach out to info@abgc.org.au if you are having any trouble.

The website itself was updated with a focus on bringing a fresh, clean look to the page which – crucially – led to a more user-friendly experience. In addition, the website now features a Frequently Asked Questions section aimed at interested consumers and a strong Best Management Practice presence. It's exciting to be able to feature so many growers on this new platform, helping to provide a face and a story to the banana industry and highlighting what the ABGC is all about – ensuring a strong future for commercial growers.





PUTTING THE BEST BANANAS FORWARD

INSTORE EDUCATION RESULTS IN BETTER DISPLAYS

By Andrew Burns, ABGC Supply Chain Engagement Manager







Banana displays photographed as part of the program.

The banana instore education and merchandising program is underway across a combined 1000 Coles and Woolworths supermarkets around Australia.

The program is an investment funded by Banana Marketing and R&D levies aimed at improving the quality of bananas instore, increasing demand through availability and encouraging the ease of shop of the banana category at retail level. Strikeforce was selected as the delivery partner to carry out the program throughout the selected retail outlets.

The program objectives include:

 Ensuring adequate stock of green and yellow bananas are available, and work with instore teams to ensure regular stock on hand levels are appropriate for run rates

- Ensuring correct storage and refilling standards are being employed
- Educating instore staff on best practice standards for both merchandising and handling which includes watching the ABGC produced training video
- Supply stores with an educational poster to be set up in storerooms to further reinforce optimal practices on an ongoing basis

The update in this article is current to the week ending 16 July, 8 weeks in and just shy of halfway in the overall 18 week project. There are many aspects to the delivery of this project that will be reported on, with some of the outcomes not known

and presentable until the very end, however some of the weekly measures can be shared.

Each week, representatives from Strikeforce visit the same 1000 (in total) Coles and Woolworths stores around Australia, gathering data relating specifically to the education and merchandising program.

In the 8 weeks to date, there have been 8969 individual face-to-face training opportunities delivered, the ABGC produced merchandising video has been viewed by produce department staff 6426 times and the Strikeforce team, whilst reviewing the banana display locations, have replenished the displays with an additional 6542 cartons.

8,969 training instances



6,542 cartons replenished



6,426 training video views



SUPPLY CHAIN ENGAGEMENT

Availability is one of the key measures that the team from Strikeforce are collecting data on. When they first get to the banana location, they take a photo of the section and start collecting data points.

The key question the Strikeforce team members are seeking to answer here is, "How would you describe the availability of Bananas in this store? (Full / Partly Full / Almost **Empty / Empty)"**. As we all know and have frequently witnessed, availability is one of those initial concerns we experience when we visit our local supermarkets.

The graph (top right) captures the amount of stores that were recorded as equal to or better than 3/4 full at the time of visit. The Strikeforce team have communicated that some of the fluctuations in availability are linked to supply chain issues, highlighting the importance of aligning supply with days of highest demands to avoid lost sales through out of stocks. A deeper analysis will be undertaken at the end of the project along with remedy recommendations.

Green Vs Yellow Bananas

Ouestion for this data collection is. "Are both 'Eat Now and Eat Later' bananas available? If so, how much of each?"

The ideal split is around the 75% yellow and 25% green level. The results accumulated over time show some variances each week versus the desired overall outcomes, however the results can be linked to the time of the day the survey was undertaken. There will be key questions asked at the end of the project, including:

- "Is the 75%/25% eat now/eat later split the correct weight?"
- "Is the point of sale at retail level conveying the appropriate message to the consumer?"

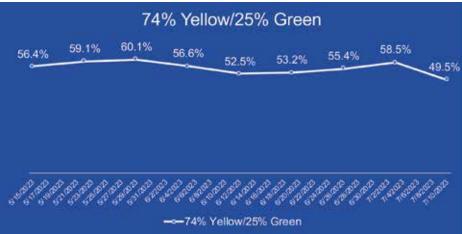
Temperature

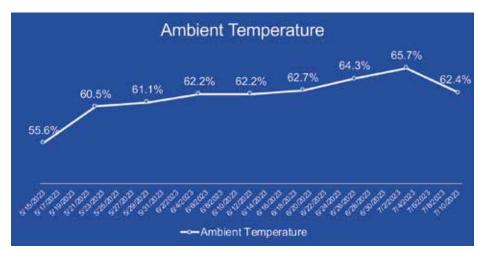
Question: "What temperature is stock stored at? (Refrigerated / Ambient / A mixture of both)."

It is important for us and the retailer to know what storage conditions are being used within the stores to maximise both the life and the quality of the bananas.

The results coming in each week are fairly similar which indicates the fixed nature of the back-room infrastructure and conditions relevant to each of the retailers back-room storage conditions. The majority of product is stored in ambient conditions, however acknowledging that the remaining percentage is held in controlled refrigerated temperatures. These storage conditions support the eat now/ eat later strategies. Moving product between the two environments is critical to ensure the eat now availability.











SUPPLY CHAIN ENGAGEMENT

Display

Question: "How are the Bananas displayed? (One layer stacked / Two or more layer stacked)"

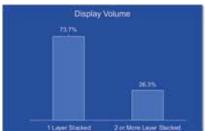
I was initially surprised by this result and assumed that the one layer stacked rate would be much higher. Interestingly the trend has remained fairly stable over time. Indications may suggest (with a much more detailed review to come), that many stores are double stacking bananas to ensure stock weight to meet the consumer demand, and in some circumstances the space allocated to bananas may be too small.

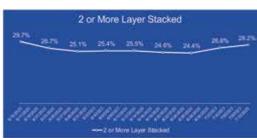
Stock Replenished

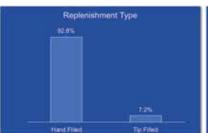
The final question asked is: "How is stock replenished? (Tip Filled versus Hand Filled)" with the results so far showing the high majority completed this the correct way, which has been the case over the life of the project to date. A deeper dive into understanding if it is the same stores each week or not, will be undertaken with recommended remedy actions employed to address this.

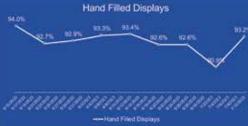












There are further survey questions aimed at gathering information, the results of which will be shared as part of the final report upon completion of the program.

After the 18 weeks of instore monitoring and reporting, the Customer Marketing team at Hort Innovation and the ABGC will deep dive into the final results and will report those findings along with recommendations back to both the Coles and Woolworths teams.

The retailers are eager to understand what the results are informing, and what strategic plans can be implemented to improve the shopper experience for their customers whilst delivering and implementing actions that will drive household penetration, the frequency of purchase ultimately leading to increased sales.

BANANAS UNDER THE SPOTLIGHT INSTORE





HYGEINE AND ENERGY SAVING SOLUTIONS

KEEP YOUR BANANA COOL ROOMS FREE FROM MOULD, BACTERIA AND YEASTS WHILE SAVING MONEY ON ELECTRICITY COSTS!

Have your energy bills increased recently and you're looking for ways to reduce your energy usage?

Regular cleaning and sanitisation of your banana rooms is required to ensure that your equipment is running at optimal efficiency. Without regular maintenance, your equipment needs to work harder to maintain the correct temperature, driving up your electricity usage. An outsourced certified cleaning company can save time, money, and help your business to meet your compliance requirements. Jaymak's experience and proven processes reduce the time taken to clean your banana room while providing you with peace of mind to the food safety of your establishment.

AS4709-2001 Guide to Cleaning and Sanitising Plant and Equipment states "The ideal sanitiser would be active at low concentrations on all microorganisms,

have low toxicity, be non-corrosive to food equipment, impart no flavours or taints to the product, be stable as a concentrate and be economical in use."

The exclusive sanitiser that Jaymak utilises, D-mould®, is all that and more! AQIS approved under category 26 for use on refrigeration units and is listed as an approved product (certification no: 9804PL) by the National Association for Sustainable Agriculture (NASAA Certified Organic). Being an approved product ensures our organic integrity and verifies our support for sustainable agricultural practices.

How Jaymak ticks all the boxes:

- Based on independent testing, Jaymak services provide an estimated 19% energy saving.
- Jaymak provides services nationally in all states and many regional hubs.

- Jaymak is the **only** company for specialised cleaning services in Australia with both ISO 9001 (Quality Management) and ISO 22000 (Food Safety Management) certifications.
- Jaymak also has ISO 45001 (Occupational Health and Safety Management) and ISO 14001 (Environmental Management System) certifications.
- ATP (Adenosine Triphosphate) measurement is used throughout the medical, scientific, food & beverage industries as a standard measurement of biological contamination benchmark for disinfection. All cleaning and disinfection is verified by a qualified Jaymak hygiene technician through the use of an ATP monitoring system.

If you would like to learn more, please contact Larry Taylor on 0414 068 857 or fnq@jaymak.com.au



How Energy Efficient and Clean Are Your Coolrooms?

Jaymak is an Australian-owned company that has been providing hygiene and energy saving solutions since 1998

- Estimated 19% potential energy saving
- Meet food safety compliance requirements
- Exclusive products meet organic certification requirements



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YOUR TRUSTED PROFESSIONALS IN CERTIFIED CLEANING

BANANA BENCHMARKING, BUT NOT AS THE BANANA INDUSTRY KNOWS IT.

After more than five years, a new project has commenced with the aim of enabling growers to track their performance against industry averages and 'best in class' performance.

And while this project couldn't come soon enough for many growers, the benefit of time passed is in the huge advancements in data collection and outputs. In short: this will be benchmarking on a whole new level.

Leading the charge on this Hort Innovationfunded project is Aglytica, who bring a focus on profitability and sustainability to their wealth of experience in farm benchmarking.

They are developing a tailor-made platform for the banana industry, which will feature a user-friendly interface to simplify data entry, enabling each participating grower to submit their information and receive real-time insights into their business.

Glenn Briggs, Business Development Manager, said they were looking forward to working with the industry to deliver a tool that goes well beyond standard benchmarking.

"Our tender was for a five-year project and, while it's early days, we have visions of taking it further," Mr Briggs said. "We're not talking about getting data from a single moment in time. The tool we're developing will allow businesses to see where

they've come from, and where they can look to go in the future."

Growers can expect to have access to the new benchmarking tool from next month (September). It will ask for a range of information from participants, with an initial input expected to take a few hours — less if you use compatible accounting software. Growers who participate will be allocated an individual, private number that can be followed through various charts and measurements to see how your business compares to others across the industry.

From then on, you can enter data as often as you like.

"The more growers who get on board, and the more data you're willing to share, the better the information we can provide," Mr Briggs said.

He noted there will be plenty of support for growers wanting to be part of the project, both in person and online. While the whole of industry will receive reports from the project, detailing overall trends and opportunities from anonymous data, only those who participate will have access to the interactive dashboard.

"With that private number, you can use our dashboard to make all kinds of comparisons and potentially discover better ways to manage your farm," Mr Briggs said.

In addition, the team at Aglytica will take part in events like Banana Congress and hold roadshows to present their latest findings.

The handling of such personal and important data requires a level of trust from growers and Mr Briggs is hoping Aglytica can start to build that over coming months.

"Aglytica uses a secure, cloud-based platform and database for its benchmarking projects. Handling this kind of data is our core business, and a responsibility we don't take lightly."

ABGC CEO Leanne Erakovic encouraged all banana growers to get involved. "This is a great opportunity for growers to access some innovative features and get a sense of how their business is faring compared to others."

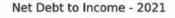
With the banana specific dashboard set to be released next month, growers can expect updates on the project before the end of the year. Keep an eye on ABGC e-bulletins for details about how to get involved.



BANANA FUND

Closing Net Equity % - 2021











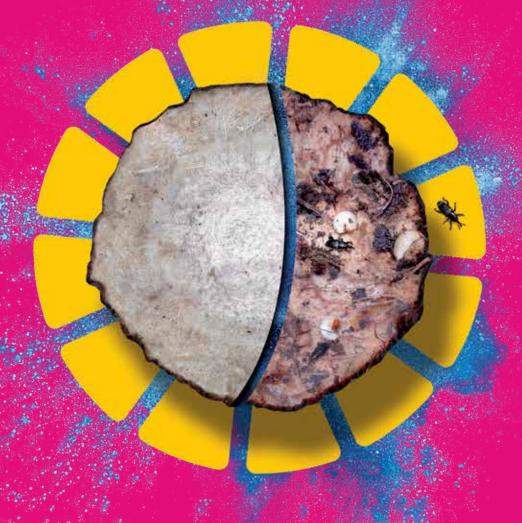




An example of Aglytica benchmarking data.

Zero in on weevil borer.







Control banana weevil borer in bananas with new Vayego® Forte insecticide.

- Low dose rate
- Reduced stem splitting
- New mode of action
- No mite flare

Scan the QR code or visit vayegoforte.com.au to download the label.



THAT BANANA IS LOOKING FUNG-KY!

FUNGAL INFECTIONS THAT AFFECT FRUIT QUALITY - THE DIFFERENCE BETWEEN **SOOTY BLOTCH, SOOTY MOULD AND FRUIT SPECKLE**

Banana fruit can be infected by fungal diseases such as sooty blotch, sooty mould and fruit speckle, that impact the visual appearance of fruit and can result in fruit not meeting market specifications. Early research indicates that prolonged periods of high rainfall and humidity can exacerbate these fungal infections. During the summer period of 2022-23, growers and market agents reported an increased incidence of sooty blotch and fruit speckle.

It can be difficult to differentiate between these diseases, as they share some similarities and can occur simultaneously on fruit. Below are examples of the three diseases.



Sooty mould is a black powdery growth that is caused by the combination of sap-feeding insects and fungi, namely the genus Cladosporium. The insects, often banana aphids and mealybugs, excrete honeydew, a waste product, which the fungi then use as a food source. Consequently, sooty mould is usually found where the insect presence is high, mainly on the upper hands of bunches, and especially on the bunch stalk and between fingers. As the sooty mould develops, the mycelium (fungi) grows in dark black layered sheets which can be peeled away or removed by rubbing, however, a stain will remain underneath.



Fruit speckle is small reddish-brown to black spots (0.5-1 mm) with water-soaked margins, and symptoms are often confused with banana flower thrips' damage. To distinguish between the two, banana flower thrips' damage causes a raised pimple (rough fruit surface), while fruit speckle is smooth. Fruit speckle can be caused by different fungi, namely *Colletotrichum musae*, *Fusarium* oxysporum and Fusarium semitectum. When weather conditions are optimal for disease development, reports of damage have been up to 70% of fruit on a bunch. Initial symptoms appear on the neck of the fruit, but as it progresses, the infection can cover the whole fruit. In severe cases, the spots can coalesce creating large areas of darkened water-soaked stains.



Sooty blotch is caused by *Chaetothyrina musarum* and presents as light brown lesions with a shadowy (sometimes water-soaked) appearance. Sooty blotch causes damage within the epidermis of the banana skin and cannot be removed by rubbing or washing. Sooty blotch symptoms are more often evenly distributed across the bunch.

What management options currently exist for banana growers?

The key to managing sooty mould is to control the honeydew-producing insects that provide the food source for the fungal infection. Ants also utilise honeydew as a food source and prevent natural predators from reducing honeydew-producing insect populations. Therefore, managing ants is a strategy to minimise sooty mould infections.

Managing and treating sooty mould in the shed is labour intensive and difficult. Some recommendations include the addition of chlorine to troughs or sprays, however this hasn't been deemed a sustainable option as chlorine has reduced efficacy in the presence of organic matter (sap) and can potentially cause equipment corrosion. High pressure water spraying or rubbing by hand may lift some of the sooty mould but these methods are also labour intensive and care must be taken not to damage the fruit.

There is limited information on the management of sooty blotch and fruit speckle, as previous research

often concluded that the fungal diseases 'did not significantly affect fruit quality' on commercial farms. What previous research does reveal is that these fungal diseases thrive in moist, damp environments and inoculum levels can build up on decaying leaves and flower parts. Therefore, management control options that improve airflow and reduce humidity, like regular de-leafing, interrow management to minimise stagnant water, and reduced planting densities can help minimise these fungal infections.

Past research suggested that yellow Sigatoka fungicide spray programs may assist in controlling fungal inoculum levels. Exceptions exist where programs have shifted to oil only or softer spray programs that don't include the multi-action site broad-spectrum fungicides, like those containing mancozeb. Mancozeb is also the only chemical active currently registered for managing fruit speckle and is registered for both plant and fruit applications (Permit 81199, see APVMA website for up-to-date labels and registered chemicals). Bunch applications should be made at bract lift when research suggests fruit is most vulnerable to fruit speckle infection.

Damage to the epidermis of fruit from fruit sap and banana flower thrips' damage increased the incidence of fruit speckle, particularly Fusarium sp. Therefore, eliminating the practice of premature bract removal and implementing correct and early bell injections could improve fruit quality and reduce the incidence of fruit speckle.

The National Banana Development and Extension project (BA19004) has started undertaking trials to gain more knowledge of how to manage these fungal diseases. Initial trials show that the inclusion of a 'flue' when bagging, as part of a suite of bunch pest management practices, can reduce the severity of fruit speckle. Work is also currently being undertaken to investigate the impact of using alternatives to plastic bunch covers, and the inclusion and timing of fungicides into banana systems on fungal diseases and fruit quality.







This article has been compiled as part of the National Rapana Development and Extension Program (RA19004) which is funded by Hort Innovation, using the banana research and development levy, co-investment from the Department of Agriculture and Fisheries and contributions from the Australian Government. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.



- Vawdrey L, et al. BA05001 final report The cause , distribution and economic importance of fruit speckle of banana in north Queensland, Horticulture Australia ltd, 2008.
- Jones D., Stover R. Handbook of diseases of banana, abaca and enset. Handbook of diseases of banana, abaca and enset. 2019.
 Stover RH. Sooly moulds of bananas. Trans Br Mycol Soc. 1975;65(2).



UNRAVELLING THE MYSTERY OF BANANA TIPS

What is the black spot at the tip of my bananas? This was a question recently asked by a grower, so the DAF Extension team at South Johnstone set out to investigate.

It was suggested that the discoloration could be Mokillo disease, a bacterial infection that causes dry rot at the end of the finger, starting in the same area on the fruit that the grower was questioning. Mokillo typically only affects a few fingers in a hand, these fingers are often smaller and narrower or pinched at the tip. Mokillo infection will continue to move through the fruit over time and have a rusty red gummy appearance (internally). It was evident that the issue in question was not Mokillo given that the blackened areas were present in all examined fruit, and the symptoms did not match.

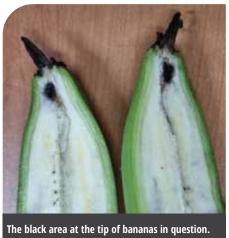
From a market perspective, the team firstly wanted to demonstrate that these black areas did not progress into the fruit pulp nor display Mokillolike symptoms as it ripened. The extension team took a sample of mature fruit and cross sectioned them at the different ripening stages. The black tips were present in all of the fruit and there was no progression into the fruit throughout the ripening process. Consequently, the DAF extension team was confident that this wasn't Mokillo and the investigation continued.

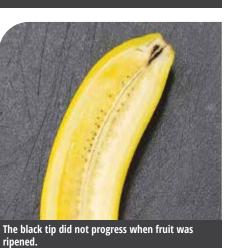
Following a theory that the blackening was associated with the physical make-up of the fruit, a review of banana literature, including the basics of banana 'anatomy', found that this blackened area is called a nectary (Septal nectary). Nectaries are structures in plants, often found at the base of stamens (male flower parts) that provide food rewards for insect or bird pollinators, and therefore play a role in the fertility of plants. Studies found that the nectary cells disintegrate/oxidise in Grand Naine when the flower ends are 'unfurling', allowing the reproductive structures (style and stamens) to be accessed by insects to pollinate. An interesting fact is that this disintegrating/oxidising

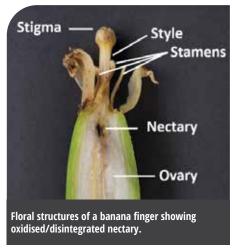
of the nectary acts as a 'roadblock' for the growth of the pollen tube towards the ovary. It has been suggested that this may be a contributing factor in why Cavendish is sterile and doesn't produce seeds.

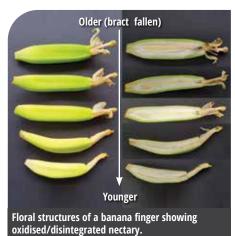
The project team cross sectioned fruit at different floral developmental stages and confirmed what previous research found in that the blackening of the nectary in Williams Cavendish occurs when the flower end reproductive structures are exposed to pollinating insects.

Overall, these nectaries which have disintegrated/ oxidised don't appear to impact fruit quality. It is possible that these areas allow for secondary infections, like Mokillo, which explains some of the similar symptoms. However, further investigation would be needed to better understand the risks and conditions which may favour these infections. The DAF extension team will continue to keep tabs on the blackening of nectaries at ad hoc times throughout the year in the course of their work and make observations in other varieties.











- Soares, T.L.; Souza, E.H.; Costa, M.A.P.C.; Silva, S.O.; Santos-Serejo, J.A. In vivo fertilization of banana. Ciênc. Rural 2014, 44, 37–42.
- dos Santos Silva, M.: Santana, A.N.: dos Santos-Sereio, I.A.: Ferreira, C.F.: Amorim, E.P. Morphoanatomy and Histochemistry of Septal Nectaries Related to Female Fertility in Banana Plants of the 'Cavendish' Subgroup. Plants 2022, 11, 1177.





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INSECT SANCTUARIES FOR BENEFICIAL PREDATORS AND PARASITES IN BANANAS

By Daniel Farrell, Dept. Agriculture and Fisheries (DAF)

Beneficial insects are species that provide a positive effect or interaction in an ecosystem, such as pollinators, predators, or decomposers. Predators and parasites (Figure 1), known collectively as natural enemies, play a critical role as beneficial insects by suppressing and controlling pest insects in ecosystems.



Figure 1. Beneficial predators and parasites: hover fly, green lacewing, and orange caterpillar parasite (left to right).

In most agricultural ecosystems, including bananas, beneficial insects aren't considered in management programs. Farming practices, for instance, pesticide usage, monocropping, tillage, and weed control along with the lack of suitable habitat can cause these ecosystems to be unhabitable for beneficial insects to remain, thrive and continue to provide biological control.

Insect sanctuaries are areas of non-harvested companion plants grown free from disturbances of farming practices and grown to encourage and attract beneficial insects to establish and remain in the ecosystem. Insect sanctuaries may consist of flowering or herbaceous plants, native shrubs or trees, or areas of specific weeds and grasses.

Insect sanctuaries are important for creating an agricultural ecosystem that is sustainable and suitable for beneficial insects by providing them with alternative food sources including important proteins and carbohydrates. In addition, sanctuaries provide harbourage and shelter increasing insect longevity and reproduction. An ecosystem with high biodiversity is generally more resilient to changes and less likely to experience pest outbreaks as natural enemies are available.

This DAF innovation-funded project aimed to use a Conservation IPDM approach to alter the banana ecosystem to provide more favourable conditions to enhance the population of beneficial insects. Seven flowering plants were evaluated including dill, fennel, *Salvia* (Figure 3), lemon balm, Thai chilli, garlic chives, and *Impatiens* (Figure 4). These treatments were compared to a bare-ground control to determine if the composition of the insect community could be altered by incorporating additional plant biodiversity.



The abundance (how many individuals) and diversity (how many different species) of insects attracted to each treatment were monitored in March — September 2022 using sticky traps, pitfall traps, and physical observations at the South Johnstone Research Facility. Collected insects were identified to the species level and then sorted into groups based on their role in the system as beneficial (Predators, Parasites, Decomposers, etc) or pest (Sap-feeders, herbivores, omnivores, etc) insects.



RESEARCH

In general, the results found that insect diversity and abundance significantly increased over the trial duration. This could be due to either a combined treatment effect where the addition of all insect sanctuaries increased diversity and abundance to the trial site, or a general increase in abundance and diversity over time (i.e. warmer weather). From data models, we were able to devise some general relationships between treatments and the attraction or suppression effect they had on the insect groups (Figure 5).

From these trial findings, Salvia and Impatiens would likely be suitable plants for insect sanctuaries in bananas, due to their high attraction for natural enemies and suppression of some pests. Dill would also seem suitable due to its good attraction to predators and suppression effect on pests; however, noting it was not a preferred host by parasites. Interestingly, Salvia, Thai chili, and Garlic chives were all suppressive to Thysanoptera (Thrips), further research could be useful to provide an alternative suppression option for banana rust thrips and banana flower thrips.

Finding the high attraction of beneficial insects to Salvia and Impatiens suggests that further studies in this area would be useful. Ideally, larger plantings with assessments for bunch pests on fruit should be conducted to explore pest-controlling relationships.

		Beneficia			Pests	
	Parasites	Predators	Decomposer	Omnivor	es Herbivores	Sap-feeders
Dill Anethum greveolens	×	卆	4	×	×	×
Salvia Salvia splendens	+	+	む	4	×	×
Fennel Foeniculum vulgare			4	X	+	-
Thai Chilli Capsicum frutescens	XX	\approx	-		×	-
Lemon balm Mellissa officinalis	-		4		+	×
Garlic chives Allium tuberosum		4	4	+	1	4
Impatiens Impatiens hawkeri		4	+	\approx	×	-
-		₽	3	*	{	×
Highly attractive	А	ttractive	Highly 5	Suppressiv	re Sup	pressive

Figure 5. Suppression or attraction effect of each flowering insect sanctuary treatment for specific groups

Ultimately, a list of suitable plants for incorporation into insect sanctuaries associated with banana plantations considering seasonality and soil types could provide growers with options for dedicating an area on their farm for beneficial insect conservation.





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FIRST RATOON RESULTS FROM THE SOUTH JOHNSTONE VARIETY TRIAL

By Katie Robertson & Jeff Daniells, Queensland Department of Agriculture and Fisheries

Trends which were observed in the plant crop (covered in Australian Bananas Issue 66: 20 – 21) continued in the first ration. Williams outproduced the TR4 resistant Cavendish varieties. All the Lady Finger selections performed well compared to the standard Lady Finger, with either improved plant or bunch characteristics and no yield reduction.

Productivity declined in the short statured TR4 resistant Cavendish Asia Pacific #1, while GCTCV 106 continued to perform comparably to Williams.

The yield reduction measured in the plant crop of the TR4 resistant Cavendish variety Asia Pacific #1 (AP#1) was further amplified by the end of the first ratoon. AP#1 yielded 33% less than Williams over the 2 crops (29.3 versus 44.1 kg/ year). This was due to their longer cycle time and a lower average bunch weight (26.7 versus 37.9 kg). AP#1 pseudostem height only increased by 8% between the plant crop and first ratoon (2.2 to 2.4 m), remaining significantly shorter than the other Cavendish varieties. Most other TR4 resistant Cavendish selections from Taiwan are taller than Williams. Finger length also remained shorter, with only 17% of AP#1 fruit falling into the premium size grade (22 – 26cm), compared to 56% for Williams. The GCTCV 106 selection – which originated from a vigorous plant identified in the previous 2018 South Johnstone variety evaluation (BA16001) – again performed comparably to Williams with regards to cycle time and yield (see table). Unfortunately, this variety has not demonstrated TR4 resistance in the

Coastal Plains (Northern Territory) screening trials (*Australian Bananas* Issue 65: 18 – 19).

There were no yield differences among the six Lady Finger varieties, with some selections displaying reduced pseudostem heights and better bunch conformation.

All Lady Finger selections, except Pendulous Lady Finger (PLF), remained significantly shorter in stature than standard Lady Finger in the first ratoon (11 - 30% shorter). In the plant crop, PLF had yielded 19% more than Lady Finger per 12-months, but by the end of the first ratoon the yields compared over the 2 crops was not different. The standard Lady Finger experienced a 33% increase in bunch weight between the plant crop and first ratoon, going from 12.2 to 18.5 kg, while PLF only had 15% heavier bunches in the first ratoon (17.7 to 20.9 kg). The fruit in PLF bunches took longer to fill (22.3 weeks) than standard Lady Finger (17.1 weeks), and had issues with premature ripening, likely influenced by the timing of bunch emergence and the environmental conditions during fruit filling. Nonetheless, the PLF plants lived up to their name and continued to produce bunches with a more desirable conformation. The four other Lady

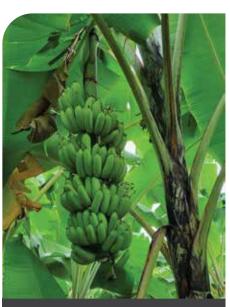
Finger varieties did not yield significantly differently to the industry standard.

The novel hybrids from CIRAD continued to perform poorly in the first ratoon, in terms of bunch size and pseudostem height.

In the plant crop, 40% of the CIRAD hybrid 918 plants had snapped before harvest despite being similar height to Williams. The incidence of pseudostem snapping in this variety rose to 87% in the first ratoon, meaning there were not enough data plants to include in the analysis. The remaining three CIRAD hybrids had bunch weights 25 – 64% lower than Williams per 12-months for the 2 crops, and CIRAD 925 and X17 were taller by 10 and 17%, respectively. X17 has demonstrated a high level of resistance to TR4 in the NT (*Australian Bananas* Issue 65: 18 – 19).

Where to next?

The trial block was nurse suckered at the beginning of the year to manage the cropping cycle, and the varieties were rated for yellow Sigatoka over the wet season. These results will be reported on later in the year.



The TR4 resistant CIRAD hybrid X17 yielded 34% less than Williams per 12-months over the two crop cycles.



The TR4 resistant Cavendish selection, Asia Pacific #1, remained shorter than Williams with reduced bunch weights, a longer crop cycle and shorter fruit lengths.



The yield of 'Dwarf Lady Finger' was comparable to standard Lady Finger but was 30% (or 1.4 m) shorter in stature.

RESEARCH

Selected yield and plant characteristics of the varieties in first ration crop cycle.

Description	Variety	Months planting to R1 harvest	R1 Bunch Wt ¹ (kg)	Cumulative bunch Wt*/12 months²	Fruit 22 - 26 cm (wt%)	Fruit 20 - 22 cm (wt%)	Pseudostem Ht (m)
Cavendish	Williams	16.7	37.9	44.1	56	20	3.5
	GCTCV 106 Selection	17.4	38.2	41.1	64	20	3.6
	Asia Pacific #1	19.9 >	26.7 <	29.3 <	17	30	2.4 <
CIRAD hybrid	CIRAD 925	15.7	28.0 <	32.9 <	n.a.	n.a.	4.2 >
	CIRAD 918	*	*	*	n.a.	n.a.	*
	CIRAD L9	14.2 <	11.8 <	15.8 <	n.a.	n.a.	3.6
	CIRAD X17	15.3	19.8 <	29.0 <	n.a.	n.a.	3.9 >
Lady Finger	Lady Finger	17.8	18.5	21.1	n.a.	n.a.	4.6
	Dwarf Lady Finger	18.3	19.2	21.4	n.a.	n.a.	3.2 <
	Pendulous LF	21.3 >	20.9	21.6	n.a.	n.a.	4.6
	Dwarf Rossi	18.8	19.3	20.6	n.a.	n.a.	3.3 <
	Santa Catarina Prata	18.6	18.1	21.2	n.a.	n.a.	3.6 <
	Tall Rossi	19.9 >	21.2	23.0	n.a.	n.a.	4.1 <

¹Excludes bunch stalk weight

n.a. = not applicable for that variety.





This project has been funded by Hort Innovation using the banana research and development levy and funds from the Australian Government. For more information on the fund and strategic levy investment visit horticulture.com.au

DRONE WORKSHOP AS GROWERS TAKE TO THE SKY

Agricultural drones have the potential to become an exciting tool for banana farmers.

From mapping drones providing a unique view of the crop through to spray drones spraying the crop; opportunities are significant. As drones become smarter and more affordable, banana growers are increasingly interested in using them across their farms. In collaboration with the Department of Agriculture and Fisheries (DAF), the ABGC recently supported a workshop in South Johnstone to share use scenarios, airspace regulations and the complex practicalities of using drones.

DAF researcher Marcus Bulstrode provided an outline of the opportunities to use drones across agriculture. These included an overview of trials performed by the department such as weed mapping, yield assessments and drainage modelling. The scope of this new and evolving technology is significant.

Marcus also provided information about the

legislative requirements covering the use of drones on banana farms. Licensing requirements increase as the drones get bigger. Small mapping drones flown above your own land require minimal certification but the pilot must always fly within the safety regulations. These regulations encompass the "standard operating conditions" that include practical considerations such as maintaining line of sight to the machine whilst in flight. Growers need to ensure they meet the Civil Aviation Safety Authority (CASA) requirements for their specific situation and drone type. Putting out registered chemicals from the air requires additional licensing requirements through Biosecurity Queensland and all chemicals must be labelled for aerial application by the Australian Pesticides & Veterinary Medicines Authority (APVMA) to be deployed by drone.

Some growers are embracing this innovative technology. A large banana grower has

undertaken a 2-year trial of drone fungicide application. With the support of Origin Net they were able to achieve non-stop application over a 10 hour period. Alec Zeglis, Director of Origin Net, shared an overview of the challenges faced during this operation. Alec expressed his desire for grower-partners to further develop this technology.

Less desirable

More desirable

Molly Blake, from the ABGC team in South Johnstone, shared her experiences of using a small mapping drones on local banana farms. Her work includes capturing aerial imagery, constructing drainage maps and assessing farm ground cover; all without the need to physically enter the paddock.

If you would like further information on using a drone on your own farm or on the drone services that ABGC offers contact ABGC via bmp@abgc.org.au

²Inclusive of the plant crop, (P+R1)/12 months.

< = significantly less than Williams or Lady Finger in the respective sections of the table (95% confidence level) and > = significantly more than.

BOOSTING BANANA SOIL RESILIENCE AND MICROBIAL BIOMASS WITH WOODCHIP AMENDMENTS

By Hazel Gaza and Tony Pattison, Department of Agriculture and Fisheries, South Johnstone

Traditional practices for growing bananas have caused a decline in organic matter in the soil.

This has resulted in a decrease in the number of beneficial soil microbes, especially fungi, which are important for suppressing diseases and improving crop resilience. Additionally, the reduced abundance and diversity of fungi have led to favourable conditions for harmful fungi like Fusarium oxysporum complexes that dominate banana-growing soils, posing a significant threat. To overcome the loss of complex organic matter. DAF researchers explored woodchip amendments as a potential solution to boost soil fungi and promote disease suppression for banana plantations. Aged woodchips from leguminous trees, commonly used as a windbreak, specifically Leucaena sp., Erythrina sp., and Gliricidia sp. (Figure 1), were used in a glasshouse experiment. Three different rates, equivalent to 2, 20, and 100 T/ha of woodchips, were incorporated into commercial banana production soil. The aged woodchips were allowed to decompose for a month before planting a Ducasse (Musa ABB) banana into the treated soil. To challenge the plants' resilience, they were subsequently inoculated with a spore suspension of Fusarium oxysporum f. sp. cubense (Foc) Race 1 (VCG 0124).

The addition of aged woodchips did not have a significant impact on the growth of banana plants, except when the high rate of *Gliricidia* sp. woodchips was added, where all the plants died. Amendment led to an increase in the total nitrogen and organic carbon content in the soil. The application of aged woodchips resulted in increased abundance of fungi and bacteria compared to soils without amendments. Specifically, the amendment of 100 T/ha of *Leucaena* sp. woodchips significantly increased fungal abundance, while *Enythrina* sp. woodchips enhanced bacterial biomass (Figure 2). The increase in microbial biomass with the high rate of woodchip amendments, led to a reduced rhizome necrosis (Figure 3).

This research demonstrated the potential benefits of using aged woodchip amendments as we strive for sustainable solutions in banana farming. However, these are only initial results and further research is still being conducted, focusing on screening amendments prior to use and establishing appropriate application rates, as they may have negative effects on plant growth. This work represents a step forward in transforming banana cultivation by emphasizing the significance of maintaining balanced soil microbial communities, to help maintain healthy plants.



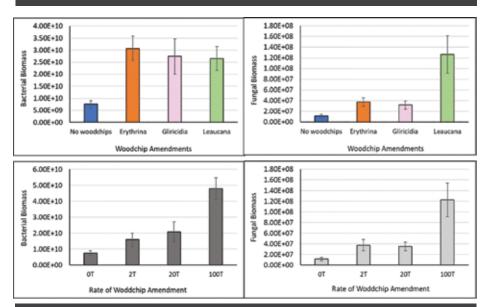


Figure 2. The bacterial and fungal abundance in soils amended with different woodchips (A) and with different rates of woodchips (B) from three leguminous tree species.

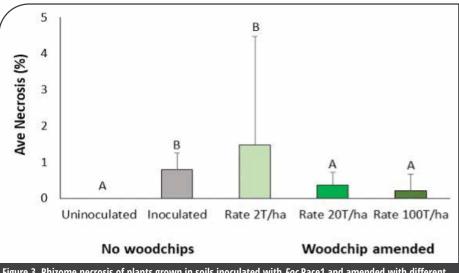


Figure 3. Rhizome necrosis of plants grown in soils inoculated with *Foc* Race1 and amended with different rates of woodchips from three leguminous tree species.

This project was funded by the Australian Centre for International Agricultural Research (ACIAR).

EMBRACE THE FUTURE WITH SIDEWINDER

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ENSURING BANANA HIGH H

The production and use of high health planting material is key to good plantation management.

It plays an essential part in ensuring serious pests and diseases, such as Panama disease, Bunchy Top virus, banana weevil borer and many more, aren't spread within and between farms.

That's where the Quality Approved Banana Nursery (OBAN) scheme comes in.

The scheme, previously administered by the Queensland Government and now jointly run by Greenlife Industry Australia (GIA) and ABGC, signals that approved businesses are verified sources of high quality, clean planting material.

QBAN is recognised across the country, both within industry and more broadly. To find out more, visit www.abgc.org.au/qban



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DIVERSE PROGRAM A HIT WITH SYMPOSIUM ATTENDEES



The 2023 Banana Scientific Symposium attracted a range of delegates, from researchers and scientists through to growers and industry providers.

If you could tap into the collective knowledge in the room for the 2023 Banana Scientific Symposium, you'd be hard pressed to find a question about the much-loved yellow fruit that couldn't be answered.

Almost 120 researchers, scientists, industry providers and growers attended the event on 17 May, the day prior to Banana Congress 2023.

The Symposium brings the banana research community together to share their latest findings, exchange ideas and network with peers. In 2023, growers and other industry stakeholders were also encouraged to attend, providing a chance for those on the front line of production to hear directly from those on the cutting edge of research.

While research is also a key feature in the Congress plenary program, the Scientific Symposium truly has science at its core, with more time available to delve into the detail. Presenters were given 10 minutes to share their updates, before Q&A sessions and networking breaks.

"The feedback we've received has been hugely positive," Dr Rosie Godwin, Australian Banana Growers Council R&D Manager and event organiser said. "This has largely been around the quality of the science and diversity of the program."

"Of course, it helps that we have such an excellent pool of researchers and scientists to draw from. It reinforced for me, and others I'm sure, that we truly are lucky to have such high calibre people working for a better banana future."

Dr Godwin worked in collaboration with Tegan Cavallaro at the Queensland Department of Agriculture and Fisheries (DAF) to facilitate the event, building on the success of the two previous iterations organised by QLD DAF.

Speakers were divided into six key areas:

- Integrated pest and disease management
- Progress in banana diagnostics and disease detection
- · Improved varieties for Australian banana growers
- Enhancing agronomic and environmental sustainability
- Minimising waste bananas
- Reducing the impact of Tropical Race 4

Dr Godwin said the one-day event, held in Cairns, more than exceeded expectations.

"The interest in this event really drove home that the Symposium deserves its place on the banana event calendar. We'll take on board feedback and continue to look for ways to improve, but we feel optimistic about another Symposium being held in conjunction with the next Banana Congress.

"We all have good intentions, but the reality is that it can be tricky to find time to chat to peers and read

through their research. These events really do help spark ideas and result in new collaborations."

Dr Godwin said having more growers and industry providers in the room was also very valuable.

"While the poster pitches and research showcased as part of the Congress plenary program are fantastic, this provides an opportunity for those involved in bananas to hear more detail, direct from the scientific community."

"It ensures we're all on the same page and up to date with the latest ideas – whether it be on farm or in the lab."



SCIENTIFIC SYMPOSIUM SNAPS 17 May, 2023

More than 100 banana researchers, scientists, growers and industry providers gathered in Cairns for the 2023 Banana Scientific Symposium.





















CONGRESS IN CAIRNS DELIVERS AGAIN

Another successful Australian Banana Industry Congress was held in Cairns in May.

Despite challenging economic times, growers from across the country, along with researchers, supply chain and other industry stakeholders gathered in the tropical north from May 17-19 for the biennial event

For the first time, Congress incorporated a Science Symposium – held on the Wednesday before the official Welcome Reception - allowing researchers to share updates not only with their peers, but also with growers and other industry representatives. Comedian Jimeoin kicked off a stellar line up of presenters and panellists that took to the stage over the two-day plenary program at the Cairns Convention Centre. The insightful, grower-focussed program addressed a range of industry related issues including the retail landscape, marketing, driving demand for bananas, robotics, recycling, R&D, on-farm innovation, mental health and personal motivation.

Congress Chair and ABGC Director, Paul Inderbitzin said it was heartening to receive positive feedback to the program - post-Congress - given the time and energy that goes into tailoring presentations to a broad delegate audience.

"Our Congress Planning Committee certainly puts a lot of thought into formulating a program that is grower and industry-focussed, that not only offers some valuable take-home learnings, but also gets you thinking about the big picture issues affecting our industry," Mr Inderbitzin said.

"At the moment we are facing so many challenges, from cost of production increases to an undervalued product that has put a big strain on many growers.

"In the retail panel and marketing panel these issues were put in the spotlight and provoked a lot of thought.

"I know, particularly over the last few years,

we've all questioned what our future looks like. There is definitely plenty of work to be done, and we certainly don't have all the answers yet. But hopefully – as an industry – we walked away from Congress with more information and a renewed drive to initiate change."

While attendance was down slightly on the previous Congress, Mr Inderbitzin said it was not unexpected and thanked those delegates who took time away from their businesses to support the event.

"Congress 2021 attracted a record attendance. But, given the state of the industry and the economy in general, we never expected to break any records this year," he said.

"But, just like past Congresses, those who did attend, by and large, had a fantastic time and hopefully we can return bigger and better in the years ahead."

Arguably the biggest highlight for delegates, a range of social events provided some much-needed time to catch up with other growers and industry representatives, culminating in the Banana Ball and Awards of Honour.

ABGC Chair Leon Collins presented recipients with their awards and said the night was a great opportunity to recognise those who had made significant contributions to industry.

"These award winners really do exemplify what it is we try to do in bananas, regardless of whether you're a grower, researcher or sit somewhere else on the supply chain," Mr Collins said.

"We're innovative, willing to share our knowledge and passionate about what we do. We want to leave things a little bit better for those who come after us. That's why I'm confident that, despite the challenges we currently face, there's still plenty to look forward to in this tough but hugely rewarding industry."

SPONSORS AND EXHIBITORS

Congress would not be possible without the support of our valued sponsors and exhibitors, and the Australian Banana Growers' Council (ABGC) and ABIC Management Committee would like to give a sincere thank you to the companies who supported our 2023 event.

Special gratitude goes to our major sponsors including; Foundation Partner Visy; Principal R&D Partner Hort Innovation; Major Partner Australian Produce Partners; Retailer Associate Partner Woolworths; Associate Partners Costa, Tropicana Banana Company/Arcella Bananas and Bayer; Supporting Partners, Soils First NQ, La Manna and Pakall. (See Page 30 for the full list of sponsors and exhibitors).







CONGRESS PLANNING COMMITTEE

The ABGC would like to thank the members of the Congress Planning Committee for their dedication and efforts to curate the 2023 Congress Program. Congress Program Committee

Paul Inderbitzin (Congress Chair)
Doriana Mangili (ABGC Director)
Jenny Crema (Banana Women's Luncheon co-ordinator)
Josephine Borsato
James Howe
Belinda Van Schaik

Sonia Campbell (Congress Co-ordinator) Leanne Erakovic (ABGC CEO) Dr Rosie Godwin Amy Spear Shanara Vievers Tegan Kukalies

A DIVERSE, EYE-OPENING PROGRAM



Professor Veena Sahajwalla

A smart vision for a sustainable future

SMaRT technologies and MICROfactories™ creating sustainable materials and products form waste

Professor Veena Sahajwalla is an internationally recognised materials scientist, engineer, and inventor revolutionising recycling science.

She is renowned for pioneering the high temperature transformation of waste in the production of a new generation of 'green materials' at the UNSW Sustainable Materials Research and Technology (SMaRT) Centre, where she is Founding Director.

"We're looking at our ability to pioneer materials from resources that we had called waste, whether they are natural or synthetic," Professor Sahajwalla told the audience. "It's about our ability to bring these materials back to life in the form of new products over and over again."

Her work is often about adding a fourth 'R' to the traditional Reduce, Reuse and Recycle - 'Reform'. This requires innovation, science, technology and an ability to set up facilities that can make quality products that match or even exceed what's already out there. Professor Sahajwalla is the inventor of polymer injection technology, known as green steel, an eco-friendly process for using recycled tyres in steel production. In 2018, she launched the world's first e-waste MICROfactorieTM and, the following year, her plastics and Green Ceramics MICROfactoriesTM. She has converted plastics that were considered difficult to recycle into valuable plastic filaments, used for 3D printing.

"We will always be making things," she said, pointing to the long list of items that are indispensable in our daily lives, from electronics to medical equipment. However, the COVID-19 pandemic highlighted just how limiting supply chains can be.

"How are we going to prepare and plan for a better and safer future?" Professor Sahajwalla asked.

"There should be no such thing as waste, everything is fundamentally a material. It's an opportunity." As part of her participation in Banana Congress 2023, Professor Sahajwalla visited Innisfail Banana Farming Company, where she was able to view items used on a farm as well as the banana plant.



Emma Germano

Managing Director of I Love Farms, Victorian Farmers' Federation president, Nuffield Scholar

Industry advocacy - are we going bananas?

Without advocacy, growers have no voice. And when growers don't have a voice, the entire community suffers.

Emma Germano knows as much as any farmer, that spending time and money on advocacy — via representative bodies or through sharing a personal story – can feel like a pointless task. But she has a simple message.

"It is so difficult to be a farmer in this economy and − I hate to tell you − I think it is going to get worse,"

"If we don't come together it is going to get worse, for us and the entire community. Because what we advocate for is really for everyone. Right now, for the first time in a long time, people are saying that they can't afford to put their usual groceries in the

The cost-of-living crisis is hitting home for many but it also presents an opportunity for farmers to share why fresh produce is costing more and why food security should be a national priority.

"The supply chain is fickle," Ms Germano said. "It is only as strong as its weakest link."

Sharing her own journey from the farm to the city and, ultimately, back to the farm, Ms Germano understands the connection producers have with their land. However, she encouraged those in the room to make decisions despite that connection and know that there is something beyond the farm.

Ms Germano has travelled across the world as part of her Nuffield scholarship and spoken to growers around Australia. Despite the obvious differences in farming and business operations, there is a huge amount of common ground.

"Sign up, join up, get involved, tell you story," she said. "There's a whole community out there who don't know about the challenges of growing bananas. But if the community is behind us, we have more leverage when it comes to Governments, retailers and supply chains."

As Ms Germano noted, there are times when it doesn't matter how good a grower you are, as there are so many external factors that you simply can't control - that's why advocacy is crucial.

Wheat and sheep farmer, John Harper, shared his experience with mental health and depression as part of the 2023 plenary program, with the aim of helping others identify and address these issues in themselves and in those around them.

John's sense of humour and genuine message clearly left its mark, with many rating him as one of the standout speakers at Congress.

John will be venturing to Far North Queensland, and potentially other banana growing areas, over coming months to catch up with any growers who are keen to have a chat and get a few more

tools under their belt for coping with increasingly tough times.

To register your interest in attending one of these relaxed, informal gatherings, please contact Sonia Campbell via sonia@abgc.org.au or keep an eye on ABGC Communications for details.

All Congress delegates have access to videos of the 2023 plenary speakers, including Professor Veena Sahajwalla and Emma Germano. If you haven't received an email with page and password details, please reach out to communications@ abgc.org.au. Please note, some presentations are not available for online publication.

AWARDS OF HONOUR



PAUL JOHNSTON, FORMER BANANA GROWER AND ABGC DIRECTOR

Paul Johnston has been around bananas since he was about 10-years-old and began focussing on the family's banana business in the early 1990s. The Johnston name is part of the farming fabric in Far North Queensland. Paul's father, Mort Johnston, was considered a pioneer of the industry and Paul has furthered their reputation as innovative, community-minded growers.

Paul has weathered the best and worst of farming, facing natural disaster, rising costs of production, and the detection of Panama TR4 on his farm.

Passionate about his own banana business and the industry more broadly, Paul served as an ABGC Director for eight years, including time as treasurer and Vice President.

Sadly, Paul made the tough decision to get out of bananas late last year, but he and his family have left a lasting legacy. Australian Bananas magazine featured the family in a previous edition – you can view the article here: www.abgc.org.au/banana-features



RICHARD PIPER, ENTOMOLOGIST, DEPARTMENT OF AGRICULTURE AND FISHERIES

Richard Piper is the person you turn to if you want to know anything about insects and bananas. He's worked with bananas for over three decades, both in a private and government capacity, most recently for the Department of Agriculture and Fisheries at South Johnstone.

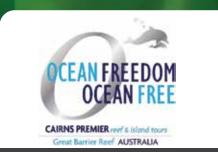
Richard has been instrumental in finding new ways to control bunch pests, screening new synthetic chemistries as well as biological products

like fungi, bacteria, beneficial nematodes and botanical chemistries. He is passionate about finding biological options, work that is becoming increasingly important as focus shifts away from traditional pest & disease control methods, for a huge range of reasons.

Richard's work has made real, tangible difference on so many farms, and his research is widely recognised and extremely highly regarded.

FUTURE FARMING AWARD





Steve and Richelle were treated to a family cruise to Upolu 'Wonderwall' Reef and Cay, and an introductory scuba dive thanks to Ocean Freedom.

STEVE LIZZIO AND RICHELLE MILES, MBL BANANAS

The 'Future Farming Award' recognises outstanding achievement in banana Best Management Practice (BMP) farming.

MBL Bananas is in close proximity to the Great Barrier Reef and is under increasing pressure with urban development established on the farm boundaries.

"The local and broader community are watching us, and we are doing our best to make sure our farming practices are sustainable in the context of the Reef and the community in which we live," Richelle said.

A reduction in sediment and nutrient losses from their farm are testament to the best practice efforts they have employed including an innovative spoon drain, sediment settling ponds, major repair and maintenance to a waterway, and 100% ground cover across the whole farm.

They have also put energy into the health of the soil. Richelle said, "We have applied microbes to our soil and added carbon boosters. This has improved beneficial microbial populations and

fertiliser efficiencies, converting our inputs into accessible forms for plants to take up at the roots."

"This means the plants are getting the best out of the soil and fertiliser applied, and we are minimising our nitrogen losses to waterways. Along with healthy plants, we are seeing soil with better water-holding capacity, so the soil is staying on the farm rather than breaking apart and being washed away," she said.

Steve was one of the thirteen growers from around Australia who contributed to the development of the industry Environmental BMP over 10 years ago. Making the most of the Future Farming Award, Steve and Richelle have badged their product boxes



The Future Farming logo on MBL Bananas boxes.

WELCOME DRINKS

17 May, 2023 Sponsored by Australian Produce Partners















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HARVEST TRAIL INFORMATION SERVICE

Hort Innovation

HTM Complete - Farm in ONE

IMTRADE CROPSCIENCE

J-Tech Systems

MISSION BEACH T.C. NURSERY

Oji Fibre Solutions

Opal Fibre Packaging

Panama TR4 Control Program

PROFESSIONAL PUMP SERVICES

SIGNET

SMART FARMING

SOILS FIRST NO STANCO TRADING

Stolle

WORKPLACE HEALTH & SAFETY QLD

Yuruga Nursery

Australian Banana Industry Congress

17 - 19 May 2023 Cairns Convention Centre



BMP FUND MAKES DECISION EASIER

Contracts have been signed for the first round of projects supported by the Banana Best Management Practice (BMP) Fund.

Thirteen projects are under way with growers taking the opportunity to share the cost of on-farm activities that minimise sediment and nutrient loss, improve water quality run-off, meet regulation standards, and support productivity and improved farm management.

"We have prioritised the first round of funding on sediment management related projects so that earthworks can take place during the dry months, and ground cover has time to establish before the wet season moves in," Australian Banana Growers' Council (ABGC) BMP Coordinator, Amelia Foster, said.

Applications for the next round of funding will be invited in early August 2023.

One grower who received funding said, "The grants made the decision to go ahead with a project easier."

The Queensland Government has provided the banana industry with \$1.3m through the Queensland Reef Water Quality Program over the next three years to co-invest with growers on their environmental BMP journey by improving farm management practices for water quality outcomes.

The 'Banana BMP Best Practice Fund' is an adapted version of previous years of reef water quality grants.

If your farm is in the Great Barrier Reef catchment area and you would like to apply for funding towards your project, contact the ABGC's BMP Team via bmp@abgc.org.au

FUND IN ACTION

The Zecchinatis have been farming bananas in Nerada since the 1990s. Michael, Belinda and Kayla Zecchinati recently purchased a new farm in the area and have been working with the Australian Banana Growers' Council's (ABGC) Best Management Practice (BMP) Team to improve the farm layout.

Earthworks to upgrade an eroded roadway and drain are the first step in this long-term plan, which will see less sediment leaving the farm. The family received financial assistance through the first round of the Banana BMP Best Practice Fund to help with the earth works in this high-risk area. The project area included a drain that was actively eroding, exposing the irrigation mains and causing ongoing damage to the roadway. The overflow water from the drain was eroding soil through the paddock and then depositing large drifts of sediment at the bottom of the paddock.

The project included drainage upgrades and roadway reconfigurations which are the first step towards a best practice layout that includes contouring, upgraded spoon drains and the possibility of a sediment trap. The new road and drain, with rock groins, were tested in the recent wet weather and stood up well.

Michael is trialing a number of new practices on the farm including a planted fallow and a new inter-row profile which will help manage water flow on the sloped blocks.

The Banana BMP and Best Practice Fund is funded through the Queensland Government's Queensland Reef Water Quality Program and delivered by Australian Banana Growers' Council in partnership with growers.

FRESHCARE ENVIRONMENTAL

Freshcare Environmental is a Recognised Program for banana producers to demonstrate they comply with the Reef regulations.

It is the best way to get formal recognition for the environmental practices you have in place on your farm. Over 60% of the banana industry in Queensland holds Freshcare Environmental Certification.

Those growers who have Freshcare Environmental are a lower priority for visits from the Queensland Government Compliance team because those farms have been third-party audited as meeting the minimum standards.

In preparation for your annual Freshcare Environmental audit, the ABGC BMP Team and Freshcare recommend that growers contact the BMP Team to update their BMP self-assessment and develop a new Farm Priority Plan. The ABGC Team are happy to come out to your farm to work through this with you. This will get you well on the way to demonstrating your commitment and continuous improvement to environmental best practice. The Farm Priority Plan can help you to demonstrate your Environmental Action Plan (EAP) requirements for Freshcare.

If you've got areas where you need to improve the BMP team can provide support through training, professional advice and grants.

The specific Reef regulation areas that your auditor will be focussing on are:

 Do you have a nutrient budget that shows how much nitrogen and phosphorus you will be applying?

- If you are over the threshold annual rates for nitrogen and phosphorus – do you have a Nutrient Management Plan that fully meets the regulations?
- Are you applying nitrogen to the crop bed and not the inter-row space?
- Do you have at least 60% covered ground in your inter-rows?
- Are you taking measures to minimise soil loss, especially in high risk areas?
- Have you kept records of your fertiliser applications?

Date of BMP Self-Asi		t	
Address			
Area under production			
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TAP INTO NUTRIENT PLANNING ASSISTANCE

ABGC's Best Practice team member, Molly Blake, has been busy collecting soil and leaf samples across the Cassowary Coast region to help growers improve their nutrient management planning.

She is delivering the Cassowary Coast Reef Smart Farming project, which will help 30 growers across the region develop and implement efficient nutrient management plans for their farms.

The project aims to assist growers in maximising their nutrient applications for optimal plant and soil health.

"Rising input costs over recent times have seen many growers looking to their fertilisers for ways to cut costs. We're focusing on efficiency as part of this project, helping growers to get the most out of their fertilisers, whilst still producing a great crop of bananas," Molly said.

To do this, growers participating in the project will follow the process of developing a nutrient management plan. The project kicked off with Molly visiting each farm, where they discussed the growers' goals, looked at the different soil types present on the farm and checked out past agronomic results.

The Cassowary Coast Reef Smart Farming project is funded by the partnership between the Australian Government's Reef Foundation.

"We'll then pair this information with the next step in the process, which is taking soil and leaf samples across all farms for our agronomists to provide tailored agronomic advice for each grower", Molly

To help Molly develop these plans, two local private agronomists, Shannon Byrnes from Farmacist and Anita Davina from Total Grower Services, are bringing the latest agronomic science and industry knowledge to the project.

"Taking both soil and leaf samples is really important to help growers get back to basics and see if their crop is actually taking up their fertilisers," Shannon said.

Shannon believes that regular sampling helps growers to identify patterns over time, so they can see what is and isn't working in their nutrient management. This can help growers identify and address any constraints that may be impacting their production.

Growers will also attend one of ABGC's Nutrient Management Planning workshops, where they will learn about all the key stages of developing their plan, including farm mapping, effective soil and leaf testing, seeking nutrient recommendations,



The BMP team's Molly Blake sampling on farm

recording fertiliser applications and monitoring yields.

These workshops are being run by agronomist Charissa Rixon from T.R.A.P. Services, who brings over 20 years of banana experience to the workshops. Tailored to small groups, the workshops provide a personalised and interactive environment for growers to build on their knowledge of nutrient management, while providing an opportunity to share on-farm experiences with other growers. If you would like to learn more about nutrient management for your farm and attend one of our workshops, contact Molly on 0419 602 864 or molly@abgc.org.au.



BANANA BMP TURNS 10

From shed meetings to spearheading change, Banana Best Management Practice is a reflection of an industry passionate about improving sustainability, and farming for both profit and the environment. Backed by growers every step of the way, it is now in its third iteration and continuing to go from strength to strength.

THE STORY SO FAR

Banana-growing communities are located in many regions that are ecologically significant. Many farms are multi-generational family businesses, and their continuing sustainable production is of high importance. Consumers of bananas are demanding more sustainable farming practices and so best practice and sustainability is an essential aspect of the industry's culture and image. In fact, it supports our social license to farm and sell bananas in Australia

The Banana BMP is a resource that has been widely used by our industry since it was first released at the 2013 Banana Congress in Coolum.

In 2023, the BMP is now in its third phase, led by the ABGC's BMP Coordinator Amelia Foster.

"The Banana BMP is a credit to this industry and its commitment to environmental stewardship," she said.

"While many growers had a focus on sustainability well before 2013, the past 10 years have resulted in greater awareness, education and deserved recognition for those doing it well.

"The Banana BMP has put us on the front foot when it comes to quality assurance and regulations, but more than anything, it showcases a community of growers who take their responsibility of caring for the land and farming this hugely popular crop very seriously."

Ms Foster also paid tribute to the Banana BMP team of extension officers, past and present, and to all those who gave up their time and effort more than 10 years ago to ensure it became a reality.



Banana BMP at Congress 2013.

GETTING IT RIGHT



From the beginning

The banana industry collaborated with the Qld Government's Department of Agriculture and Fisheries (DAF) for resources to develop a Banana Best Management Practice (BMP) guideline owned by industry. This was a proactive move by the industry to demonstrate environmental stewardship.



An industry-driven priority

The BMP project purpose was to work with growers to increase farm productivity and profitability and improve water quality in the Great Barrier Reef. It was led by DAF, and co-funded by the Queensland Government, Australian Government, and Hort Innovation using the banana industry levy.



By growers, for growers

A group of 13 experienced growers from around Australia was established to provide oversight and direction.



Perfectly timed to drive adoption

With consensus from the grower group and project reference panel, Freshcare Limited was approached for guidance.

Freshcare had the template and DAF had the information, and work has continued to ensure alignment between the banana industry BMP and Freshcare Environmental since.



Check, launch, and deliver

An additional 20 growers and 30 technical experts with skills in nutrition, soil conservation, and integrated pest and disease management assisted with the review of the draft BMP. The BMP was launched in 2013 with an online version of the checklist (hosted by ABGC) published to allow growers to gain a visual summary of their results around key areas such as sediment, nutrient, and pesticide management.

"There is a noticeable difference in how farms look when driving around the region, especially the increased ground cover." Dean Sinton, grower





What better way to celebrate a 10th birthday than with cake? The BMP team and the banana industry marked the occasion at Banana Congress 2023.

DRIVING CHANGE OVER TIME

BMP Launched

- \$180,000 Queensland Government investment over 2 years
- · Freshcare Limited onboard
- Coles starts to encourage their suppliers to participate in Freshcare **Environmental training**

2015-2018

BMP Phase I

- \$600,000 investment from ORWOP
- ABGC supports growers to improve practices on-farm and through record keeping

BMP Phase II

- \$2.9m through QRWQP allows the Banana BMP Program to assist and support growers to improve practices
- \$1.2m grant program for on-farm practice change, and water quality
- Freshcare Environmental Program -Reef Assured certification aligned to the regulations

2022-2026

2018-2022

BMP Phase III

- QRWQP \$2.2m investment for Banana BMP extension continues
- \$1.5m Best Practice Fund to support on-farm practice change and improve water quality



Where all good ideas begin: with a few beers and food on a Friday afternoon. The BMP was created for growers, by growers.

PROOF IS IN THE PADDOCK

Thousands of hectares of improved practices

Growers have adopted improved practice change across a vast area in the Reef catchment. Funding has supported almost 100 on-farm projects (with more under way) and resulted in visible improvements in the management of inter-rows and installation of sediment run-off prevention structures. Adoption of improved fertiliser management is also evident based on grower advice over time.

Many growers with improved knowledge & awareness

Growers have attended workshops (nutrient and sediment management), and received on-farm support along with specialist technical advice. This has supported a culture-shift with a focus on environmental stewardship, allowing the industry to genuinely promote the good things growers are doing to foster a social license to grow and sell bananas. These workshops will continue to be available to growers throughout the life of the project.

>90% of the industry have done their BMP checklist

More than half of growers have undertaken one or more BMP self-assessment checklists which has been linked closely with the funding program. Most of these BMPs were done by the largest growers, representing over 90% of the land area under bananas in the reef catchment.

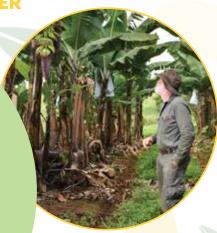
Regulation & Freshcare alignment

Third party verification of practices was required against the reef water quality regulations. BMP certification has been streamlined with the existing Freshcare Environmental Accreditation process. The BMP is also a tool that the industry continues to utilise in negotiations with Government, particularly relating to the development of programs and regulations.

VALKING THE TALK

MARK GALLAGHER, GROWER

"How we do something is equally as important as what we do. The motivation to improve and excel comes from within. Forty years ago, I wasn't thinking BMP, but just simply doing what I believed was right and would support the business of growing bananas as well as safeguarding the environment. We farm in a unique part of the world and the effect of our actions do not always stop at our boundaries. Wadda Farms has evolved with this philosophy."







#BananaBestPracticePaysOff

THE PANAMA TR4 PROGRAM - A SUCCESSFUL LEGACY

By Rebecca Breaden and Lea Coghlan (Biosecurity Queensland), and Skye Orsmond (ABGC)

From the outset, government and industry worked together to provide a highly effective response to Panama disease tropical race 4 containment. It was a unique partnership, that managed to contain TR4 to eight properties in Queensland over the past eight years. Here we pay homage to Biosecurity Queensland's risk management strategies delivered under the internationally-recognised Panama TR4 Program; and the legacy of a successful government-industry collaboration.

February 11, 2015 was a day like any other in the Australian banana industry's heartland, the Cassowary Coast in Far North Queensland.

Activity in paddocks and packing sheds hummed along on hundreds of banana farms scattered throughout the region, amongst the heat and humidity of the Far North's typical summer season.

That was until the Australian Banana Growers' Council (ABGC) banana leaf inspector, Louis Lardi, came across a suspicious looking plant, triggering a chain of events that threatened the livelihood of growers and changed the future of the industry forever.

"I initially thought it was Erwinia when I first looked at the plant," Mr Lardi recalled.

"But it looked different to anything I'd seen before, and I had a feeling that it wasn't good."

After taking samples of the plant, Mr Lardi alerted his boss.

On March 3, vegetative compatibility group (VCG), test results came back that the samples were positive for the devastating soil-borne disease, Panama disease tropical race 4 (Panama TR4).

It was the first detection of the disease in Queensland and sent shockwaves through the banana industry and Cassowary Coast community.

"It's a day I won't forget in a hurry," Mr Lardi said. "It wasn't the best thing to be known for discovering, but it's a reality of farming. Pests and diseases are always prevalent in farming — but this one was something we'd never seen before."

Biosecurity Queensland (BQ) swung into action and launched an emergency response, supported by industry.

As the situation evolved and the gravity of the threat was realised, BQ launched a multi-million-dollar control and containment strategy, which has since been internationally recognised. This was the cornerstone of collaboration between government, industry and growers.

BQ's Panama TR4 Program team set up a temporary base at the South Johnstone Research Station

before moving to the former Moresby State School.

A surveillance program was rolled out and information sessions for growers became a high priority for both BQ and the ABGC. Farm quarantine and biosecurity controls became second nature, particularly for growers in the disease hotspot, the Tully Valley, home to all of today's eight infested farms

Key to success

Former Panama TR4 Program Leader Rhiannon Evans said several factors had contributed to the success of the control and containment effort.

"We have a proactive industry in commercial banana production, so when symptoms could not be explained, the (first) grower reached out to the experts," Ms Evans said.

"This provided us with an early alert to the disease. Active surveillance has helped provide confidence that the disease is concentrated in the Tully Valley, and other growing districts are presently free of Panama TR4

"Banana growers took action to protect their properties through implementation of sound biosecurity management plans.

"Finally, we have world class researchers and scientists that helped inform our biosecurity risk mitigation practices, ensuring we actively looked for the disease and took decisive action when it was found.



The ABGC and DAF hosted information meetings for banana growers and other industry members in Tully, Innisfail and Mareeba after the initial detection of Panama TR4 in the Tully Valley in 2015.

The Panama TR4 Program's (former) Operations Manager, Donna Campagnolo, believes the collaboration and consultation with industry (ABGC) and growers has been key to the Program's success, along with surveillance.

"An effective surveillance strategy has been developed and this has resulted in the control and containment of Panama TR4 to the Tully Valley," Ms Campagnolo said.

"The Program's highly trained surveillance staff have identified these detections, with the skill needed for a successful control and containment program."
"Officers have been able to identify Panama TR4 in

individual plants, often on new properties." **Honing knowledge**

As the Program evolved, the focus broadened beyond the farmgate to include research and development. Queensland biosecurity authorities and the banana industry had little experience in managing a disease like Panama TR4.

Department of Agriculture and Fisheries' Team Leader, Banana Production Systems, Stewart Lindsay said the department turned to networks in countries with Panama TR4 for knowledge on known research and development outcomes.

"Harnessing these opportunities stood us in great stead for understanding the challenges that were in front of us," Mr Lindsay said.

"Despite this advantage, there were many questions coming from growers at public information meetings that we couldn't answer confidently.

"Solutions were needed for short term priorities like science-based biosecurity practices that would help contain any potential spread, e.g. 'what's the best disinfectant to use'. At the same meetings we were also being asked about other longer-term questions that we are still trying to answer, such as 'what's the best resistant variety?' And there was everything in between."

Notwithstanding the success of the Program, there have been many challenges.

PANAMA TR4

"The industry was introduced to the planning cycle of government, while Government examined how they could use legislation to enable greater industry involvement," Ms Evans said.

"An example of this was the establishment of detailed contracts to engage Australian Banana Growers' Council (ABGC) employees to deliver objectives of the Program, enabling them to understand the nuances and intricacies of applying legislation."

ABGC Chief Executive Officer Leanne Erakovic said collaboration between government and industry was crucial to the Program's success.

"The swift response and management after the initial detection is a testament to the growers and their commitment to working closely with Biosecurity Queensland and key stakeholders in our banana industry."



Queensland's Panama TR4 containment success has attracted widespread international interest over the years.

So why has Panama TR4 been successfully contained to the Tully Valley? Many say it's because of the collaboration that has taken place between the banana industry, growers and government. Others feel early detection has been the key. The most likely scenario is a combination of these factors.

Early detection

Early detection through surveillance on farms and compliance on known infested properties has been critical to the Program's success.

Chris Collier was on the frontline of the Panama TR4 Program as a surveillance officer for about seven years. With on-ground experience, Chris believes growers should be doing their own regular surveillance on their properties and call-in suspect plants.

"Growers shouldn't just rely on scheduled surveillance as these vary from weeks to months apart, and symptoms of Panama TR4 can show themselves within a shorter period of time," Mr Collier said.

"In my view, identifying sick plants early and growers doing self-surveillance are key to minimising the spread of Panama TR4. This will be more important than ever as the disease continues to spread."

Grower response

Both the ABGC and BQ recognise that growers' rapid response to adopting 'come clean, leave clean' on-farm biosecurity protocols, from the outset of the first detection, has played a crucial role in the containment of Panama TR4 over the past

Former ABGC Chair Stephen Lowe said he applauded growers for the steps they have taken to improve their on-farm biosecurity, particularly infested property owners, which he credits with helping to stem the spread of the disease.

"From those that have implemented world-class procedures to those that have done as much as they can, collectively these actions have helped growers to not only protect their own businesses, but industry at large," Mr Lowe said.

"I have no doubt that it has contributed greatly to our efforts so far to contain this disease to just eight farms in eight years, and it will be key to continuing to manage the spread of TR4 into the future."

INVESTMENT PAYS OFF

The ABGC acknowledges that funding and support from government and industry over the past eight years has been – and continues to be – critical in the Panama TR4 fight.

- Queensland Government almost \$42 million to date invested to contain and manage Panama TR4 across the emergency response, the Panama TR4 Program, research and development, and feral pig control and coordination initiative. Looking for signs of the disease through surveillance on farms has been a significant component of this funding allocation.
- Federal Government \$1.5 million toward 1IP buyout, \$300,000 for ABGC grower training and undisclosed amounts including initial emergency response.
- Growers contributing levies of \$3 million to the buyout of 1IP; on-going funding for securing 1IP; and countless monies spent individually on on-farm biosecurity improvements and feral pig control.

ABGC leading for industry

In the eight years since Panama TR4 was first detected in the Tully Valley, the ABGC has played a pivotal role in industry's response.

Doug Phillips, who was chair of the ABGC at the time, recalled the challenging times in the initial stages of the outbreak, when the ABGC was navigating unchartered waters in response to the biosecurity threat.

"We (the ABGC) were the face of the industry, not only to government and other industry partners, but also back to growers," Mr Phillips said.

"We were the conduit for information to growers and that was absolutely critical in those early days. It was so important that early on growers had access to the latest information because it was a highly stressful, developing situation."

"And we pushed hard. We helped to convince growers that they needed to put on on-farm biosecurity, and that containment was the prime strategy. And, we convinced the Federal Government to assist in buying the first infected farm. All of those things were the result of the ABGC working hard in the best interests of growers."



Behind the scenes then ABGC CEO Jim Pekin and then ABGC Chair Doug Phillips worked hard to lobby government for TR4 funding, including TR4 extension and other assistance for growers. They also lobbied financial institutions to maintain confidence in the banana industry.

PROOF IS IN THE AWARD

BQ's Panama TR4 Program was recognised for its work protecting the banana industry, with a win at the 2020 Australian Biosecurity Awards.

The Program won one of three awards in the community category at the awards, recognising the delivery of significant biosecurity outcomes, raising awareness of biosecurity in the community and an outstanding contribution to protecting plant health.



The Panama TR4 Program was recognised for its work with a win at the 2020 Australian **Biosecurity Awards.**

GROWER ENGAGEMENT

Grower engagement has been a critical part of the containment and management strategy, and saw a close collaboration formed between BQ and the ABGC's communication teams. Many engagement activities involved growers themselves talking about their experiences with the disease as well as encouraging other growers to help in the fight against Panama TR4.



Dean Sinton, president of the Cassowary Coast Banana Growers' Association, was one of many growers who participated in the Panama TR4 Program's grower video series in 2020.

TACKLING FERAL PIGS HEAD ON

The battle to contain the spread of Panama TR4 has put a serious dent in the numbers of another feral pest that has long wreaked havoc across various agricultural commodities in the Cassowary Coast.

Knowing no boundaries and running rampant across farming land, the industry realised feral pig control was a critical part in keeping a lid on Panama TR4.

Tully banana grower and ABGC Chair Leon Collins has spearheaded efforts to control the feral pig population in the Tully Valley since Panama TR4 was detected in 2015.

"There's no doubt that pigs are spreading this disease," Mr Collins said. "They were in plague proportions and action needed to be taken to get the numbers under control."

Industry, government and the community

formed a working group to ensure a strategic, coordinated approach was taken to managing the problem.

The Panama TR4 Feral Pig Program is funded by key stakeholders including the Cassowary Coast Regional Council, Queensland Government, Australian Banana Growers' Council, Canegrowers and MSF Sugar, with a collaborative effort making the program a huge success.

"We were presented with larger numbers than we thought, but thanks to everyone doing their bit we made good progress," Mr Collins said. "We got 100 per cent uptake from growers at the start of the program — not many programs have that result."

Five strategies were used to manage the pigs including aerial shooting, trapping, ground shooting, exclusion fencing and baiting.

LIVING WITH PANAMA TR4

It's the words no banana grower wants to hear - "We have received notification from the laboratory that the plant sample taken off your property has returned a positive diagnostic result to Panama disease tropical race 4."

Tully Valley banana grower Gavin Mackay lived this in 2017 and reflects on the journey since receiving the life-changing news.

When grower Gavin Mackay reflects on receiving a positive Panama TR4 detection on his Tully Valley farm in 2017, he doesn't talk about the logistics and procedures, he talks about the people.

"We had a lot of really good people working with us," Mr Mackay said. "It allowed us to engage and interact more and provide people with a sense of responsibility. "You can't walk up every row — our people are our eyes and ears. So, engaging with all of our staff working in the field was very important."

"Everyone stepped up to the plate — we worked together, during a challenging time, to keep farming to the best of our abilities."

Mr Mackay is part of the Mackay family, the largest banana grower in Australia. He says that early identification, detection and treatment helped contain the disease.

"The buy-in from farmers in Australia has been really good," Mr Mackay said. "We're engaged and hands on and understand the necessity of being on the front foot with containment and control

"Without having a solution for the problem (Panama TR4) yet, early detection and treatment is key. Limiting and knowing who and what's coming and on and off your farm is important."

Mr Mackay said creating on and off procedures, limiting access to the farm via one access point and understanding what movements happen on and off your farm were important management decisions to consider.

"I think for those that don't have it, they need to put measures in place to protect their farms and remember that early detection, being proactive and getting your team involved on the ground is key."

Former Panama TR4 Program Operations Manager Donna Campagnolo said infested property growers showed great innovation to meet requirements.

"The infested properties are businesses and you're dealing with somebody's livelihood, so we have had to make good decisions quickly," Ms Campagnolo said.

"People need to return to trade as soon as possible, so they have had to develop their biosecurity practices to meet their legislative requirements.

"The new Act, the Queensland Biosecurity Act 2014, has allowed that to happen and has heightened the influence that growers can have on searching for solutions and outcomes.

"For example, the movement of trailer tops from one side of the road to the other.

"We have worked in unity with these growers and maintained great relationships with all the infested property owners. They have accepted their situation and have created innovative solutions for their individual farms."



Gavin Mackay received a positive Panama TR4 detection on his Tully Valley banana farm in 2017.

THE BATTLE CONTINUES

While the management of Panama TR4 has transitioned from government to industry, the battle to protect the heartland of Australia's banana industry is far from over.

The threat posed by the soil-borne disease remains high and growers and industry need to continue to be vigilant. It's a view shared by all stakeholders.

"Growers persevere in so many day-to-day challenges – adverse weather events, a global pandemic removing your workforce, fluctuating market prices, increased input costs and evergrowing regulatory expectations," former Panama TR4 Program Leader Rhiannon Evans said.

"Persevere with your biosecurity management plans. Keep your staff aware and compliant with your on-farm requirements. The benefits of perseverance are not ever immediately obvious, but you always know in hindsight it is worth it."



The children's book about Panama TR4 'Charlie goes bananas!' has received international interest.



Industry, growers and government have collaborated in the fight against Panama TR4.

Cassowary Coast Banana Growers' Association Chair Dean Sinton said no farm was safe from Panama TR4.

"I would say that training staff to know what the signs and symptoms of Panama TR4 look like is so important, because we know that early detection is key.

"Doing self-surveillance on your own property is vital if you want to find the disease early, and especially if you reside next to an infested property.

"If that was me, I'd be paying extra attention to my plants. We also know the current system of reporting suspect plants works, so we need to stick with it. Everyone's got to be vigilant because no one's safe from Panama TR4."



Australian Banana Growers' Council (ABGC) Chief Executive Officer Leanne Erakovic said banana growers were renowned for being resilient and adaptive.

"Panama TR4 has put these qualities to the test," she said.

"Continued effort and vigilance in disease management and containment are important, as well as growers taking a pro-active approach to on-farm biosecurity measures.

"It's in everyone's best interest to work together and we've proven we can do that successfully."



Former Panama TR4 Program Operations Manager Donna Campagnolo believes growers need to look after their own livelihoods first.

"It's up to you to protect your farm," Ms Campagnolo said.

"Stay vigilant, report anything suspicious and don't be complacent. Worry about your own farm first."

Reporting suspect plants

Since the disease was first detected in Queensland, one of the most important messages from the Panama TR4 Program has been to report suspect plants to 13 25 23. Records show that from 2018, 143 public reports of suspect plants for Panama TR4 were received. This includes growers selfreporting suspect plants, community members reporting possible sightings of Panama TR4 in commercial banana farms, and residential property owners reporting suspect plants in their home gardens.

The Queensland Government's Panama TR4 Program ceased on 30 June 2023, however supporting industry in its battle against Panama TR4 will continue past this date.

Stewart Lindsay, Team Leader, Banana Production Systems (DAF), said the investment into long term solutions such as finding resistant varieties and improving soil health would continue to be a priority for Queensland's research and development programs.

"This is a necessity if we are to minimise the impact of Panama TR4 on our regional communities, employment and economic viability," Mr Lindsay

"Our priority is for research outcomes to be relevant to growers, whether this relates to identifying agronomic solutions or on-farm biosecurity options.

"Our extension project team continues to work with growers and researchers to develop and implement improved biosecurity and other practices."

The Department continues to support the ABGC in the management of Panama TR4 through extension activities, research and development projects and by remaining to be the primary enforcer of legislation around the disease.

THE ROAD AHEAD FOR PANAMA TR4 MANAGEMENT

A MESSAGE FROM THE TR4 CONTROL PROGRAM MANAGER, GEOFF WILSON

Many wheels have been in motion since industry was appointed to lead disease management from 1 July this year.

Our journey to get to this point hasn't been a straight path. We're the first agricultural industry to undertake a disease management transition of this kind in Australia. It's a huge achievement, and a reflection of the hard work that's been contributed to the Panama TR4 control and containment efforts. I'm proud to say that the ABGC TR4 Control Program officially commenced on 1 July 2023.

Our team consists of 9 staff, a considerable downsize from the Biosecurity Queensland led Program.

Our surveillance team, Grower Support Coordinator, Jess Portch, and Surveillance Coordinator, Nat Hayward bring years of skills and experience working in the Panama TR4 arena.

Myself and our Communication and Engagement Officer, Skye Orsmond, have been working in the transition space with Biosecurity Queensland (BQ) and Jen McKee, our Senior Policy and Project Officer has previously worked for the Panama TR4 Program.

We're eager to deliver a robust surveillance program and work closely with growers and key

stakeholders on keeping Panama TR4 controlled and contained to the Tully Valley.

I'd like to take this opportunity to thank the Department of Agriculture and Fisheries (DAF) Biosecurity Queensland (BQ) team for establishing a great foundation for the banana industry to take the lead on disease management going forward.

The banana industry owes a debt of gratitude to DAF for their control and containment efforts in restricting it to the Tully Valley.

Growers also need to be congratulated, especially infested property owners. They have done a tremendous job in controlling this disease and the entire industry is grateful for their efforts.

ABGC appreciates the challenge in front of us in managing this disease.

We will continue to work in partnership with BQ in managing Panama TR4. We appreciate the trust that has been placed in us and for the opportunity to lead the management of this disease.

Please don't hesitate to get in touch if you have any questions or concerns.

TR4 CONTROL PROGRAM Protecting Australian bananas, together



TR4 CONTROL PROGRAM STEERING COMMITTEE FORMED

The Panama TR4 Management Board ceased to govern the Biosecurity Queensland led program on 30 June 2023.

ABGG's TR4 Control Program has formed a Steering Committee, with representation from Biosecurity Queensland, Department of Agriculture and Fisheries, ABGC and banana growers. The Program's Management Plan and supporting strategies were presented at the first Steering Committee meeting in mid-July.

MEET THE TEAM



Geoff Wilson Program Manager geoff@abgc.org.au 0418 644 068



Jen McKee Senior Policy and Planning Officer jennifer.mckee@abgc.org.au 0498 071 689



Jess Portch Grower Support Coordinator Jess.portch@abgc.org.au 0400 067 438



Natalie Hayward Surveillance Coordinator Nat.hayward@abgc.org.au 0455 526 797



Skye OrsmondCommunications and
Engagement Officer
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INFORMED CONSENT TO SHARE DATA

Before ABGC surveillance can commence, Biosecurity Queensland need growers to supply a signed informed consent form, to enable data captured from surveillance to be shared between the ABGC and **Biosecurity Queensland.**

This is an interim measure for the TR4 Control Program until legislation can be amended that allows ABGC to be the custodian of its data.

We have growers' best interests at the forefront of our operations, and information security is of paramount importance for the TR4 Control Program.

However, without consent, surveillance will not happen.

You'll be receiving a letter from Biosecurity Queensland in the mailbox. (Or you might have already received and returned it – thank

Please complete and return the paper form using the pre-paid envelope or you can send an electronic copy — either by a scan, or with a photo taken via your phone and emailed to panamatr4@daf.qld.gov.au. We can obtain a hard copy at a later date.

It's crucial we get your consent, so that we can continue to keep TR4 controlled and contained.

If you have any questions, contact Geoff on 0418 644 068 or geoff@abgc.org.au

We appreciate your support.

CODE OF PRACTICE - CHANGE TO APPLICATION OF BIOSECURITY REGULATIONS

'Code of Practice for the Management and Control of Panama disease tropical race 4 on an Infested Property in Queensland' replaces the requirements of the 'Notice of presence of Panama disease tropical race 4' and the Biosecurity Manual (destruction protocol) for infested properties.

From 1 July 2023, Biosecurity Queensland will no longer give a notice to properties that become infested with Panama TR4.

There is now a Code of Practice for the management of Panama TR4. This code is mandatory (adopted under Regulation) and applies to properties where the disease is known to be present. This code imposes mandatory biosecurity practices to control and contain the disease.

Banana Biosecurity Guidelines will apply to all other banana growing properties in Queensland. These guidelines have reasonable and practical steps that should be taken to minimise biosecurity risk associated with banana production in an area where Panama TR4 is present.

The code was developed in consultation with a working group of growers, government and the ABGC prior to release to banana growers for feedback.

The ABGC sees this, in association with the provisions provided under the Biosecurity Act 2014 (Act), as an important first step in empowering the industry to take charge and responsibility for their own biosecurity future, with support from BQ.

GET IN THE KNOW - TR4 E-LEARNING





Include a Panama TR4 refresher for staff in your next WHS session. E-learning modules for banana farm workers, banana farmers, service providers and community are a great tool to test your knowledge and keep on the front foot with everything you need to know about this destructive disease. Find the free e-learning modules under Resources at www.panamaTR4protect.com.au

ON-FARM BIOSECURITY ADVICE AND SUPPORT

Be prepared and ready for a detection of Panama TR4.

The National Banana Development and Extension team (Department of Agriculture and Fisheries, DAF) provides growers with support in the following areas:

- how to get started with your on-farm biosecurity
- assistance with your biosecurity plan
- how to be ready for a detection of Panama TR4.

To arrange a farm visit to discuss on-farm biosecurity contact Tegan Cavallaro on 07 4220 4152 or email betterbananas@daf.qld.gov.au.

For shed posters, information or assistance, get in touch with us at info@abgc.org.au



Dylan Smith Surveillance Team



Clancy Wone Surveillance Team



Brendan Ambrum Surveillance Team



CONTINUE TO REPORT SUSPECT PLANTS TO **BIOSECURITY QUEENSLAND** ON 13 25 23

Not pictured: Richard Wimbis, Surveillance Team.

Three additional surveillance team members will be recruited and trained in the coming months.

AUSTRALIAN BANANAS

LOOKING AHEAD: ADVERTISING SCHEDULE FOR REMAINDER OF 2023

Television

Role of Channel: Build mass awareness of Bananas.

Live dates: 7th August - 22nd October

Planned Reach: 3,216,056

Program Examples: Sunrise, Seven News, Home and Away.



Retail Online Media



Role of Channel: Drive purchase of Bananas across the online store as well as traditional retail

Live dates: 21st July - 19th November
Cartology Planned Impressions: 540,000
Coles Planned Impressions: 2,142,000

Catch Up Television

Role of Channel: Building top of mind awareness across premium programs on BVOD (Broadcast video on demand).

Live dates: 10th July - 30th Dec **Planned Reach:** 441,152



Radio



nova 96.9

Role of Channel: Create awareness and increase consideration of Bananas amongst Main Grocery Buyers.

Live dates: 31st July - 26th November **Planned Reach:** 5,330,544

2023 CHANNEL LIVE DATES:

	Channel		Television	Catch-up Television	Retail Online Media	Radio	Social Media
	Jul	3rd				7	
		10th				-2	
		17th				100	
		24th					
		31st					
	Aug	7th					
		14th					
		21st					
		28th					
		4th				4	
	Sep	11th					
		18th					
		25th					
	Oct	2nd				1	
		9th					
		16th				*	
		23rd					
		30th					
	Nov	6th					
		13th					
		20th					
		27th					
	Dec	4th					
		11th			9		
		18th					
		25th					

Social Media

Role of Channel:

Drive cost efficient reach.

Live dates:

3rd July - 30th Dec

Planned Reach Meta:

6,287,931

Planned Reach Tiktok:

1,875,000



JOIN THE TEAM FOR **NATIONAL BANANA DAY!**

To celebrate National Banana Day, **Australian Bananas is looking** for growers willing to 'pass the banana' as part of The Virtual Banana Day Relay.

Australian Bananas has enlisted Olympian Jana Pittman to lead the charge and make bodies right across the country sing. Banana lovers will be asked to grab their favourite fruit and film themselves being active (think skipping, dancing or running), before passing the banana 'baton' left or right. Participants will be encouraged to share the footage on social media, using #bananadayrelay for friends, family and followers to join in.

As part of the launch, and to inspire others to get involved, Australian Bananas wants to create a short two-minute video to show how growers are getting involved, alongside Jana Pittman.

The ask: Record video content of you holding a banana and being active any way you choose – it could be in the packing shed or the paddock, or it could be your favourite form of exercise (from footy to hula hooping, whatever floats your boat!) Then simply pass the banana off to your left or right side.



More info: For an example, tips and details as to where to upload your video, visit www.abgc.org.au and follow the links. Please upload your video by 13 August.

HORT INNOVATION AT CONGRESS

A team from Hort Innovation provided an update on marketing as part of Banana Congress 2023. The focus was on the transformation of the Australian Bananas marketing program, with CEO Brett Fifield also sharing an update on Hort Innovation more broadly and Marco Silva (from NielsonIQ) crunching the numbers for a market overview.



a marketing panel featuring (from left to right): Gillian Reilly (Head of Consumer Marketing, Hort Innovation), Belinda Van Schaik (Marketing Manager, Hort Innovation), Andre Krogh (Head of Customer Marketing, Hort Innovation), Jane Smith (General Manager of Marketing, Hort Innovation) and Daniel Mackay (Mackays Marketing).



HARVEST TO HOME

Growers can view recent banana retail performance by visiting www.harvesttohome.net.au

The interactive dashboard provides a market overview including, but not limited to, household buying behaviour, dollar sales growth and volume growth, compared to the broader fruit category.

Through a Hort Innovation multi-industry, levyfunded project with contributions from the Australian Government, the data is provided by Nielsen Homescan®, a continuous panel of 10,000 households who record all takehome packed and fresh grocery from all retail outlets. The sample is demographically and geographically representative of the Australian household population.

TULLY SH

Banana exhibit: 28-29 July, 2023

















RESULTS

Champion Bunch 1st JR & V Dickinson 2nd Sellars Bananas

Champion Plant Bunch 1st Sellars Bananas

2nd Reidy's Bananas

Heaviest Bunch 1st Reidy's Bananas 2nd R & V Dickinson

Heaviest Plant Bunch 1st JR & V Dickinson 2nd Mackay's Mullins Rd

Champion Lady Finger Bunch 1st Valley View Bananas 2nd Hull River Bananas

Champion 12kg Lady Finger Carton 1st Valley View Bananas 2nd Hull River Bananas

Champion Pair of Ratoon Bunches 1st Jarra Bend 2nd Mackay's Sth

Davidson

Champion Pair of Plant Bunches 1st Sellars Bananas 2nd Mackay's Ranch Rd

Champion Ex-Large Carton (Hands) 1st Di Carlo's Bananas 2nd M & G Dunne

Champion Large Cluster Carton 1st Sellars Bananas 2nd JR & V Dickinson

Champion Cluster Carton 13kg 1st Sellars Bananas 2nd R & V Dickinson

Champion 15kg Cluster Carton Hand 1st Sellars Bananas 2nd Mackay's Mullins Rd **Champion Hand** 1st Jarra Bend 2nd Flegler Group

Champion Pair of Hands 1st Di Caro's Bananas 2nd Flegler Group

Heaviest Hand 1st Flegler Group 2nd JR & V Dickinson

Best 6 Singles 1st Jarra Bend 2nd Flegler Group

Heaviest Single 1st Sellars Bananas 2nd JR & V Dickinson

Heaviest Freak 1st Di Carlo's Bananas 2nd Mackay's Mullins Rd

Best 3 Clusters 1st Sellars Bananas 2nd Flegler Group

Open Heaviest Bunch 1st Reidy's Bananas

Open Heaviest Plant Bunch 1st JR & V Dickinson

Champion Carton (Tully District) 1st Sellars Bananas 2nd Sellars Bananas

Champion Bunch (Tully District) 1st JR & V Dickinson 2nd Sellars Bananas

Most Successful Exhibitor 1st Sellars Bananas 2nd JR & V Dickinson

Stewards' Bunch 1st Jarra Bend 2nd0 JR & V Dickinson

INNISFAIL SHOW

Packing competition and banana exhibit

12-13 July, 2023























RESULTS

Class 1: Champion **Ratoon Bunch**

1st Sellars Bananas 2nd JR & V Dickinson

Class 2: Champion **Plant Bunch**

1st Reidys Bananas P/L 2nd Jarabend

Bananas Class 3: **Heaviest Ratoon** Bunch

1st Reidys Bananas P/L -64.50 kg 2nd Reidys Bananas P/L - 63.35 kg

Class 4: Heaviest **Plant Bunch**

1st IR & V Dickinson -41.35 kg 2nd Reidys Bananas P/L - 31.50 kg

Class 5: Best Two **Ratoon Bunches**

1st Sellars Bananas 2nd Nourish Banana Co.

Class 6: Best Two **Plant Bunches**

1st Reidy's Bananas P/L 2nd Reidy's Bananas P/L

Class 7: Champion Carton of Hands, Ex Large

1st Di Carlo Bananas 2nd M & G Dunne

Encouragement Award

JR & V Dickinson

Class 8: Champion **Cluster Carton Extra** Large 13kg in 6 per layer carton only

1st Sellars Bananas 2nd JR & V Dickinson

Encouragement Award

Tropical Horticulture

Class 9: Champion **Cluster Carton Large** 15 kg in 6 per layer carton only

1st Tropical Horticulture 2nd Sellars Bananas

Encouragement Award

Jarabend Bananas

Class 10: Best three (3) Clusters

1st JR & V Dickinson 2nd Sellars Bananas

Class 11: Champion Hand

1st Sellars Bananas 2nd IR & V Dickinson

Class 12: Heaviest Hand

1st JR & V Dickinson 2nd Sellars Bananas

Class 13: Champion **Pair of Hands**

1st Di Carlo Bananas 2nd JR & V Dickinson

Class 14: Heaviest Banana (Any Variety, can be Freak)

1st Woopen Creek Bananas 2nd Reidy's Bananas P/L

Class 15: Best Carton of Ex Large Hands -**Any Other Variety**

1st Woopen Creek Bananas 2nd Woopen Creek Bananas

Class 16: Open **Heaviest Ratoon** Bunch

1st Reidy's Bananas -79.55 kg

Class 17: CHAMPION **LADY FINGER BUNCH**

1st Woopen Creek Bananas 2nd Woopen Creek Bananas

Class 18: Most Successful Exhibition on Aggregate Points 1st Reidy's Bananas P/L

Most Outstanding Exhibit

Reidy's Bananas P/L

