Australian

BANANAS

Issue: 62 | AUGUST 2021

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32

CONTENTS

Issue: 62 | AUGUST 2021

REGULARS

INDUSTRY NEWS

BANANA FEATURE

RESEARCH

WATER QUALITY

BANANA EVENTS

Front page: Benny Banana and NRL legend Billy Slater at Banana Congress 2021 in Cairns.


34


50


51

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CEO COLUMN

Jim Pekin, CEO

It's been six-and-a-half years since Far North Queensland had its first detection of Panama tropical race 4 (TR4) and, as at 31 July, it had been detected on four other FNQ farms.

ABGC's Position

ABGC's position remains the same as it was when the disease was first detected in the Tully Valley in February 2015 – to contain the disease as best as possible; to buy time for industry to put in place biosecurity measures and for research to hopefully provide some viable options.

The ABGC Board continues to support a surveillance strategy and regulatory compliance, which includes rapid destruction of, and exclusion, from destruction zones. The longer this approach continues, the better protected the industry will be from TR4 spreading more rapidly. Obviously, this is not without its costs and the infested property owners are to be thanked for their dedication and the financial commitments they have made to contain the disease and protect the rest of industry.

The Cost Sharing Deed signed on 30 June 2020, between the ABGC and DAF, commits both industry levies and Biosecurity Queensland (BQ) resources to the TR4 Program until 30 June 2023, after which industry will lead the disease's management.

DAF and ABGC Cost Sharing Deed

Financial Year	19/20	20/21	21/22	22/23
Industry Share (%)	10	25	40	50
Industry $'s (m)	0.4	1.0	1.6	1.6
DAF Share (%)	90	75	60	50
DAF $ (m)	3.6	3	2.4	1.6
Total Budget ($'s)	4	4	4	3.2

BQ's Chief Biosecurity Officer has clarified that the current TR4 Program has a limited lifespan and will cease on 30 June 2023. However, a new industry-led program (currently being devised) will roll-out after this date.

What the Program looks like will depend on funding and on where the disease has spread to by then. But, industry will need alternative dedicated funding to fund areas like regulatory and diagnostic services, under an industry-led scheme.

At this stage, ABGC is planning to lead and run a Program in two years that has approximately half the current $4m/year spent.

Scenarios

Possible scenarios include:

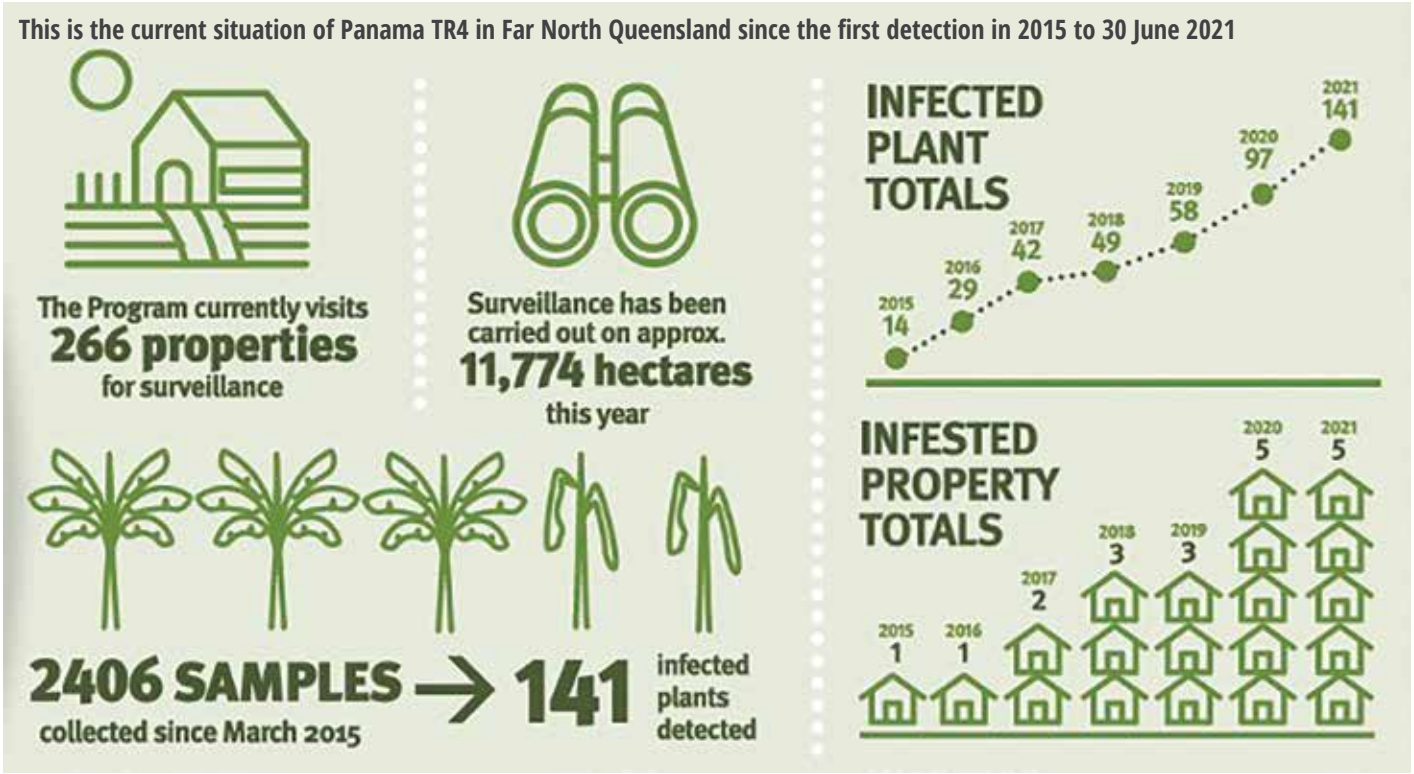
1. Status quo: gradual increase in TR4 positive farms in Tully
2. Rapid escalation in Tully
3. Detections in other FNQ districts

Unfortunately, the third scenario above is always a possibility and therefore we should also plan for such an event. The advice to growers continues to be, be prepared for TR4 to spread – for example, by having biosecurity measures in place on your farm.

As the scientists have advised from the start, *Fusarium* moves at a tortoise pace, unless man, animal or floodwaters help it along. We also know its spores survive decades in soil, so it could be found some time later in a patch that has not had bananas for quite a while. No one knows how it came to Tully. But we do know that people and machinery moved freely within the region before 2015.

So our best advice is to do everything in your power to stop this disease from coming onto your farm, by implementing effective on-farm biosecurity practices.

This is the current situation of Panama TR4 in Far North Queensland since the first detection in 2015 to 30 June 2021



CHAIR COLUMN

Stephen Lowe, ABGC Chair

Hard times, but industry will bounce back

There is a poignant quote by Canadian author and organic farmer Brett Brian, it is: *"Farming is a profession of hope".*

I, like most others, can relate to this quote, as it sums up farming in six simple words. Whether it's good times or bad, farming is always about hope. In the best of times, we hope our run of good fortune continues. In the not so good times, we lay awake at night, hoping for a miracle to turn our despair around.

At a time when our industry continues to grapple with nationwide worker shortages, the impacts of natural disasters, various compliance issues and consecutive years of low prices, hope has never been more front of mind.

It's no secret morale amongst most growers is low (particularly since COVID) and our resilience is again being tested, in some ways, like it never has been before.

But we are growers. And, we will always keep up the good fight. After listening to mental health advocate Mary O'Brien present at Congress in Cairns earlier this year, I hope everyone is looking out for one another and checking-in to make sure everyone gets the support they need, even if this is a simple phone call.

I don't usually like to dwell on negatives in this column, but I think with our current stack of challenges in front of us likely to continue it's necessary to acknowledge these and make sure we unite as an industry to move forward into more prosperous and less challenging times.

With that, I'll end this section with a quote from John F. Kennedy which sums up our reality to a tee and highlights the fundamental challenges we face as an industry every day.

"The farmer is the only man in our economy who buys everything at retail, sells everything at wholesale, and pays the freight both ways."

TR4 transition

As mentioned by our CEO Jim Pekin in his Page 4 column, complete transition to an industry-led TR4 program is less than two years away.

Developing a framework for this transition is progressing well, thanks to work being undertaken by new Industry Transition Leader Geoff Wilson, the Australian Banana Growers' Council, government and industry.

Geoff was appointed by the ABGC to work with growers and the TR4 Program to develop a clear way forward to plan for the future management of the disease.

All growers are encouraged to have their say on this framework by calling Geoff on 0418 644 068 or email geoff@abgc.org.au.

To read more about recent activities that have been undertaken to ensure this transition is delivered as smooth as possible, on time and on budget, go to Pages 40 and 41 of this magazine.

Congress

Earlier in this column I mentioned the 2021 Congress, which was one of our biggest and most successful on record and I'd like to thank all those who attended and supported the event, particularly our growers.

I know it's difficult to get away from our farms, but Congress does offer a great chance to catch up and relax, while gaining some learnings to take back home from two days of presentations delivered in our plenary program, developed by a dedicated Program Committee.

Finally, I'd like to make special mention and give thanks to our valued sponsors. Without your support, Congress simply wouldn't be possible. I hope you also enjoyed our 2021 event and I hope to see you all again in 2023!

FY2021 produced a bumper year

The Australian banana industry sold the second highest ever production in 2020/21, based on levy dollars collected by the Government.

The 403,000 tonnes in 2020/21 was surpassed only in 2016/17 with 414,000 tonnes.

Years ending 30th June (in '000 tonnes):	
2013	341
2014	371
2015	371
2016	393
2017	414
2018	388
2019	372
2020	382
2021	403

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

BANANA LEVY RATE

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 industry.
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).

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: Jim Pekin, CEO, ABGC: Email - jim.pekin@abgc.org.au Phone – 07 3278 4786. More info on the levy rate: https://www.agriculture.gov.au/ag-farm-food/levies/rates/bananas

REEF HEARING

The chair of the Australian Banana Growers' Council has again argued that Best Management Practice is a better approach to improving water quality than reef regulations.

Stephen Lowe gave evidence to a Queensland Parliamentary committee hearing examining the introduction of a Bill by Member for Hinchinbrook Nick Dametto (Katter's Australia Party). The Bill sought to repeal all amendments made to the Environmental Protection Act 1994 by the state government in 2019 – namely the regulations around minimum standards for managing soil and nutrient loss from farms and new cropping land.

Mr Lowe told the hearing, held in June, that prior to regulation the majority of banana growers already had high environmental outcomes and excellent farm practices.

"As an industry, we've been reducing the amount of nutrient applied to crops over the last 10-15 years, driven by Best Management Practice," he explained. "We can apply on an as-needed basis – just a little every so often."

He also outlined increasing consumer demand for good environmental practices and the fact that at least one major retailer requires growers to be accredited to the Freshcare Environmental program before they will accept fruit.

Mr Lowe pointed to the Scientific Consensus Statement for the Great Barrier Reef which showed the banana industry contributed just 4 per cent of the overall loss of dissolved inorganic nitrogen in the Wet Tropics. He noted the Statement showed bananas had no impact in the Cape York-Lakeland region and again called for growers in that area to be excluded from regulation.

"We've worked closely with the Department as an industry and we're happy that government has listened to requests for their minimum rates to align with BMP. But those minimum rates are only a best guess – more research needs to be done and the regulation has gone ahead regardless."

When asked whether there was a middle ground to be reached, Mr Lowe responded that the market is the best mechanism to establish standards and therefore Freshcare Environmental accredited growers should be exempt from the regulations.

Mr Lowe was supported by the ABGC's Strategy Manager Michelle McKinlay.

There is another public hearing on September 3, with a report to be handed down in October, however it unlikely the Bill will pass in the current Parliament.

The ABGC's chair Stephen Lowe and Strategy Manager Michelle McKinlay appeared at a Parliamentary hearing on reef regulations in June.

GRANTS FINALLY AVAILABLE TO HELP GROWERS RECOVER

In July, four months after Tropical Cyclone Niran, growers were finally able to access disaster relief grants of up to $75,000.

The ABGC had previously raised concerns about the delay in opening the application process after more than 100 banana farms were damaged in March.

"We were pleased to see this was eventually rectified and growers can now access these much-needed funds," ABGC CEO Jim Pekin said.

The grants can help cover costs associated with equipment or materials, clean up, removing debris, and replacing fencing. The full amount is available through two applications – an initial amount of up to $15,000 and a subsequent amount of up to $60,000.

"Many affected growers are still in recovery mode and will be for months to come. These grants will go some way to easing the severe financial burden imposed by this natural disaster and other challenges currently facing industry."

Applications for the grants close on December 17, 2021.

Growers should visit the Queensland Rural and Industry Development Authority website for further details and to access application forms: https://bit.ly/3wJza2H

PIECEWORK RATES STILL UNDER SCRUTINY

At the time of going to print, the Fair Work Commission's hearing of the Australian Workers Union application to vary the Horticulture Award regarding piecework rates had almost wrapped up.

The NFF and the NFF Horticulture Council (of which the Australian Banana Growers' Council is part) are jointly contesting the application which seeks to:

(1) place a 'floor' on piece rate arrangements to see that a pieceworker is guaranteed at least minimum hourly earnings; and

(2) require employers to maintain a record of all piece workers' hours.

Over four days from 13-20 July, via video conference, the FWC heard evidence from both sides. Witnesses were cross examined about how and why they use piece work rates and the impact a floor price would have on their businesses and incomes.

Written closing submissions (in chief) were under way in the last week of July with a half-day hearing scheduled for July 30. The FWC will then reserve its decision. It remains unclear as to when the commission will hand down a decision.

TR4 EPI REVIEW IN FINAL STAGES

An Epidemiological Review (Review) which was commissioned by the Panama TR4 Board earlier this year is in its final stages. From the Review, its authors have presented key recommendations to the Board and infested property growers who were consulted with as part of the investigation. The Board is considering all of the recommendations and will produce a response that will be published alongside the Review. All stakeholders will be notified when the report and recommendations are available.

CHEMICAL UPDATES

Mancozeb permit extended

The minor use permit for Mancozeb (Tatodust) for use on banana bunches to control banana fruit speckle has been renewed until 2026.

Growers had been waiting on this news after the permit originally expired in March this year.

The permit is valid in NSW, NT, QLD and WA. Further details can be found on the APVMA (Australian Pesticides and Veterinary Medicines Authority) website.

Chemical reviews

The dithiocarbamates (e.g Mancozeb) have been prioritized for review by APVMA since 2015. Recently completed reviews by the European Union and Canada have resulted in many of the use patterns being deleted or significantly amended. Given the outcomes internationally, Australia may follow these trends once an Australian review is finalised.

Other products being targeted internationally for re-evaluation include chlorpyrifos (e.g Strikeout, Suscon, Lorsban), clothianidin (Shield), and some of the leaf spot chemicals in the triazole group and chlorothalonil.

New Products/ uses

Sumitomo has applied to register a new fungicide active ExcaliaTM (Inpyrfluxam) (group 7) for the control of yellow sigatoka in bananas.

SLAB A SIGN OF WORK TO COME

Work is progressing at the New South Wales-based variety trial site in Alstonville, with a slab marking the start of construction of a shed to be used for fruit processing and data collection.

The shed will be completed by the end of this month (August), with an irrigation system to follow.

The new project will screen banana varieties for their resistance to Fusarium oxysporum f. sp. cubense Race 1, as well as collect data associated with their agronomic characteristics and performance within a subtropical climate. Varieties found to possess commercially acceptable levels of resistance to Race 1 will proceed to further trials to look at consumer acceptance and post-harvest procedures.

As the trial site will be used to screen banana varieties for their susceptibility or resistance to Panama Race 1, an important first step was to determine whether there was any Panama disease (Race 1 or subtropical Race 4) already present. In order to achieve this, 30 plants each of Williams Cavendish and Ducasse were planted across the site at the start of December 2020. To date, 10 plants of each variety have been assessed to check for evidence of Panama disease with no plant showing any symptoms so far. If the disease is not found onsite then Panama Race 1 will be cultured to inoculate the site.

At this stage, there a number of varieties that will be tested. Keep an eye on ABGC and NSW DPI communications for more in coming months.

NSW DPI Banana Industry Development Officer Tom Flanagan on the new shed slab.

TAM JOINS THE ABGC

ABGC welcomes new extension officer Tamaya Peressini to the Best Practice Team.

Tamaya (or Tam) grew up in Cairns and is pleased to be back in the Tropics after living in Canberra for the last two years. Tam has just finished her graduate role at the Australian Centre for International Agriculture Research (ACIAR), where she worked with Tony Pattison on integrated management of TR4 in Laos.

From there she got the banana 'bug' and is keen to learn more about the industry and its challenges in Australia. Before working at ACIAR, Tam completed a Bachelor of Plant Science at the University of Queensland. Tam is looking forward to working with banana farmers and helping them work towards their best practice goals.

SCIENCE SYMPOSIUM

Australia's top banana scientists gathered in Brisbane in April to share the latest research helping to protect and improve farming of the nation's favourite fruit.

Over the course of two days, more than 30 scientists delivered updates to an audience of almost 80 people on a range of topics including Panama disease, diagnostics, consumer acceptance and pest management.

The fast-paced, informative presentations were broken up with networking opportunities, allowing the vast community of researchers to develop relationships and share ideas.

Stewart Lindsay is the Team Leader for Banana Production Systems with the Queensland Department of Agriculture and Fisheries. He, along with his project team of Tegan Kukulies, Ingrid Jenkins, Shanara Veivers and Rob Mayers – with the ABGC's Dr Rosie Godwin – organised the event under the banana plant protection project.

"If you went back even 6 or 7 years, the banana research community in Australia was relatively small," Mr Lindsay said. "Now in 2021 you only have to look at the staff from 11 different agencies and universities that are here now to know there's a lot more plant protection work going on in bananas. And we organise these events because of concerns from funding agencies and industry that those scientists working in banana research now aren't necessarily engaging with each other as much as they could, which means they might be missing opportunities to collaborate or share their findings. Not that they have to, of course, but we shouldn't miss those opportunities. It's really about better interaction and communication, hoping that we can expand projects and collaboration, ultimately to improve research outcomes for the banana industry."

Not only is the banana industry now investing more money in plant protection, the success of the previous Scientific Symposium in 2018 – conveyed via word of mouth as well as through project networks – meant a surge in attendance for 2021. While COVID-19 prevented some people from being there in person, it also provided an added incentive to make the most of a rare chance to catch-up.

"I think one of the reasons we have nearly 80 participants this time is that people haven't had the opportunity to travel, to go to international conferences or even mingle for a long period of time," Mr Lindsay said.

Scientific Symposium: Australia's banana researchers gathered in Brisbane in April to share updates, ideas and network.

"We had a lot of strong feedback when we asked people if they wanted us to do this symposium completely online – we got a resounding 'no, let's wait' as they really wanted to meet in person. It's the networking that matters. It's about building people's knowledge, but it's also equally about building those relationships and networking."

The event itself is not designed to replace any interaction or opportunities to share research with growers. Rather, it's a forum for the scientific community to talk among themselves – scientists talking with scientists about the science.

"People embraced the opportunity to network and openly share their work," Mr Lindsay said. "I commend everybody for the spirit in which they've participated."

Mr Lindsay also paid tribute to the Plant Protection project team for their 'mammoth' efforts in organising this year's event.

Lilia Costa Carvalhais (University of Queensland) and Hazel Gaza (QLD Department of Agriculture and Fisheries)

Tom Flanagan (NSW Department of Primary Industries), Rob Mayers (QLD DAF) and Ingrid Jenkins (QLD DAF)

Richard Piper (QLD DAF) and Zac McKeever (NSW grower)

Jay Anderson (Southern Cross University) and Rosie Godwin (Australian Banana Growers' Council)

Hort Innovation
Strategic levy investment
BANANA FUND

This project was funded by Hort Innovation, using the Hort Innovation banana research and development levy, co-investment from Queensland Government and contributions from the Australian Government. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.

Queensland Government

INNISFAIL GROWERS ON PANAMA TR4 MANAGEMENT

Mandatory biosecurity, ongoing education and incentive programs were some of the suggestions given to the Panama TR4 Program's Management Board by Innisfail growers at a focus group meeting.

The Panama TR4 Program Management Board convened a focus group of Innisfail growers to inform the future direction of Panama disease tropical race 4 (Panama TR4) management. The workshop was part of a broader series of engagements to gain insight into areas of most concern to growers.

The group of fifteen growers were provided a scenario that Biosecurity Queensland (BQ) was about to announce a new disease detection on an Innisfail farm. It then posed the question, 'what information or assistance would you need in response to this scenario?'

The feedback suggested that not all growers feel informed about the requirements of an infested property. The Board also noted a varying level of understanding about the management of Panama TR4 in general.

Following this discussion, the Board is now considering a focus on service providers' awareness of their general biosecurity obligations and a new series of communication and engagement initiatives.

Program Board Chair and Biosecurity Queensland's Chief Biosecurity Officer, Malcolm Letts, was grateful for the honesty of everyone in the room and asked that all growers continue to feed information to the Board as an ongoing concern.

"We welcome any grower, at any point, to contact us about challenges they're having with biosecurity and put forward ideas which might help protect our communities from Panama TR4," said Mr Letts.

The Board's series of in-person engagements commenced with an open invitation to a meeting at the Innisfail Brothers Leagues Club in October 2020. Earlier this year was a meeting with infested property owners to understand their perspective of living with Panama TR4. And an open invitation was delivered in a presentation at the Australian Banana Industry Congress for growers to provide input to the future management of the disease.

CEO of the Australian Banana Growers' Council and Program Board member, Jim Pekin said that the transition of Panama TR4 management to industry by July 2023 is high on the Board's agenda with an extensive grower consultation process being planned.

"Growers will soon be consulted on a Draft TR4 Management Plan under industry leadership.

"Throughout the consultations we hope to discuss

Innisfail growers at a focus group workshop with the Panama TR4 Program Management Board

that Plan with a cross section of the industry, within targeted geographical production regions, demographics, property size and biosecurity levels. This will help us to identify differing perspectives on the future plan for TR4 control and containment. "

The Panama TR4 Program Management Board first convened in April 2020 to jointly fund, deliver and govern the strategic direction of the Panama TR4 Program until 2023. Comprised of equal government and industry representation, the Board gives the industry an opportunity to make key decisions on the future management of the disease, and to lead an effective and efficient Program.

Growers are invited to contact Geoff Wilson, ABGC Industry Transition Leader on 0418 644 068 regarding the future industry leadership of the the TR4 Program.

PANAMA TR4 WORKING GROUP DISCUSSES FUTURE LEGISLATIVE OPTIONS

The Panama TR4 Board's Transition to Industry Working Group recently met with specialists to discuss the legislative framework for industry's management of Panama TR4.

The Panama TR4 Program's Transition to Industry Working Group are considering a range of legislative options for future disease management.

The Group recently met with specialists to deliberate on key issues including ease of industry's understanding of requirements and what elements of control and containment are essential for regulatory compliance.

Opening the workshop was Australian Banana Growers' Council (ABGC) Industry Transition Leader, Geoff Wilson who set the challenge to identify a framework that will manage the disease spread while being grower-centric, scalable, and flexible. The framework should also support a continued focus on surveillance and empower growers to protect from disease, as well as continue to operate with the disease.

"We tested several scenarios against the biosecurity legislative tools available, to best support industry to take leadership in managing Panama TR4," said Geoff.

The Transition to Industry Working Group is chaired by ABGC CEO Jim Pekin with representatives from Biosecurity Queensland and ABGC.

Panama TR4 Transition to Industry Working Group with subject matter experts gathered at South Johnstone's DAF Research Station to workshop legislative tools for banana disease management.

THE REALITY OF

COVID WORKER CRISIS CONTINUES

Banana businesses of all sizes have been hard hit by ongoing pandemic-related worker shortages.
The situation is constantly changing. Here, four growers share their experience so far.

By Amy Spear

Alarm bells started sounding more than 18 months ago. As COVID-19 made its way across states, countries and seas, many Australian industries raised concern about a potential decline in their available workforce.

Agriculture – including the banana industry – was at the front of that charge, warning that the impacts of reduced mobility could be dire.

While everyone agrees that health must come first, the impact of worker shortages on many banana businesses has now become a devastating reality.

Growers have been dealt severe financial blows and are making critical decisions about what to prioritise on their farms – some choosing to cut down fruit they have no staff to process, others cutting back acreage and production.

But, through it all, there's a sense of soldiering on, appreciation for staff who have stayed and an acceptance that some things are simply out of anyone's control.

Franziska Inderbitzin

Franziska Inderbitzin, of Swiss Farms, has serious concerns for the future of the industry.

"There's so much uncertainty out there and our industry is so labour intensive," she said. "If we can't find the right staff then I think there's a real risk we won't be viable."

The Inderbitzins place huge value on a positive workplace culture and struggled with the COVID-related labour shortages for months, after the pandemic hit.

"Financially, we were at risk. We couldn't keep up with our work in the longer term. Quality suffered, we had a drop in production and we had to reduce acreage – it had a big impact," she explained.

Thankfully, they have recently been able to secure more workers through on-farm quarantine, a process Ms Inderbitzin describes as a 'huge undertaking'.

For the Inderbitzins, the most challenging part – aside from the financial outlay – was simply getting approval in the first place. Ms Inderbitzin spent weeks on the phone trying to find the right people to answer her questions, before eventually beginning the paperwork and inspection process to set up their facility.

"We got through it and we learned a lot. Horticulture – and farming generally – needs people on the ground now. The Federal Government has released figures showing 4.9% unemployment, but despite all the incentives we simply haven't got any more people. Now, there's changes to the Working Holiday Visa (so holders are not obliged to work in agriculture) – that's another big loss."

Ms Inderbitzin believes a dedicated Agriculture Visa could provide some relief, but details from Federal Agriculture Minister David Littleproud's recent announcement are still to be released. And it's the detail she believes will be crucial to its success.

Essentially – if growers decide to bring in employees using this new visa, they should be prepared to commit to providing a good working environment through a scheme like Fair Farms and, in turn, have the workers commit to their business for a longer period of time. The relationship may result in the workers being sponsored, providing more stability and continuation of learned skills in an industry that operates 52 weeks of the year.

This concept would also help to ease an additional burden facing growers who use the SWP and PLS, with some workers absconding without repercussion.

"A lot of our current permanent staff have been sponsored. You get to know the people, you work with them, they are happy to be here. It's a great relationship and I've got staff who have been here 10 years now because of that original visa," Ms Inderbitzin said.

"You can't get locals attracted to banana work. With the people we have here now we're trying to improve their skills and take them to the next level. And that's the problem with other schemes – people go home after a few months and there's constant change.

"So some jobs that are really important on the farm, they're more suited to permanent staff on a long-term basis."

WORKER SHORTAGES

Andrew Serra

Andrew Serra has spent a lot of time on the phone over the past 12-months. While this isn't unusual for most business owners, it's the subject of those phone calls that has changed.

"We've been working with [labour hire company] Madec non-stop," he said. "I've been on the phone with them every second day, just pushing."

Mr Serra, who grows bananas and avocados, has been looking for workers since this time last year. He's managed to get by with current staff but describes the situation as a constant battle. Thankfully, he's now secured a number of seasonal workers through both the hotel and on-farm quarantine systems.

"I know a number of farms who use these workers and have got very few people currently. The turnover is massive and it's draining on the farm owners, obviously, but also on their support staff and management team.

"From our experience, it's not only us but also our supervisors and managers who have been struggling since Christmas."

Mr Serra describes the current situation as an employee's market. The few that are looking for work can pick and choose, and agriculture is often far down their list of desirable jobs.

"Look at the changes to the Working Holiday Visa," he said. "If you had the choice between working in a bar on Hamilton Island or humping bananas, what are you going to do? I know what I'd be doing in that situation and I don't blame them," he said.

This also means he has concerns about what the future holds, when more workers do come back to Australia. He foresees a trickle down effect, where other industries and jobs in agriculture will need to fill before the workers begin to arrive back in bananas.

Like Ms Inderbitzin, he points to the unemployment rate as a sign that while locals are always welcome, there are not a lot of them seeking out work on banana farms.

"That's a pipe dream," he said. "The Government can put all the incentives they want out there, but it's not going to change."

For Mr Serra, part of the solution lies in working with authorities to set up more quarantine hubs and ensuring appropriate vaccinations are available to those coming from COVID-free countries to work.

"Unfortunately, though, it's going to be a user pays system," he said. "The days when you could pick up a worker fresh into the country, without having to pay for quarantine or anything else, are likely done for the next few years at least.

"Some can afford it, some can't. I understand that. It's a commercial decision people will have to make."

It's not a cheap decision – hotel quarantine, for example, works out at roughly $2,000 a person. But after going through the process, there's a little light at the end of the tunnel – productivity and the workplace culture have improved.

It's not over yet, though. There's always going to be competition with other industries and backpackers can pick and choose their path.

With many banana businesses struggling, particularly those that are smaller, Mr Serra's advice is to work with reputable Approved Employers to give you the best chance of accessing new workers arriving into the country.

Leon Collins

Leon Collins is one of the country's biggest banana producers and, up until recently, had been struggling to find staff. He's had to leave fruit in the field as there simply weren't enough people to process it.

"You – and your staff – can only do so much," he said. Now, they've secured a number of workers from the Pacific Islands but are still chasing people for the shed and packing lines.

"Being such a labour intensive industry, that's where we fall down. We're not mechanised, we're not like grain farming in South Australia or big, open broadacre cropping areas. We are intensive and we employ a lot of labour, 12 months of the year."

Mr Collins hasn't seen worker shortages like this since the 1970s, but believes visas are a good place to start.

Like other growers, he has concerns about the changes to the Working Holiday Visa which is likely to see potential employees diverted to other industries like tourism and hospitality.

"In saying that, there are people who want to get in, be part of a team, nurture something and watch it grow. We've had people come back after 12 months for another stint of work and take photos of the patches they've been involved in planting."

"COVID is a total mess," he said. "We're struggling, and it's affecting lots of industries, but we'll get through it."

Steve Lizzio

For Steve Lizzio, the impact of pandemic-related worker shortages was not what he pictured.

"I thought I would lose more temporary staff, but I actually lost some of my more senior employees," he explained.

"Even though it wasn't a lot of workers, that's where it hurt me. They were either offered jobs at bigger businesses for more money, or COVID meant a change of lifestyle for them."

Mr Lizzio, of Liverpool River Bananas and MBL Bananas Mission Beach, lost a few other workers along the way but has retained some key staff who have pulled him through.

"It has been tough trying to replace those people – in fact, I haven't been able to do so yet. A couple of my staff have stepped up and they're doing quite a good job," he said.

"I think sometimes you've just got to let 2-3 people do the job of one. You're always learning as a boss and delegation is key to where I'm at now. It comes with time."

Mr Lizzio has also felt competition from other industries, including mining who are also keen for workers. "You can't hold your staff back," he said. "It's been difficult on a number of levels."

He acknowledged a solution may simply take time, but is concerned that as the end of the year approaches, the industry will be hard hit again. Like many growers, he's joined the waitlist for SWP/PLS workers and believes they are a great addition to anyone's workforce.

"There's hope that scheme will continue rolling out – after all, you're only as good as the workforce you have."

INCENTIVES FOR BANANA WORKERS IN WA

The Sweeter Banana Co-Operative took a risk when trying to secure their workforce – and it's one that's paid off so far.

At Banana Congress 2021, the Co-Operative's Business Manager Doriana Mangili spoke about how they'd used a $100,000 cash flow boost from the Federal Government (designed to help businesses employ people during the pandemic) to provide bonuses to their staff.

The Co-Operative, which is also considering employing students, relies mostly on backpackers (and some locals) to maintain their business.

"In the winter we generally lose staff because they don't get as many hours. We wanted to keep those staff for summer, so we set aside that $100,000 to use as bonuses."

Throughout July and August last year, Sweeter paid staff for an extra five hours a week. From then on, they offered bonuses that reached $1000 in January, February and March.

While they suspected they'd get some productivity benefits from this approach, the results as at March had well and truly proved it.

Though the Co-Operative had paid more than $80,000 in bonuses , it had only cost them $13,000 based on a wages per carton figure.

"As soon as we started paying them five hours extra to 'not work', they started doing three-and-a-half days in two-and-a-half," Ms Mangili said.

They've also been able to retain staff, which has had efficiency benefits and reduced the need to retrain.

The Co-Operative plans to take a similar approach this financial year but knows that even incentives like this aren't necessarily enough to keep people in one place for an extended period of time.

"This year is going to be a bigger challenge than last," she added.

ABGC ADVOCACY CONTINUES

The ABGC continues to work with growers, Approved Employer groups and relevant government agencies to help improve access to seasonal workers through the Seasonal Worker Program (SWP) and Pacific Islander Scheme (PLS).

However, there remains severe roadblocks to alleviating worker shortages, including a dire lack of quarantine options and recent changes to working holiday visa arrangements.

With the situation ever evolving, the ABGC will continue to do its best to keep growers well informed of all new and emerging developments via its usual communication channels. Get all the latest updates on the ABGC's dedicated Workforce Shortages and Job Vacancies page at https://abgc.org.au/workforceshortages-jobvacancies/

The page includes a number of resources to help guide growers through the current crisis, including guidelines for quarantine of PLS and SWP workers, visa updates and a Banana Jobs Noticeboard to advertise jobs for farm work. The Jobs Noticeboard – found at https://abgc.org.au/bananajobs/ continues to have a strong visitation rate. In the two months from 1 June to 1 August, the page had more than 1200 views.

SWP/PLS REVIEW WRAPS UP

The Australian Government's six-week consultation process on the future arrangements for the SWP/PLS closed Sunday 18 July.

Prior to that date, the Australian Banana Growers' Council's Executive Officer, Leanne Erakovic, met with a range of stakeholders to provide member feedback on the programs. This feedback also fed into the NFF Horticulture Council's submission.

At the time of going to print, it was unclear when the results of the review would be made public.

PLEA TO RETHINK VISA CHANGE

The Australian Banana Growers' Council has called on the Australian Government to rethink an announcement made by Immigration Minister Alex Hawke in June that altered conditions for backpackers.

Minister Hawke changed the rules for those backpackers seeking to extend their Working Holiday Maker visa to second and third years, allowing them to complete their 88 days work not just on farm but also now in the tourism and hospitality sectors across northern and remote Australia.

ABGC Deputy Chair Leon Collins noted that this was likely to mean even less access to staff for banana growers than the critically short situation now.

"The Australian Government needs to review and overturn the Minister's decision immediately," he said.

"Agriculture is continuously touted as critical to surviving this pandemic and our economic recovery. Right now, it's hard to see this reflected in any solid policy.

"There are ongoing challenges in recruiting staff for the banana industry, which is largely based in Far North Queensland, as a result of the COVID pandemic and travel restrictions."

The ABGC also called for effective industry consultation and greater transparency in policy making on this long running visa program and related matters.

CASH BONUSES LURE WORKERS IN #PICKQLD CAMPAIGN

The Queensland Government is helping to lure workers to take up farm jobs across the state, with cash bonuses of $1500 on offer as part of its #pickqld campaign.

The scheme kicked off on 1 June, 2021 and is available to workers 16-years and older, including Queensland and interstate residents, or any individual with the right to work in Australia including visa holders.

The cash bonuses are paid in two instalments, on top of the worker's weekly wage. An initial $500 will be paid after 10 days work within a consecutive 28-day period (4 weeks) and a second and final payment of $1000 will be paid after 30 days of additional work within a consecutive 70-day period (10 weeks).

The #pickqld bonus has been designed to support Queensland's Economic Recover Strategy, to accelerate the state's recovery from COVID-19.

For more information go to; https://www.qld.gov.au/about/pickqld

Enjoying the outdoors and making some great extra cash over the recent school holidays were Far North Queensland youngsters Hamish Foster and Cooper Kleemann. If you are a school leaver or a student looking for work in the next school holidays local banana farmers would love to hear from you. Australian banana farms with jobs currently available are advertised on the ABGC Banana Jobs site.
Go to; https://abgc.org.au/bananajobs/

PEST AND DISEASE PREVENTION IN THE TORRES STRAIT

ABGC directors Leon Collins and Andrew Serra visited the Torres Strait Islands in recent months to provide grower perspective on a disease prevention project.

Two of the Australian Banana Growers' Council's North Queensland directors, Leon Collins and Andrew Serra, recently visited islands in the Torres Strait as part of a disease prevention project funded by the Federal Government with contribution from the ABGC.

The project was particularly focussed on surveillance for leaf diseases with the Islands obviously in close proximity to the major Australian production areas in Far North Queensland.

Mr Collins spent time on Boigu Island, while Mr Serra visited Mer Island, providing industry perspective on the control of disease and sharing their production expertise with local landholders and leaders.

Mr Serra said his role, in an initial visit early in the year and most recently in June, was to show locals how to look after their banana plants to minimise the impact of disease.

"I was showing them how to deleaf as that is the only effective control for leaf diseases – that, or get rid of the plant altogether. But that can be sensitive as bananas have been grown on Mer Island for thousands of years. It's not a new thing – well before European settlement they used to trade the fruit and became known for it."

In the Torres Strait, there are no commercial plantations but there are plenty of backyard plantings.

"It's in our industry's best interest to try and reduce the presence of pests and disease so there's less risk of them moving to Far North Queensland. TR4 should teach us that disease can move around," Mr Serra added.

The project, being led by consultant Dr Ron Glanville will produce a report on the way forward later this year. In the meantime, the ABGC Board has resolved to continue the ABGC's extension role in the region to assist with future containment and prevention measures.

Mr Collins said the people on Boigu Island were keen to talk to growers and get hands-on advice. "They're really keen to listen and learn," he said.

"It wouldn't be hard to control leaf diseases on Boigu, but keeping them out will be a challenge. Someone could be on Boigu and travel to Cairns in a day – it's part of Australia after all. And it's going to be a big problem if exotic ones get to Far North Queensland."

It's a sentiment Mr Serra shares.

"Working with Torres Strait Islanders, a program to deleaf and keep their bananas clean would help."

Mr Collins said they've already developed some good relationships, but getting people on the ground to work with local landholders regularly will be key.

The ABGC plans to continue to work with local landholders and relevant government agencies to improve disease management and banana production in the Torres Strait.

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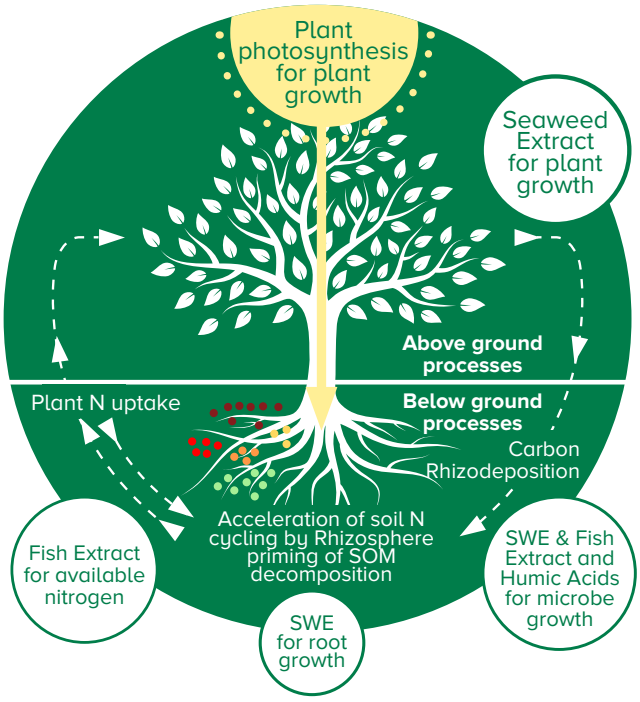

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FIRST RATOON RESULTS FROM THE TR4 VARIETY

PART 1: THE MAIN TRIAL

By Sharl Mintoff[1], Samantha Cullen[1], Chris Kelly[1], Maxine Piggott[1] and Jeff Daniells[2]
[1]Northern Territory Department of Industry, Tourism and Trade, Darwin, NT
[2]Queensland Department of Agriculture and Fisheries, South Johnstone, QLD

Eight varieties in a banana variety trial in the Northern Territory have demonstrated better resistance to TR4 than Formosana which include two Cavendish selections being considered for the next phase of pre-commercialisation trials. Three of the hybrids from the CIRAD breeding program in the French West Indies displayed better resistance than Goldfinger.

The final disease assessments for the banana variety trial in the Northern Territory (NT) were completed in August 2020. This trial is part of the 'Improved plant protection for the banana industry' project (BA16001). The overall trial screened 32 varieties (including three reference varieties) and assessed their resistance to Panama disease Tropical race 4 (TR4). The trial ran for 20 months with most of the surviving varieties completing their first ratoon crop cycle.

As a reminder, this trial was split into two parts, previously referred to as "Main trial" and "Sub-trial" owing to a shortage of plants of the CIRAD breeding program parental lines that were included. For the sake of clarity we have chosen to report the results as two separate articles – one in this magazine and one in the next edition. Here in Part 1 (Main trial) we focus on the results of the Cavendish lines, CIRAD hybrids and some miscellaneous selections, categorising their performance based on resistance or susceptibility to TR4. Part 2 (Sub-trial), in the next edition, will focus on the CIRAD parental lines. The plant crop results for this trial were reported in the August 2020 edition of *Australian Bananas* (pp 20-21).

METHODS

All plants in this trial were artificially inoculated at planting with TR4 colonised millet. Three reference varieties acted as control treatments for comparison, Williams – Very Susceptible; Formosana (GCTCV 218) – Intermediate; and Goldfinger (FHIA-01) – Resistant, as their reactions are well known and act as a reference point for the other test varieties.

Disease assessments were carried out fortnightly once external symptoms became apparent in a susceptible variety. Assessments included noting the appearance of external disease symptoms and internal symptoms at plant death or harvest.

Disease performances of a particular variety were given a score and grouped into one of the following categories:

Highly Resistant (HR) – No disease symptoms were observed within the crop cycle and may not show symptoms under high inoculum pressures.

Resistant (R) – Plants normally show no signs of infection in the presence of the pathogen. However, under high inoculum pressures low amounts of symptoms or losses may occur.

Intermediate (I) – Plants which can withstand some infection and suffer low losses under natural infestation conditions, with most completing their crop cycle. However, its susceptibility or resistance can be highly dependent on the inoculum pressure already present. With the appropriate crop management or environment to lower the inoculum levels, these should be commercially viable.

Susceptible (S) – More than 50% of plants show symptoms and/or killed due to pathogen infection.

Very susceptible (VS) – Majority of plants (more than 70%) showed severe symptoms, most of which died due to TR4.

RESULTS

Interestingly there appeared to be a reduction in disease severity observed across the first ratoon crop compared to the plant crop, with dramatic shifts occurring for a couple of varieties (Table 1).

Highly Resistant

CIRAD 03 and CIRAD 04 retained their resistance seen in the previous crop cycle continuing to be classified as highly resistant into the first ratoon. Dwarf French Plantain moved up into this category with no disease symptoms noted in the ratoon crop.

Resistant

Varieties Asia Pacific No.1 and CIRAD 05 both displayed low incidences of TR4 infection in the first ratoon moving them down into the resistant category. GCTCV 105 and GCTCV 217 (Figure 1) both moved up into the resistant category after displaying a slight reduction in disease development in the ratoon crop. The resistant reference Goldfinger remained in this category.

Intermediate

Asia Pacific No.3 moved down into this category due to an increase in plants infected with TR4 in the ratoon crop cycle. CIRAD 06 and High Noon, showed a dramatic reduction in the number of affected plants in the ratoon crop moving them up from very susceptible (in the plant crop) into the intermediate category.

Susceptible and Very Susceptible

Varieties that were deemed susceptible within the first ratoon crop cycle included Hom Thong Mokho, Pisang Ceylan, PKZ and the CJ19 Selection. The intermediate reference variety Formosana displayed an increase in disease severity in the first ratoon crop and as a result was moved down into the susceptible category. The susceptibility of the very susceptible reference variety Williams did not change.

CONCLUSION

Generally, the focus of the NT screening trials is to identify resistant varieties, especially those that display similar or better resistance than Formosana, as it is used as the benchmark for the lowest acceptable level of resistance. In this trial eight varieties demonstrated better resistance than Formosana, which include Cavendish and CIRAD lines.

The Cavendish selections Asia Pacific No.3 and GCTCV 217 both performed better than Formosana against TR4 and have also performed fairly well agronomically in north Queensland, so they are being considered for on-farm pre-commercialisation trials in 2022. There were 2 other Cavendish with intermediate or resistant reactions: the Asia Pacific No.1 plants were all tissue culture

SCREENING TRIAL IN THE NORTHERN TERRITORY

offtypes (very slow and low yielding), whilst the fruit of GCTCV 105 was too short in South Johnstone trials, with significantly less fruit in the currently required size range for market.

The continued good performance of Dwarf French Plantain against TR4 is encouraging for the few commercial producers of this type of niche variety. The CIRAD lines 03, 04 and 05 all had outstanding resistance against TR4 across the 2 crops which is very encouraging for the French breeding program. However, growers must understand that these are not Cavendish and so the fruit they produce does not slot readily into the current market requirements. The plants are taller making them more difficult to manage and subject to greater wind damage.

Although apparent "recovery" occurred in some varieties within the first ratoon crop, a degree of caution is required when interpreting these results, particularly in the case of CIRAD 06 and High Noon. Although the results of those two varieties are very interesting, this would need to be investigated further to determine how repeatable such a recovery is, and whether indeed, it would continue into later ratoon crops.

Table 1. Resistance rating of trial plants in plant crop and first ratoon

Variety	Description	Rating	
		Plant	Ratoon
CIRAD 03	Novel hybrid	HR	HR
CIRAD 04	Novel hybrid	HR	HR
CIRAD 05	Novel hybrid	HR	R
Asia Pacific No. 1	Cavendish (slow offtype)	HR	R
Dwarf French Plantain	Cooking banana	R	HR
Goldfinger	**Resistant TR4 reference**	**R**	**R**
Asia Pacific No. 3	Cavendish	R	I
GCTCV 217	Cavendish	I	R
GCTCV 105	Cavendish	I	R
Formosana	**Intermediate TR4 reference**	**I**	**S**
CIRAD 06	Novel hybrid	VS	I
High Noon	Lady Finger hybrid	VS	I
Hom Thong Mokho	Gros Michel style; ex Thailand	VS	S
Pisang Ceylan	Mysore group	VS	S
PKZ	Highgate? Hybrid	VS	S
CJ19 Selection	Cavendish ex N. Qld	VS	S
Williams	**Very susceptible TR4 reference**	**VS**	**VS**

HR = highly resistant, R = resistant, I = intermediate, S = susceptible, VS = very susceptible

Figure 1: Representative resistance for certain Cavendish varieties exposed to TR4 in the first ratoon. Williams displayed prominent disease symptoms with leaf yellowing, necrosis and evental death. The majority of plants for the resistant varieties GCTCV 107 and 217 displayed no symptoms during first ratoon.

Hort Innovation Strategic levy investment | BANANA FUND

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

BEST OF THE BEST - DAF'S GOLDFINGER MUTAGENESIS TRIAL ENTERS ITS THIRD PHASE

By Katie Ferro, Jeff Daniells and Ashley Balsom, Queensland Department of Agriculture and Fisheries

The top five selections out of the original 630 Goldfinger variants grown at South Johnstone have been identified for consumer acceptance evaluation.

Where it all began

Goldfinger was one of the varieties (along with CJ19, Dwarf Nathan, GCTCV 215 and GCTCV 119) included in the mutagenesis component of Queensland DAF's BA14014 project 'Fusarium Wilt Tropical Race 4 Research Program'. For the latter Cavendish varieties, we sought improved production qualities like shorter plants and faster crop cycles, whilst with Goldfinger we aimed to create a variant which possessed more favourable fresh eating characteristics.

In 2017, 630 gamma-irradiated Goldfinger plants were established at South Johnstone with observations made on their individual agronomic and post-harvest performance over the following 12 months. Subsequently, 20 variants, which rated highly in the selection criteria, were chosen for further screening in phase two. A more detailed summary of this early trial work can be found in the August 2018 and April 2019 editions of Australian Bananas.

Narrowing it down from the top 20

Following the selection of the top 20 variants, sucker and bit material from the original trial was planted in September and October 2019.

Bunches began emerging from the more established plants in March 2020 and continued throughout the year; the final harvest was performed in January 2021. Data was again collected on both agronomic performance and eating characteristics to substantiate the findings from the first investigation.

The taste panelling occurred once a week, with a maximum of six variants tasted in one session (including a Goldfinger and a Lady Finger 'Dwarf Rossi' as control samples to compare against). Panellists included colleagues who volunteered to taste the fruit under "controlled" conditions at the research station and the family members and friends of those who took fruit home.

Each variant was tasted 3 – 4 times over the six-month trial period, except for variant 423 (which was only tasted twice due to late bunch-emergence). Taste preference was ranked on a hedonic scale, which included the following categories: 1 = dislike extremely, 2 = dislike very much, 3 = dislike moderately, 4 = dislike slightly, 5 = neither like nor dislike, 6 = like slightly, 7 = like moderately, 8 = like very much, and 9 = like extremely.

Dwarf Rossi, the Lady Finger comparison, scored the highest overall rating (at 6.8) of all the varieties included in the taste panelling (Figure 1), corresponding with 77% of respondents indicating they would purchase it if it were commercially available (Figure 2). This was closely followed by variant 521, which was the best performer out of all the Goldfinger variants with an average rating of 6.5.

Several comments were made that this variant had similar eating characteristics to a Lady Finger. The Goldfinger control was rated poorly, 4.7 on average, with 255 the only variant below it at 3.7. Variants 211, 544, 144 and 903 joined 521 in making up the five selections given the highest overall eating experience rating, and which also had the greatest number of people answer 'yes' to the question: "if this fruit was commercially available, would you choose to purchase it?"

The plant heights of all the selected variants were not significantly different from the 3.1 m Goldfinger average. The total fruit yield was also comparable to the average Goldfinger bunch (27.3 kg) for three of the selected variants, while the other two were 15 -20% lower.

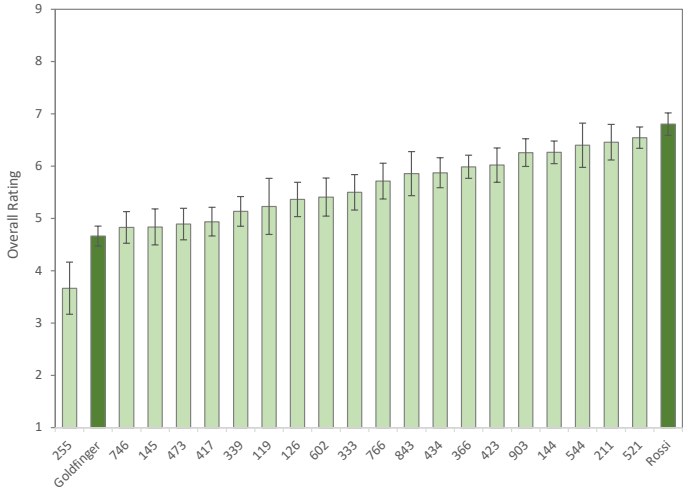

Figure 1: The average overall rating given to the variants across several taste panels (where 1 = dislike extremely, 5 = neither like nor dislike, and 9 = like extremely). The bars represent the standard error of the mean. Dwarf Rossi is a Lady Finger-type control included in the panelling as a reference variety.

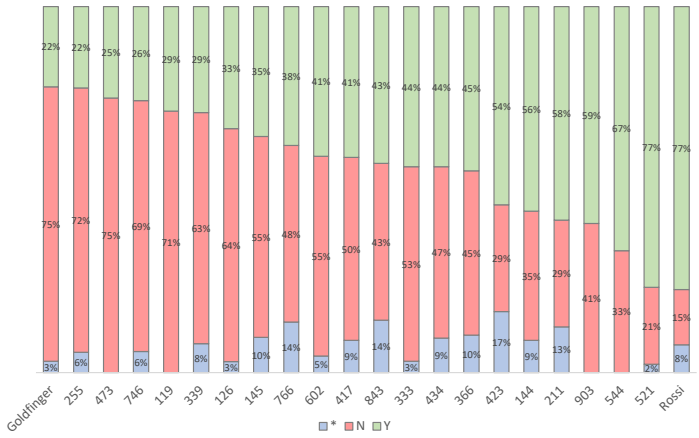

Figure 2: The percentage of respondents in the taste panelling who answered 'yes' (green) or 'no' (red) to the question, *"if this product was commercially available, would you choose to purchase it?"*. The remaining category (blue) are the instances where the question was left unanswered.

There were a couple of variants with undesirable characteristics which had gone undetected in the original selection of top performers. For example, several plants from one variant had severely fused fingers – to the point where several hands in a bunch were unusable.

Another variant had fruit which retained a green-tinge upon ripening. The relatively tall (3.5 m) and thin pseudostem (54 cm) of another contributed to two of the ten plants snapping before bunch maturity; its brittle pseudostem also made harvesting difficult. Such issues prevented these three variants being pursued further.

Entering phase III

Plants were nurse-suckered in December 2020 and the first bunches began emerging in June 2021. Agronomic data will again be collected from all variants, but only fruit from the top five performers will be sent down for consumer and sensory evaluation at DAF's Coopers Plains facility in Brisbane later in the year.

Here, a much larger tasting panel will be engaged to assist in identifying which variants are the most well-received by consumers and have the best market prospects for the future. Planting material is also in the process of being sent to the Northern Territory, where field trials will confirm the variants have retained Panama disease resistance before they are included in DAF supervised pre-commercialisation trials carried out on farms in north Queensland.

Bunches of the five variants selected to progress into the next phase of the investigation, along with the Goldfinger control.

For more information about the trial including earlier results see the Better Bananas website https://betterbananas.com.au/2018/04/17/gctcv119-mutagenesis-work-2/

Hort Innovation Strategic levy investment | BANANA FUND

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KEEPING BANANA SOILS RESILIENT IN A CHANGING CLIMATE

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

Climate extremes impact on banana growers everywhere, whether it be cyclones, heat, drought, or waterlogging. To reduce production losses "climate-smart" practices are needed.

The added threat of Panama disease, a soil-borne disease, is increased when bananas undergo environmental stress. To help maintain plant health, soil health needs to be a priority.

Maintaining a healthy soil microbial community is a major contributor to healthy soils. However, environment and farm management practices can adversely reduce the stability of the soil microbial community.

To assess the stability of the soil microbial community, it is important to understand the microbial community's resistance and resilience to stress. Resistance (RS) is the ability of the microbial community to remain unchanged during a disturbance (Figure 1). On the other hand, resilience (RL) is the ability to recover and bounce back after stress.

We investigated the impact of heat stress on microbes in banana soils with different nitrogen rates. Banana soils treated with equivalent to 0, 300, and 500 kg N/ha/yr were exposed to 40 °C heat for 15 days before being allowed to recover (Figure 2). We then measured the changes in microbial community composition at regular time points.

High nitrogen inputs left the microbial community less resistant to heat stress (Figure 2). The abundance of microbes decreased after exposure to heat. Furthermore, the microbial community was less resilient. Even after 30 days the microbe number did not return to the pre-disturbance level in soils with high nitrogen inputs.

Additionally, the activity of enzymes produced by the soil organisms was reduced during heat stress in soils with more applied nitrogen (Figure 3). This indicates that important soil functions, like disease suppression, rapidly decline when exposed to heat. However, the enzyme activity quickly recovered, after the heat stress in soils with more nitrogen. The recovery was due to more available nutrients from the dead soil organisms, which allowed those organisms that survived the heat to rapidly multiply.

This study demonstrated that applying high amounts of nitrogen to soil reduced the microbial stability in response to stress. Therefore, careful use of nitrogen is one practice banana growers can use to develop climate smart farm practice to reduce environmental impacts on their production.

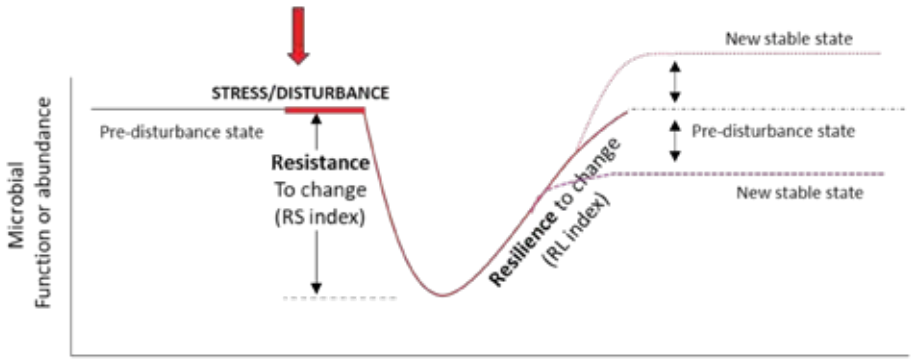

Figure 1. Schematic representation showing the effect of environmental stress or disturbance on the resistance and resilience of microbial function or abundance. (Adapted from Griffiths and Phillipot, 2013).

Figure 2. Soils with different rates of nitrogen incubated in a 40 °C oven.

HEAT STRESS	Microbial activity			Microbial abundance		
	0N	300N	500N	0N	300N	500N
During Resistance (RS)	✓✓✓	✓✓	✓✓	✓✓✓	✓	✓
After Resilience (RL)	✓	XX	✓✓	✓✓✓	x	X

Colour key:

Positive index value
Negative index value

Figure 3. Heatmap of the resistance and resilience of microbial activity and abundance in soils with different rates of nitrogen. The intensity of the colour green denotes how close to an index value of +1 that indicates full resistance or full recovery. The intensity of the colour red orange denotes how close to an index value of -1 that indicates lack of resistance or recovery. The ✓ implies it's a good quality and X implies a poor quality. The number and size of ticks or crosses indicates its high or low values.

This project was funded by the Qld Horticulture and Forestry Science Department, with contributions from the Australian Centre for International Agricultural Research (ACIAR).

MICROBES MATTER: BANANA FARMING IMPACTS ON SOIL ORGANISMS

By Tony Pattison and Hazel Gaza, Department of Agriculture and Fisheries (DAF) and Henry Birt and Paul Dennis, University of Queensland

Bananas are an important part of the tropical north Queensland landscape.

Not only are bananas found in commercial plantations, but there are "wild bananas" found in surrounding rainforests (Fig 1).

We can make use of the wild bananas, along with other land uses in the area like rainforests, pastures and sugarcane, to determine the impact banana farming has on soil microbial communities.

Twenty sites for each of the four main land uses were selected in a focused area between Silkwood and Babinda in north Queensland. The soil collected from each site underwent an extensive microbial examination of bacteria, fungi, and nematodes.

The amount of soil organisms (biomass) was halved in agricultural soils, either banana or sugarcane, compared to rainforest or pasture soils (Figure 2 and Table 1). Furthermore, the profile of the nematode community was significantly different between the land uses. There were less fungal feeding nematodes in banana soils and more plant-parasitic nematodes, compared with the rainforest, pasture and even sugarcane soils.

The results seen in the nematode community were mirrored in the bacterial and fungal communities, with reduced fungal diversity in banana soil. Furthermore, in the banana soil there was a dominance of *Fusarium oxysporum* fungi. Although *Fusarium oxysporum* was found in the wild bananas, it was nowhere near as dominant as it was in soil from banana farms.

Further, testing of the soil, by growing a susceptible banana inoculated with Panama Disease Race 1, showed that the Panama disease was more severe in plants grown in banana soil compared with banana plants grown in rainforest soil.

Overall, the results highlight that banana farm management practices have reduced soil microbial diversity, particularly fungal diversity. The loss of fungal diversity makes the soil more prone to development of soil borne diseases.

The loss of soil microbial diversity is dramatic, but the organisms remaining in the soil can still offer some protection to bananas from soil diseases.

When all the microbes are removed, through soil sterilisation, there is an even greater chance for pathogens like Panama disease to dominate the soil and cause more severe disease.

By understanding how farm management practices have changed the soil microbial community, we can develop a better idea of what we need to do to correct it. Farm practices that maintain good soil health and microbial diversity, like soil pH management, careful nutrient management and good ground cover, can all help to suppress soil borne diseases like plant-parasitic nematodes and Panama disease, and maintain productive bananas.

Fig 1. Wild bananas found in the rainforest of north Queensland

Table 1: Differences in soil microbial measurements under four different land uses in the banana growing region of north Queensland




	Natural	Semi-natural	Sugarcane	Banana
Plant parasitic nematodes	Low	Low	Mod	High
Fungal-feeding nematodes	High	Moderate	Moderate	Low
Total microbes (biomass)	High	High	Low	Low
Fusarium oxysporum	Low	Low	Mod	Very High

Fig 2. Soil sampling in a commercial banana plantation in north Queensland

REDUCE YOUR CARBON FOOTPRINT WITH QUALITY NITRATE FERTILISERS

Yara can help farmers reduce their carbon footprint by utilising environmentally friendly production methods for nitrate based fertilisers.

Yara Crop Nutrition Commercial Director – Australia and New Zealand, Michael Waites, says nitrate fertilisers are the most efficient and reliable way of delivering nitrogen to a wide range of agricultural crops.

"Compared to urea or ammonium, nitrate is more quickly absorbed by the plants roots, facilitating faster plant uptake," Michael says.

"Plants capture large amounts of carbon dioxide during growth.

"Applying the correct fertiliser at the right amount and time helps to optimise biomass production and carbon dioxide uptake per hectare.

"While this carbon dioxide fixation is only short-term because most of this biomass is consumed as food or feed, increasing the efficiency of agricultural production can free up more land for bioenergy production without impacting food security.

"Replacing fossil fuels with bioenergy has the potential to reduce carbon dioxide emissions by up to 80 percent.

"Increasing the productivity of existing agricultural land helps to reduce pressure for further land-use change, which contributes about 12 percent of global greenhouse gas emissions."

Yara is one of the world's leading producers of nitrate fertilisers, including the widely-used YaraMila range of compound NPK fertilisers.

A recent innovation is the YaraRega range of water-soluble NPK fertilisers that are suitable for delivery via simple irrigation systems or broadcasting before irrigation or rainfall.

Michael says Yara is committed to becoming carbon neutral by 2050.

"We've already reduced the carbon footprint of our nitrate fertiliser production by 40 percent by making our production plants and processes among the most energy-efficient in the world," he says.

"Our ammonia plants are energy-efficient and continuously improving, leading to lower natural gas consumption and less carbon dioxide emissions. Our nitric acid plants are among the best for greenhouse gas emissions thanks to the development and adoption of catalyst technology.

"This technology significantly reduces emissions of nitrous oxide – a potent greenhouse gas – associated with the production of nitric acid.

"Yara has shared this technology, which is considered best practice by the EU, with the rest of the industry, which has helped to significantly reduce the carbon footprint of nitrate and urea production in Europe compared to other countries.[1,2]

"Yara's ongoing development of 'green' ammonia technology and climate-smart agricultural practices means we're on track to reduce emissions by another 30 percent within a decade."

'Green' ammonia technology uses renewable hydrogen sources instead of fossil fuels to produce ammonia.

Yara is constructing one of the world's first industrial-scale renewable hydrogen plants in the Pilbara region of Western Australia in partnership with ENGIE, a global low-carbon energy and services group.

Other local initiatives include partnership with the Farm Waste Recovery and drumMUSTER packaging recycling programs, and implementing fully-recyclable polyethylene bottles for its YaraVita micronutrient foliar fertilisers.

Yara is committed to the development and adoption of integrated crop nutrition solutions, innovative decision-making tools and climate-smart agricultural practices that maximise the efficiency of fertiliser application.

References: 1. Brentrup, F., *et al.* (2018). Updated carbon footprint values for mineral fertilizer from different world regions. 11th International Conference on Life Cycle Assessment of Food 2018 (LCA Food) 17-19 October 2018, Bangkok, Thailand. 2. Hoxha, A. & Christensen, B. (2018). The carbon footprint of fertiliser production: Regional reference values. Proceedings 805. International Fertiliser Society Conference 8 May 2018, Prague, Czech Republic.

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Quality nitrate fertilisers from Yara can optimise the yield and quality of crops – and significantly reduce the carbon footprint of your farm. We've already reduced the carbon footprint of our nitrate fertiliser production by 40% by making our production plants and processes among the most energy-efficient in the world. Our ongoing development of 'green' ammonia technology and climate-smart agricultural practices means we're on track to reduce emissions by another 30% within a decade and carbon neutral by 2050. Contact Yara and find out how our integrated crop nutrition programs can deliver better agronomic, business and environmental outcomes for your farming business.

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MAJOR SUCCESS IN FERAL PIG CONTROL EFFORTS TO CONTAIN TR4

It's been four years since a concerted feral pig eradication program began in the Tully Valley, in Queensland's far north, to help fight the spread of Panama TR4 and the results are quite remarkable.

From the air, now, not only are the number of wild pig populations noticeably reduced, but areas of land once littered with pig wallows, crop damage, erosion and general environmental destruction are visibly regenerating.

The co-ordinated feral pig management effort has been led by the Australian Banana Growers' Council (ABGC) and has involved aerial shooting, as well as ground shooting, baiting, trapping and exclusion fencing in high-risk, TR4 zones across the Tully/Murray Valley catchment.

ABGC deputy chair Leon Collins and professional shooter Trevor Williamson have co-ordinated the Cassowary Coast Panama TR4 Feral Pig Program since July 2017. In that time, Mr Collins said more than 6300 pigs have been culled from the area, including almost 2900 through aerial shooting.

"It's been more successful than we ever thought it would be," Mr Collins said. "We didn't realise the true severity of problem, until we started."

"It's no wonder the farmers were having such pig pressure, because the numbers of pigs out there was much more than what we thought. And the normal methods that we used in the past (to reduce pig populations) just weren't keeping up with the numbers."

Mr Collins said that initially many doubted whether the program would work. However, with the support of growers, it's resulted in substantial outcomes. Since July 2017, growers have also conducted their own ground-based pig control methods, such as baiting and trapping - at significant financial costs – suppressing pig numbers on their farms by more than 3400.

"It has been a team effort right from the word go between growers and industry. And the reason it's been so successful, is the people involved are dedicated to the cause."

"We had our knockers who said it wouldn't work in the Wet Tropics. (They said), 'You can't do it. There's too much rainforest, and you can't shoot on farms', and we proved them wrong pretty quickly."

While controlling feral pigs is seen as crucial to the containment of TR4 – having been identified as being a vector in spreading of the disease – the program has resulted in other important beneficial outcomes to the environment, crops and surrounding wildlife. As the animals often emerge from nearby National parklands, to feed and wallow on farms, as well as along creek beds and rivers, erosion and water quality have been drastically improved.

"The landscape is a lot cleaner now, particularly next to the World Heritage land. Sedimentary run-off has been reduced in a massive way, particularly in the top of the (Tully) Valley, you can see how pristine the creeks are running now and also into the river, and it's because of the less pressure from pigs," Mr Collins said.

"Another important benefit has been the increase in cassowary numbers, because there has been less predation of cassowary eggs and their young," he said.

Mr Williamson, who has been a key component in the co-ordination of the aerial shooting program with Mr Collins, said it was essential the program continued to maintain control of pig numbers.

"We are at a crucial point where the majority of the hard work has been done and we can more easily maintain these low numbers now," Mr Williamson said.

"When we started, we were shooting every weekend, but recently we have been doing every six weeks to two months on these farms. But we need to maintain these numbers, and in order to maintain this level, we need to cull 70 per cent of numbers consistently."

"Pigs reach sexual maturity at around 25 kg, so as soon as they reach 25kg they are up to that reproductive size. So, it is a massive achievement for the banana industry to do what it has done, because people just do not understand how hard it is to control feral pigs."

At this time, the aerial shooting component of the program is funded by the ABGC and growers, as the three-year program with the State Government has come to an end. It's hoped that government will provide further financial assistance to the banana industry to continue to manage feral pig populations.

Fence lines and tree lines once littered with large pig wallows (left) are now lush green paddocks (right) as a result of feral pig control measures.

More evidence of farmland recovery, with large pig wallows from 2017 (pictured left) compared to rejuvenated paddocks (pictured right) due to reduced pig pressure.

FRESHCARE TICKS REEF REG BOXES

By Kathyrn Dryden, ABGC

Growers who have done their Freshcare Environmental accreditation are enjoying less paperwork and less chance of a compliance visit amongst other benefits.

Thanks to a collaboration between Freshcare, the Australian Banana Growers' Council, and the Queensland Government, growers are now eligible to become "Reef Assured" through their Freshcare Environmental accreditation to demonstrate compliance with Reef Regulation requirements.

Over 60% of banana growers in the Great Barrier Reef Catchment are already committed to protecting the Great Barrier Reef through the Freshcare Environmental accreditation program.

Minister for the Environment and the Great Barrier Reef Meaghan Scanlon congratulated Freshcare on its constructive engagement throughout the accreditation process.

"We appreciate the commitment of Freshcare to delivering robust, accredited standards that are embedded within an assurance and certification model that is industry owned and self-funded," Ms Scanlon said.

"Banana growers who are seeking accreditation or re-accreditation will be supporting their business's environmental outcomes, while demonstrating they meet the minimum legislative requirements for protecting the Great Barrier Reef water quality.

"Growers who are accredited with the Freshcare Environmental Program will be the lowest priority for a compliance inspection under the Reef protection regulations."

Tropicana Banana has recently renewed their Freshcare Environmental Accreditation at their three farms in Mareeba and Innisfail. Quality Assurance Manager Misty Craw said it is great that the Freshcare Environmental Program is now recognised under the Reef regulations.

"It means that we can demonstrate our compliance to the new regulations without significant additional paperwork. The new resources and templates that are specific for banana growers are really easy to use and made our job much easier," she said.

Australian Banana Growers' Council CEO, Mr Jim Pekin, acknowledged the benefits to growers and industry because of Freshcare's recognition.

He said, "This is a great outcome for banana growers, with those who are Freshcare certified now a lower priority for compliance activities under the Act. We encourage other banana growers to become Freshcare certified and the Best Management Practice (BMP) self-assessment process is a good place to start."

Growers who are interested in setting up a BMP self-assessment can contact the ABGC's Best Practice Team via bmp@abgc.org.au and/or go to https://abgc.org.au/environmental-bmp/ for more information.

PRODUCTIVITY VS ENVIRONMENT – IS IT ONE OR THE OTHER?

Growers are continuously working towards improving long-term productivity of their farms. Whether it is managing nutrient levels or pests and diseases, there is always work to be done, and money to be spent!

Diljit Singh is one of over 50 growers in the Wet Tropics region who has sought some assistance in the last 18 months to improve the productivity of his farm. With support from the ABGC Best Practice Team, he has made changes to his farm management practices resulting in more soil and nutrient retention with less inputs, which is good for him, his bananas, and his hip pocket in the long-term.

It is also good for the Great Barrier Reef.

Diljit has purchased a side-throw slasher for inter-row management and mulching the tree beds. He is also installing an automated fertigation system to better control his nutrient inputs. This makes nutrients more available to the trees and reduces losses through leaching and runoff. The production benefits of his actions are obvious, but they also have significant environmental benefits. Read more about these benefits in his feature below.

The Best Practice Extension team have supported the development of projects such as Dilgit's for growers around the Reef Catchment region. All approved projects received grants of up to 50% of the project cost (capped at $20,000) from the Office of the Great Barrier Reef, to improve sediment and nutrient management on their farms.

Growers are covering the remainder of the cost of their respective projects and can justify their investment with long term productivity whilst promoting environmental stewardship, which consumers are demanding more of from the industry.

The projects also complement Freshcare Environmental accreditation and the Reef Regulations, making these growers a low risk and less likely to receive a visit from compliance officers due to their proactive approach towards sediment and/or nutrient management.

Best Practice Extension Officer Kathryn Dryden said, "I've learnt that productivity and the environment complement one another. If growers can keep soil and nutrients on their farms, they can be proud of a healthy and productive farming system whilst reducing the impacts of sediment and nutrients running to the Reef."

ABGC Extension Officers are seeing more and more growers embracing best practice.

"I come across quite a few growers who are setting up their farms or planting fallow blocks, and they say that they want to set it up properly from the beginning," said Kathryn.

She said, at the end of the day, growers will prioritise their livelihoods, however to see more movement towards best practice management by those both new and experienced, provides further evidence that the banana industry is committed to improving the landscape and environmental stewardship.

So it seems that productivity and the environment go hand-in-hand. Here we feature two examples of projects where both growers and the environment are benefiting.

DILGIT SLASHES NUTRIENT INPUTS

Grower: Dilgit Singh

Project: Side-throw slasher and fertigation

Area of project influence: 45 ha

Catchment: Johnstone

Purpose: To reduce fertiliser input quantities and wastage so that targeted amounts are applied to different paddocks depending on needs. Also, to establish and manage grass in inter-rows by reducing traffic with a single-pass slasher which also throws mulch onto the banana beds to increase organic matter and nutrients available to the trees.

Total Cost: ~ $59,000

Grant contribution: $20,000

Anticipated Business/Productivity Outcomes:

- Save time and money
- Improve soil health and nutrient application for optimal tree growth and fruit yield
- Minimise the risk of pests and diseases
- Reduce use of pesticides
- Equipment is an asset to the farm business
- Better meet requirements of Freshcare Environmental and Reef Regulations

Anticipated Water Quality Outcomes:

- Minimise sediment and nutrient runoff into waterways
- Contribute to a healthier aquatic ecosystem, particularly that of the Great Barrier Reef

Dilgit Singh with his wife Jasbeer Kaur and daughter Loveleen Kaur on their Mena Creek banana farm. Dilgit is proud of the work he's doing to grow healthy trees, grass his inter-rows and repair headlands. His project will further improve his farm and environment with the purchase of automatic fertigation and a side-throw slasher.

HAYDEN'S SOIL TO BE SECURED

Grower: Hayden Darveniza

Project: Road and drainage upgrades

Area of project influence: 192ha

Catchment: Johnstone

Purpose: To improve drainage and upgrade main haulage routes. This includes laying of rock and the protection of a riparian buffer strip.

Total Cost: ~ $27,500

Grant contribution: 50%

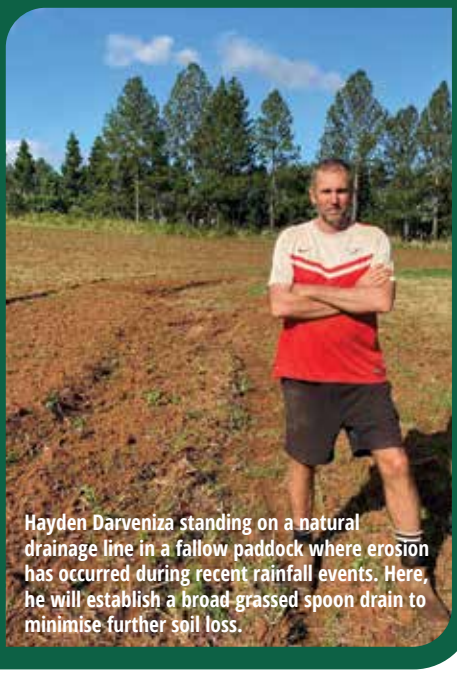
Anticipated Business/Productivity Outcomes:

- Save time and money on ongoing road and drainage repairs
- Manage soil movement and minimise losses
- Minimise marks on fruit with more permanently smooth traffic areas
- Less wear-and-tear on vehicles and equipment

Anticipated Water Quality Outcomes:

- Minimise sediment runoff into waterways
- Contribute to a healthier aquatic ecosystem, particularly that of the Great Barrier Reef

"By improving our drainage and roadways with long term outcomes in mind, we will be able to focus on improving other parts of the business and eliminate the need to spend time fixing roads and headlands every year. Good drains, roads, and headlands are very important to us because we want to be kind to the machinery and fruit driving on them every day," Hayden says.



Hayden Darveniza standing on a natural drainage line in a fallow paddock where erosion has occurred during recent rainfall events. Here, he will establish a broad grassed spoon drain to minimise further soil loss.

The Best Practice Extension Team would love to hear your thoughts on this article. To comment and/or find out about how you can work towards best practice on your farm, contact them by emailing bmp@abgc.org.au. Funding for grants has been exhausted but ABGC is hopeful that further funding for Best Practice grants may be available in the future.

NUTRIENT WORKSHOPS

Growers in the Reef catchments are gaining a better understanding of the soils on their farms and what nutrition they need in order to enhance production.

The ABGC's Best Practice Team have engaged an independent agronomist to provide nutrient management training to small groups of growers, and feedback about the workshops has been positive.

One grower who attended said, "It's been awesome! Fantastic for farmers who have limited knowledge and also those who want to bounce ideas!"

The Workshops so far have been attended by growers who successfully applied for a related Best Practice grant, but more Workshop dates are being planned.

To express interest in attending future workshops at South Johnstone, contact the Best Practice team via bmp@abgc.org.au or call 0419 602 864.

Kieren Borgna, Manager at Mackays Mullins Rd farm in Tully, with the tractor that is to be fitted with the innovative GPS system.

GETTING IT RIGHT FROM THE START WITH GPS

By Kathryn Dryden

Banana farming perfection is an ambitious (and impossible) goal, but there are growers who are having a crack anyway in some aspects of their farming, and for Kieren Borgna, it starts with the paddock setup and getting it right from the beginning.

Kieren is the Manager at Mackays' Mullins Rd farm in Tully and recently opened a package containing the farm's new innovative GPS system which will be installed on a tractor.

"The GPS system will be used to manage our fallow blocks. It will decrease herbicide usage along with paddock imprint and compaction by avoiding unnecessary overlap of traffic. This will reduce the amount of pesticides and fuel used, wear-and-tear on vehicles and equipment, and it will benefit soil health," Kieren said.

"It will also accurately guide the setup of extremely straight rows which will allow effective drainage and eliminate damage to fruit due to crooked and inconsistent row width where tractors and equipment can bump into trees and bunches."

The 500 acre farm is managed with a regular rotation program of fallow blocks. This allows Kieren to replant 15% of the farm every year and have the benefit of young trees yielding large, quality bunches. Due to such a regular ongoing planting regime, the GPS system will make it easy to manage the fallow blocks and set up plant blocks with great accuracy and efficiency.

The system will plot the course of the tractor and automatically keep it driving in a straight line when spraying weeds, mounding beds, V-blading, and planting. This will also allow irrigation to be positioned correctly. Permanent beds are established to avoid trees getting wet feet and 'V-ing out' the inter-rows will minimise bogs and ruts whilst allowing effective drainage.

A similar system has been used on the company's neighbouring cane farm and due to the significant savings and efficiencies gained as a result, Kieren is confident it will give them similar benefits on their banana operation.

"Biosecurity was a big part of the decision to purchase the system for the banana farm, to avoid movement of the existing GPS system currently used on equipment managing the cane farm. This is an essential consideration to minimise the threat of Panama TR4 transferring from farm to farm," Kieren said.

The GPS relies on a signal from a local mobile tower, so when the signal is poor (which has not happened yet), the system will not work effectively. "If this were to happen, I can simply adjust the channel, and if that doesn't work, I would just put off the job to the next day. It hasn't ever been a problem before," Kieren said.

The system is an investment, but due to the management plan for the farm it is deemed an important one, and its benefits are considered to justify the expense. There are environmental benefits too. These include the reduction of excess pesticide and fertiliser application which means only what is needed is used, therefore less is lost to the environment. The management of traffic reduces the number of passes therefore compaction, which results in a less frequent need to move soil for row renovations. The soil remains on the farm rather than being washed into waterways during major rain events.

Kieren is looking forward to starting to use the system which supports the farms efforts to move towards best practice. For more information about Best Practice, contact ABGC's BMP Team via bmp@abgc.org.au.

UPDATE ON THE RP191 BANANA NUTRIENT RATES TRIALS

By Curtis Lanham, Rebecca Murray and Alex Lindsay, Department of Agriculture and Fisheries

About the trial

The RP191 banana nutrient trials are assessing the agronomic and economic performance of nutrient management treatments, primarily focused on nitrogen.

The multi-rate trial at South Johnstone Research Facility (SJRF) commenced in 2019 as part of a network of nitrogen rate trials being conducted on farms within the Innisfail and Tully areas. The on-farm trial sites allow nutrient applications to be tested in "real-world" conditions across a range of soil types and management practices.

The trials have allowed intensive assessment of crop performance, along with intensive soil, soil water and leaf analysis. At SJRF, nitrogen fertiliser is applied fortnightly as urea using a network of fertigation tanks in randomised blocks throughout the trial area. The site was fallow for several years before establishment and had very low levels of soil nitrogen. Granular phosphorus was spread across the site at 60kg P/ha/yr, and all plants receive a fortnightly application of potassium equivalent to 850kg K/ha/yr. Other nutrients were applied as required based on agronomic advice.

Table 1: Nitrogen application rates, SJRF

Treatment	Plant crop (kg N/ha/yr)	Ratoon crop (kg N/ha/yr)
Rate 1	100	200
Rate 2	190	300
Rate 3	280	400
Rate 4	350	500

Plant crop results

Harvest of the plant crop commenced in November 2019. Bunch yields within the plant crop were largely uniform for all nitrogen rates tested, with less than 10 percent difference in the average bunch yields for each treatment. The average time to harvest was similar for all rates tested, although a slightly shorter time to harvest was observed with increasing nitrogen rate. There was no apparent difference between rates in percentage of fruit within size specification.

Table 2: Plant crop performance with applied nitrogen rates

Applied nitrogen rate (Kg N ha/yr)	Average plant crop yield (kg)#	Average time to harvest plant crop (weeks)
100	20.7	48.5
190	21.9	47.9
280	21.3	47.3
350	21.5	46.6

excludes bunch stalk but includes outsized fruit

Multi-rate trial on commercial farm

A second multi-rate trial was established on a commercial farm at Upper Daradgee in late 2020. The new trial includes some higher rates of nitrogen, and the design is such that the trial plots are being managed in the same way as the rest of the farm.

RP191 is guided by a Project Reference Group (PRG) which includes several commercial banana growers who have provided rigorous feedback on the project design and progress. Input has also been received from local agronomic advisors, who critically review and aid in the understanding of interim results.

Yield and physiological results from all sites will be statistically analysed and communicated when they become available. Data from the project will inform an economic analysis comparing the effect of different nitrogen application rates.

Ratoon crop

Harvesting of the first ratoon crop commenced in June 2020. Slight differences in the plant crop cycle times of treatments were accentuated through to first ratoon harvest, with the average time to harvest of first ratoon varying by almost six weeks across the range of applied nitrogen treatments.

Increasing nitrogen rates reduced the average first ratoon cycle time, and the average time to harvest the 500kg N/ha/yr treatment was approximately three weeks faster compared to the average time to harvest for the 400kg N/ha/yr treatment.

Table 3: First ratoon crop performance

Applied nitrogen rate (Kg N ha/yr)	Average ratoon 1 yield (kg)#	Average time from plant crop harvest to ratoon 1 harvest (weeks)
200	27.5	41.7
300	28.8	40.2
400	29.0	39.3
500	29.2	36.2

excludes bunch stalk but includes outsized fruit

Average bunch yield in the first ratoon was similar across all applied nitrogen rates, with less than 2kg difference in yield between lowest and highest rates.

There was no apparent difference between rates in percentage of fruit within size specification. It should be noted that the ratoon nitrogen rates were paired with the plant crop nitrogen rates, so the highest ratoon nitrogen rate (500kg N/ha/yr) was applied to the plants that received the highest plant crop nitrogen rate (350kg N/ha/yr).

The banana nutrient rate trials are funded through the Queensland Government's Reef Water Quality program and is being delivered by the Department of Agriculture and Fisheries (DAF).

Queensland Government

FOCUS ON GROWERS: EXTENSION TEAM RE-ENGAGE AT THE FARM LEVEL

By Tegan Kukulies

You may be a little more familiar with the team working in the National Banana Development and Extension Program in Far North Queensland and New South Wales following the first phase of one-on-one farm visits.

The first year of the project has provided an opportunity for the team (pictured) to get out and about on farms and talk with growers about their businesses. Growers have been very welcoming – with some growers asking to have return visits to keep updated with R&D in the industry. Some have even commented that they did not have an appreciation for the scope of R&D occurring in the industry prior to the team visiting.

In this first phase of the project, the team conducted a survey with growers to improve our understanding of farming operations, production challenges and priorities of the banana industry, as well as a better understanding of how growers source information and how the extension project can tailor information and extension activities to better suit them.

So, what did growers say?

There was no surprise that in FNQ the biggest issue that growers said was affecting their yield and quality was birds and bats, with fruit damage caused by bats reported to have increased over the past 12-24 months. The second and third biggest issues for yield and quality most frequently mentioned by banana growers were Banana rust thrips and the weather.

In NSW the most frequently mentioned issue was Banana Weevil Borer, however similar to FNQ, the weather and birds and bats were the second and third most frequently mentioned issues.

The top industry priorities in both FNQ and NSW were profitability and Panama disease TR4. For profitability, oversupply featured strongly in both FNQ and NSW. In FNQ these two industry priorities were closely followed by labour. This has likely been exacerbated by the current labour shortages caused by COVID-19 international border closures.

Panama disease race 1 (R1) also featured as an industry priority for NSW growers. When discussing on-farm biosecurity nearly all growers that participated saw biosecurity as important for protecting their farm. Many growers had mentioned that they would like to make a plan to implement or improve their on-farm biosecurity practices.

Remember: if you want to have a chat about kick-starting your on-farm biosecurity or improving your current practices, don't hesitate to contact the extension team who can come out to your farm and talk through practical on-farm biosecurity options for your farm layout.

So, where to now? This information helps give us more direction for the next four years of the National Banana Development and Extension Project. The next phase of one-on-one engagement will have a focus on bunch pests and root and corm pests in both FNQ and NSW.

The report which summarises the survey will also help inform future investment of R&D funding (Hort Innovation). For example, Hort Innovation has used the documented grower priorities and yield and quality challenges to help inform the next strategic investment plan, due for release soon.

Ideas shared during these visits are also helping inform the next round of on-farm innovation trials, so keep an eye out for information about these in your e-bulletin and on the Better Bananas website for updates on the trials as they kick off.

Talking with growers has also given the team greater insight into where and how growers source information. As a result, in addition to showcasing research at extension events (e.g. roadshows, field days) and reading about them via ABGC communications (e.g. this magazine and e-bulletins) we will aim to integrate more opportunities for grower-to-grower discussion at events and e-mail communication with links to information on the Better Bananas website.

Remember – google the Better Bananas website and keep an eye on ABGC e-bulletins to check out the latest research updates.

The extension team would like to thank all the growers for the opportunity to visit their farms and who generously gave up their time to provide valuable feedback and information as part of the survey.

Please don't hesitate to get in touch with the extension team for any pest, disease, agronomic or on-farm biosecurity enquiries. FNQ enquiries 07 4220 4177, Subtropical enquiries (Tom Flanagan) 0437 654 633, bettersbananas@daf.qld.gov.au

This National Banana and Development Extension Program (BA19004) has been funded by Hort Innovation, using the banana research and development levy, co-investment from the Department of Agriculture and Fisheries and 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.

BIOLOGICAL CONTROL OF BANANA RUST THRIPS

By Richard Piper, DAF Entomologist

Grower interest in using alternative control methods to insecticides for Banana rust thrips control has prompted a pilot investigation of several commercially available thrips predators.

A glasshouse trial has been established at South Johnstone Research Facility using potted tissue cultured plants (Williams Cavendish) that have been infested with Banana rust thrips, *Chaetanaphothrips signipennis*, from mature plants in the field.

The aim of the trial is to investigate the efficacy of three thrips-feeding mites (Neoseiulus cucumeris, Stratiolaelaps scimitus, and Typhlodromips montdorensis) and one predatory bug (Orius tantillus) in controlling Banana rust thrips on the banana plants in a glasshouse environment.

There are seven plants being used for each treatment and the treatments applied are a single application of one of each of the four predators. The fifth treatment is a control treatment where no thrips predators are applied. Plants have been set up in the glasshouse with a double water moat system, using pot plant saucers so that movement of the predators is prevented. Plants are also spaced sufficiently apart on the benches to prevent leaves touching adjacent plants.

Following introduction of the predators to the plants, Banana rust thrips activity is being assessed at regular intervals. A rating score is recorded based on the extent of feeding marks on the pseudostems of the plants. The trial will run for the next couple of months. Towards the end of the trial, a count of adult Banana rust thrips emergence from each pot will be assessed using sticky traps.

A smaller field trial is also underway that will look at whether the introduction of these predators to banana bunches, inside fine mesh bunch covers, provides a level of control of Banana rust thrips on fruit.

Information obtained from the glasshouse trial and small field trial will provide useful insights as to whether further investigation of these predators is warranted, to develop an alternative bunch pest control system less reliant on insecticides.

Cucumeris, Neoseiulus cucumeris adult. Picture supplied by Bugs for Bugs.

Pirate bug adult, Orius tantillus (left) and nymph (right). Picture supplied by Denis Crawford.

Potted plant in glasshouse showing Banana rust thrips markings on pseudostem caused by the pest feeding.

CONTROLLING BANANA RUST THRIPS NOW

As discussed in Richard Piper's article, Banana rust thrips continues to pop up as a priority pest for banana growers.

While research continues into potential alternative control methods, correct and timely application of chemicals is currently vital to manage these tiny pests.

Chemical resistance has been raised as a concern by growers. Why is this important? Thrips' fast lifecycle and relatively sedentary behaviour means they can build-up resistance to chemicals quickly.

Growers should rotate between chemicals with different modes of actions (following label rates and directions) to minimise the possibility of chemical resistance developing.

Moving towards softer/biological options for bunch pest management is something that growers have expressed interest in.

While industry research evaluating new chemistries, including softer biological options is underway, you can refresh your knowledge of Rust thrips, their lifecycle, symptoms and current management practices by visiting the Better Bananas website.

This update has been provided as part of the National Banana Development and Extension Program (BA19004). This project has been funded by Hort Innovation, using the Hort Innovation banana research and development levy, co-investment from the Queensland Government 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.

CONGRESS IN CAIRNS 2021!

TROPICAL BANANA HEARTLAND DRAWS MEGA CROWD

NRL legend and long-time banana ambassador Billy Slater and MC Todd Widdicombe

Despite the uncertainties of a pandemic, growers and industry stakeholders turned out in their droves to celebrate all that goes into producing Australia's favourite fruit.

The banana heartland of Tropical Far North Queensland proved to be a winning formula for hosting a successful 2021 Australian Banana Industry Congress from 12-14 of May.

The Cairns event was one of the most successful Congresses in the event's 26-year history, attracting almost 470 delegates, including 140 growers, over the three-day program.

Despite the constant uncertainties of the COVID pandemic, a dedicated Congress Program Committee pushed ahead during 18-months of planning, devising a dynamic line-up of speakers, entertainers and social events.

Congress Chair and ABGC director Paul Inderbitzin said he was overwhelmed by the positive response to the industry's biggest national event after a tumultuous year, particularly with the impacts of COVID.

"The reaction to this year's program line-up, and to the Far North Queensland location, was phenomenal. In fact, it was by far one of our most well-attended events on record," Mr Inderbitzin said.

"We were excited to have growers and industry partners join us from all of our growing regions. Of course, Far North Queenslanders were out in force, but we also had representatives from NSW, WA and the NT."

Delegate numbers were up 20 per cent on last Congress, held on the Gold Coast in 2019, with exhibitor numbers and sponsors also greatly surpassing previous years.

"The fact that it's been such an incredibly tough few years for so many growers, it's comforting to know that industry still sees a great deal of value in Congress and were keen to celebrate our achievements and toast to a bright future," Mr Inderbitzin said.

"And not just growers - researchers, supply chain, our sponsors and exhibitors. We hope everyone who is part of the fabric of our national industry, left the event feeling motivated and positive about the future."

Congress always offers a rare chance for all those involved in the industry to gather under one roof, providing inspiration, practical tips and insight into the latest research and development, innovation and technologies.

World-renowned Outback Wrangler Matt Wright kept audiences entertained at the Banana Ball

A diverse speaker line-up drew on expertise from both within and outside of industry, with highlights including motivational expert Matt Church, marketing guru Adam Ferrier, Andrew Bate of Swarm Farms Robotics and mental health advocate Mary O'Brien.

NRL legend and long-time banana ambassador Billy Slater, along with world-renowned Outback Wrangler Matt Wright also proved to be star attractions at the three-day event.

Growers and banana researchers stepped into the spotlight as part of the popular Science Speed Talks and Grower Innovation Panel.

Researchers detailed exotic disease and variety trials, while growers shared tips on brand awareness, environmental achievements and GPS bunch tagging.

In addition to delivering a wealth of information, Congress also offered the chance for growers to spend time away from their farms, catching up with friends and – most importantly – take time out to relax.

With the next Congress in 2023 already in the works, Mr Inderbitzin paid tribute to the range of sponsors, exhibitors and Planning Committee members who made this year's event possible.

"I'd particularly like to thank our Foundation Partner Visy, Principal R&D Partner Hort Innovation, Principal Partner Woolworths, Major Partner MacKay's Marketing and Associate Partners Costa, Arcella Bananas and Soils First NQ," he said.

"And to the growers and industry colleagues who gave up valuable time to help us plan the fantastic 2021 program – thank you. We couldn't have done it without you."

Congress Chair and ABGC Director Paul Inderbitzin addresses delegates

Tony Catt was a popular presenter covering the topic of Succession Planning

Mary O'Brien provided some very real conversations about mental health

Derrick McManus closed Congress with his story of incredible bravery

A special thank you to members of the Congress Management Committee and Program Committee. Congress 2021 would not have been the success it was, without your dedication and support.

Congress Management Committee

Paul Inderbitzin (Congress Chair)
Sonia Campbell (Congress Co-Ordinator)
Leanne Erakovic
Amy Spear
MCI Australia

Congress Program Committee

Paul Inderbitzin (Congress Chair)
Sonia Campbell (Congress Co-Ordinator)
Doriana Mangili (ABGC director)
Jade Buchanan (former ABGC director)
Josephine Borsato
Jenny Crema
Tate Connolly
Shanara Veivers
Leanne Erakovic
Rosie Godwin
Amy Spear

Rabobank's Tim Hunt presented on Global Trends – After the pandemic

Science Speed Talks

Future of Bananas and R&D Panel

LESSONS FROM THE GINGER INDUSTRY

Ten years ago, Shane Templeton noticed a couple of square metres of ginger going yellow on his farm.

"We thought it was just Round-Up rot – accidental damage. We didn't worry too much about it," he told Banana Congress 2021.

However, over coming years the President of the Australian Ginger Industry Association realised it was something much harder to handle.

It was eventually confirmed as a Phythium outbreak, a naturally occurring fungal disease that can spread incredibly quickly in the right environment. The ginger industry's discovery of this disease, and battle to find a solution, is not unlike what the banana industry is going through, with Panama disease TR4 and a range of other threats across all growing regions.

Mr Templeton, who has also served as a Director for Buderim Ginger Limited and had involvement in risk assessments for fresh ginger imports, began working with the Queensland Department of Agriculture and Fisheries and Agrifutures about three years after they first noticed the symptoms.

A range of R&D projects were initiated, including minor use permits for fungacides and tests to see where the disease was coming from. His sister went on a fact-finding mission to Japan, where the importance of biosecurity was emphasised. The message she brought back was clear: you can't eradicate it, you must learn to manage it.

Mr Templeton said they improved biosecurity and made changes to their seed dip and fresh produce bins.

"We looked to industries like bananas – we looked to you like a big brother – at your biosecurity measures, things like cleaning boots and machinery," he said.

He and his team made changes to their field drainage systems, as Phythium likes water, and increased their crop rotation and cover cropping.

Mr Templeton said staff education was critical, as they were likely to spot the symptoms first and could quickly take action.

"The sooner we could identify it, the sooner we could get it out. When it's in smaller numbers, it's much easier to control," he said.

He also has farms in more than one location and implements strict biosecurity protocols for each. The ginger industry has introduced a clean seed scheme (looking to bananas and the use of tissue culture). But perhaps most importantly – if sometimes hardest to take - they've constantly learned from mistakes.

"Take a look at farm biosecurity from a risk management approach," he said. "If we left a stone unturned, that's where we copped it again."

While Mr Templeton sometimes still gets asked about the cost of all these changes - the cost of implementing biosecurity - his answer is simply that the cost of doing nothing would be far greater.

GROWER INNOVATION PANEL

A highlight of Congress was the Grower Innovation Panel where Doriana Mangili (WA), Matt Abbott (NQ) and Gavin Devaney (NQ) shared innovative practices they've implemented or are trialling on their farms and within their businesses.

Ms Mangili, - business manager for the Sweeter Banana Co-Operative in Carnarvon, WA, spoke about innovation through collaboration. In the past, Carnarvon supplied 100% of Western Australia's bananas, but that changed with centralised supermarket buying.

Growers were also facing large amounts of waste, low prices, a lack of scale and competition with fellow growers facing the same issues. Growers formed a Marketing Association and created a brand 'Lunchbox Bananas'. Sweeter officially opened in 2002, providing a centralised packing shed and dedicated marketing – and things have improved since. Ms Mangili shared the various lessons learnt and their plans for coming years, including more emphasis on value adding, innovation in employment and new varieties.

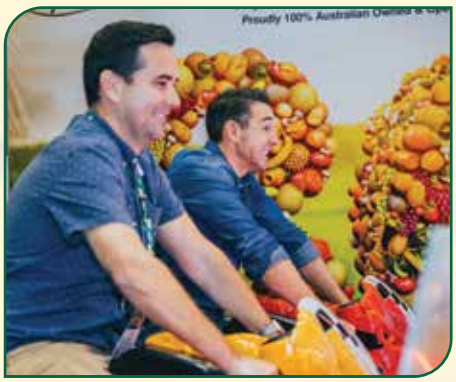
Matt Abbott, of Good Life Organics, is trialling a new bunch tagging system on farm. Working with Farmacist and through the Great Barrier Reef Foundation's Innovation Fund, the system uses GPS and radio frequency ID. While it's currently in its early stages, it's anticipated this will allow much more accurate data and mapping of banana crops and yields. Ultimately, it will also lead to more environmentally efficient production. The software generates daily and weekly reports, which will eventually form maps as information is input.

Mr Devaney, Bartle Frere Bananas, provided insight into the farm and drainage design solving water and runoff issues on his low-lying property. The process has involved accessing drone footage and photos, which showed significant damage from water in some areas. Working with soil expert Darryl Evans, they were able to contour and laser level to effectively address these issues. Will Darveniza from the Wet Tropics Major Integrated Project was then brought in for his expertise in drains. They ended up installing a storm water drain designed to handle high flows of water – in times of low flow, the central part acts as a wetland. The water from the drains has been monitored for two years and it has reduced a large amount of nutrients. DrainTech also contributed to the farm design with an underground pipe system. Bartle Frere has also started a project with Smartfarming using real time data to continuously monitor on-farm decisions.

TRADE SHOW


M5-1
ROPS


Kubota
M5-1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Welcome to Opal.
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for our customers.

WELCOME DRINKS

BANANA BALL


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RECOGNISING AN OUTSTANDING BUNCH

The banana industry celebrated the incredible work of five of its best at the Banana Ball in May, a fitting way to conclude Banana Congress 2021 in Cairns.

Growers Dennis Howe and Franziska and Peter Inderbitzin, along with horticulturalist Jeff Daniells, received Awards of Honour at the gala dinner at Cairns Convention Centre.

Gavin Devaney, a grower from Boogan, took home the Future Farming Award, acknowledging outstanding achievement in banana Best Management Practice.

The Awards of Honour are given out every two years as part of the Australian Banana Industry Congress. This year, the Australian Banana Growers' Council (ABGC) introduced the BMP award, to recognise the extraordinary environmental work being undertaken by growers.

ABGC chair Stephen Lowe said it was about celebrating those who are leading the way, going above and beyond with outstanding farming practices that contribute to water quality improvement in local waterways and the Great Barrier Reef.

"The idea is that it is given to someone who demonstrates commitment, innovation, a willingness to share information and a desire to contribute to the long-term improvement of water quality and farm productivity," Mr Lowe said.

"I couldn't imagine a more fitting person to receive the inaugural award than Gavin Devaney."

Mr Lowe also paid tribute to the incredible careers of those acknowledged with Awards of Honour.

"We count some of the world's most innovative growers and researchers among our Australian industry. To say we are lucky is an understatement," Mr Lowe said.

"Growers like Dennis Howe and Franziska and Peter Inderbitzin are renowned for their hard work, resilience and willingness to take a risk. They're also top people to boot.

"It's thanks to researchers like Jeff Daniells, often working tirelessly behind the scenes, that our industry has such a positive future here in Australia."

Recipients received their awards from world-renowned croc wrangler Matt Wright, who was a special guest presenter on the night.

Award of Honour recipients:

Peter and Franziska Inderbitzin

Peter and Franziska, the second of three generations involved in the family's Lakeland farm, have carved out a reputation as industry leaders. They are innovative, sustainable growers who produce a consistently high product.

To this day, they are the only banana farmers in Australia to utilise the South American cableway system. In addition, they were among the first to welcome overseas workers through the Pacific Labour Scheme and have led the way in using recycled organic waste for compost on-farm.

Dennis Howe

In 1995, Dennis Howe became the first person to plant Cavendish bananas in Walkamin on the Atherton Tablelands – an area that was then believed to be too cold for anything other than lady fingers.

A year later, Dennis planted his second block which is still in production today. He is now the country's second largest producer of Cavendish bananas and grows a wealth of other crops including avocados, coffee, blueberries, peanuts and sugar cane. He employs some 500 people around the Mareeba and Atherton regions. *Dennis Howe was unable to attend the Banana Ball. His son James (pictured) accepted the award in his place.*

Jeff Daniells

This year marks an incredible milestone for research horticulturalist Jeff Daniells: four decades with the Queensland Department of Agriculture and Fisheries.

Jeff has travelled extensively as part of his work, collecting germplasm in Papua New Guinea, working with ACIAR to identify black Sigatoka resistant varieties for Australia and Pacific nations in the 80s and 90s. He has developed scientific relationships that have benefited the Australian banana industry extensively.

Jeff is currently leading the importation and screening of new varieties under the Plant Protection Program.

Future Farming Award recipient:

Gavin Devaney

Gavin Devaney has converted a former cane paddock into a best practice banana farm with innovative runoff solutions. In doing so, he has significantly improved the farm's layout and reduced its environmental impacts, while also maintaining productivity and profitability.

Gavin has made land available to trial new methods on-farm, participates in project reference groups and has contributed to the Best Management Practice Guideline.

His enthusiasm to embrace new technologies and share information for the benefit of his farm and the broader farming community is also evident through his participation Smart Farms project. This is a project that is using remote sensing to measure aspects of BMP including nutrient loss through leaching. The project has the potential to influence BMP standards for the entire industry into the future.

NEW RESOURCE TO HELP GROWERS FIGHT BUNCHY TOP

Samantha Stringer and Wayne Shoobridge at Banana Congress 2021 in Cairns.

There's a YouTube video for just about everything in 2021. Now, this includes detecting one of the world's most devastating banana diseases – Bunchy Top.

The National Bunchy Top Project, funded by Hort Innovation and run through the Australian Banana Growers' Council, has produced a new video helping growers identify BBTV symptoms and the best way to destroy infected plants.

A challenge to spot for the untrained, and capable of infecting all varieties of bananas, the disease is currently contained to Northern New South Wales and South East Queensland. It's spread by banana aphids or infected planting material, stunts plant growth and stops fruit production.

The Bunchy Top Project's Samantha Stringer said the new video aims to ensure growers feel better equipped to protect their property – and the broader industry – from the disease.

"Early detection is key," Ms Stringer said. "Once it's established on a farm it will move quickly – so the sooner an infected plant can be destroyed, the better.

"In this video we've given growers some tips on spotting the symptoms before they take hold. For example, we know it's important to keep an eye on any new leaves coming through. The best way to do this is walk through each row, looking up and about 4-6 plants ahead. This will give you an overall view of each plant and if you spot anything concerning, that's the time to take a closer look."

While there is no prevention against banana aphids, good on-farm practices such as deleafing, desuckering and maintaining weed control will help. In addition, growers should source planting material from QBAN certified businesses (see list on Page 41) to ensure they arrive in high health, and consult the Banana Industry Code of Practice for Planting Material (available on the ABGC website) for additional biosecurity risk mitigation steps that can be taken.

You can view the video at abgc.org.au/banana-bunchy-top.

In coming months, the National Bunchy Top Project will release a second video targeted at backyard growers.

The video helps growers identify Bunchy Top symptoms and destroy infected plants.

SHARING KNOWLEDGE

Bunchy Top inspectors Samantha Stringer and Wayne Shoobridge made the trek to Far North Queensland in May to deliver a Bunchy Top workshop and take part in Banana Congress 2021.

The 'train-the-trainer' style workshop, held at South Johnstone Research Station, was presented to over 50 people including extension staff, plant pathologists and agronomists. While Bunchy Top is not currently found in the major banana growing region, it's crucial that industry knows what to look for as its detection could be devastating.

At Congress, Samantha and Wayne manned a stall displaying a range of resources and spoke with growers and other industry stakeholders about the viral disease, including how to detect it.

Last month, the team was also invited to take part in the Queensland Garden Expo, a fantastic chance to educate backyard banana growers on how to spot symptoms of Bunchy Top and the steps to take if they do.

RESOURCES FOR GROWERS

- Bunchy Top Hotline on 1800 068 371
- Follow the National Bunchy Top Project on Facebook or Instagram (@bananabunchytopproject)
- A Project policy on grower participation has been issued (https://abgc.org.au/wp-content/uploads/2020/10/ABGC-CIRCULAR-1020-BANANA-BUNCHY-TOP-PROGRAM.pdf)
- Banana Industry Biosecurity Code of Practice: www.abgc.org.au/biosecurity/
- If you think you may have detected Bunchy Top within areas where BBTV is not known to be present in Queensland in the Southern banana biosecurity zone or in New South Wales outside of the BBTV control zone you can also contact Biosecurity Queensland on 132523 or DPI NSW on 1800 680 244.

NEW TEAM MEMBERS ON BOARD

Two new team members have joined the National Bunchy Top Project, bringing a wealth of experience and knowledge to the team.

Part-Time Project Officer Carena Rose is based in northern New South Wales and has a background in horticulture as well as project and data management. Her role supports the bunchy top inspection team and Project Manager Grant Telford. She holds a degree in agriculture with majors in soil science, plant pathology and agribusiness.

Armadeep Singh has joined the dedicated inspection team as a new trainee. Armadeep will also be based in New South Wales and is an experienced banana grower, making him an ideal fit for this role.

Hort Innovation Strategic levy investment | BANANA FUND

This project is being funded by Hort Innovation using the banana research and development levy and funds from the Australian Government. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture. Phase 4 of the Bunchy Top National Project is now underway. It is the fourth stage in a 10-year plan to eradicate/control Banana Bunchy Top disease from commercial plantations.

PANAMA TR4 PROGRAM UPDATE

By Jael Napper, Panama TR4 Program Engagement Officer

Have your say on the future management of Panama TR4

Since the first detection of Panama disease tropical race 4 (Panama TR4) in the Tully Valley in March 2015, the Panama TR4 Program (Program) has worked closely with the Australian Banana Growers' Council (ABGC) to control and contain the disease. This has been achieved through the Program's control and containment efforts alongside growers implementing on-farm biosecurity and ABGC purchasing and shutting down the first infested farm.

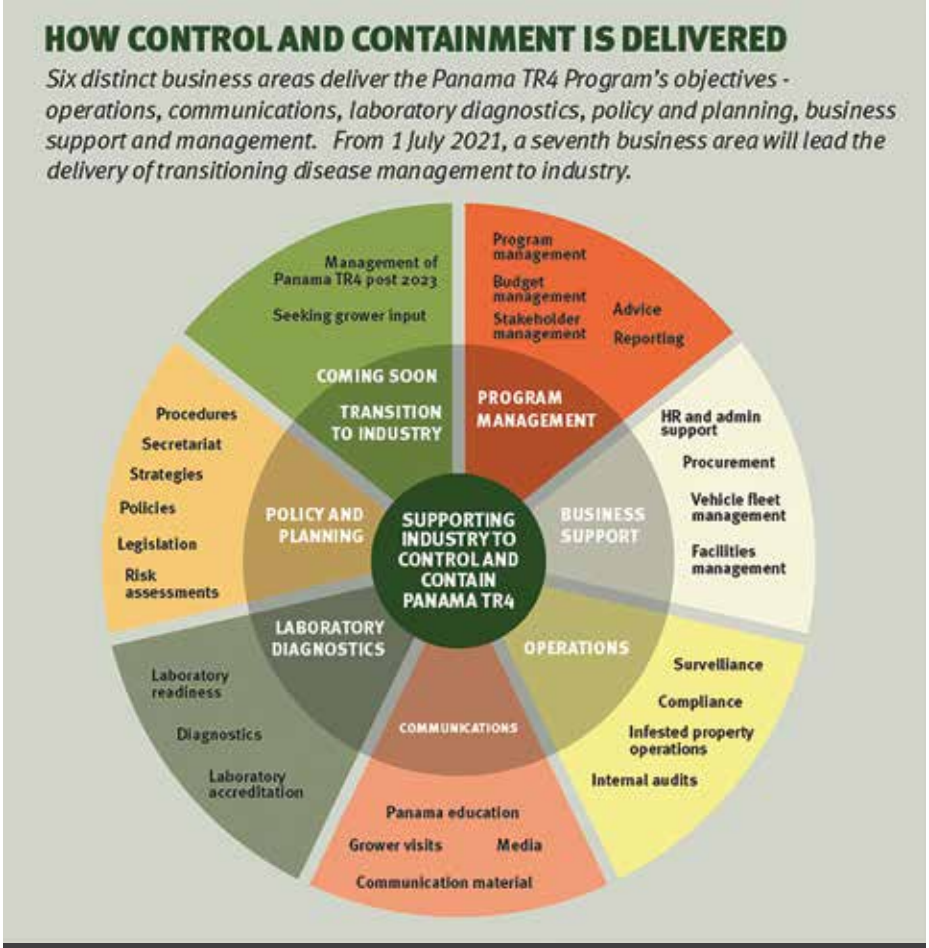
- **Through the ABGC, the banana industry has been co-funding the Program since 2019.**
- **Since 2020, the Program is governed by a Board comprised of equal government and industry representatives.**
- **The Queensland Government has invested almost $42 million in the fight against Panama TR4 since 2015.**
- **Queensland Government funding has been committed until June 2023, beyond which time industry will take leadership in disease management.**

Through the ABGC, industry has committed to support government funding of the Program to June 2023 in a staged approach, from 10% in the financial year 2019-20 through to 50% in 2022-23.

Six distinct business areas deliver the Panama TR4 Program's objectives to control and contain the disease. This includes operations, communications, laboratory diagnostics, policy and planning as well as business support and management. From 1 July 2021, a seventh business area was added to the Program which will lead the delivery of transitioning disease management to industry.

An Industry Transition Leader, Geoff Wilson, has been appointed by the ABGC to work with growers and government on planning for future management of the disease. In doing so, Geoff is seeking grower input to understand where the focus areas should be within this framework.

All growers are encouraged to have their say by calling Geoff on 0418 644 068 or email geoff@abgc.org.au.



Seven business areas make up the Panama TR4 Program which supports industry to control and contain the disease.

Banana growers will soon take over the management of Panama TR4 from government.

PROGRAM HITS SURVEILLANCE TARGET FOR THE YEAR

Surveillance officers at the Panama TR4 Program completed their mission to survey 266 properties in the 2020-21 financial year, collecting 179 samples from plants exhibiting compatible symptoms.

Of those samples, 56 were diagnosed positive for the disease. All the positive plants remain contained within the Tully Valley. An additional property was confirmed with the disease in September 2020, making five in total since 2015.

The Panama TR4 surveillance schedule was expanded across Far North Queensland last year to include all commercial banana properties from Rollingstone to Lakeland to be surveyed once every twelve months. Tully Valley properties were surveyed every three months, and Panama TR4 infested properties every eight weeks.

Panama TR4 Program Leader, Rhiannon Evans congratulated everyone for this achievement.

"The importance of surveillance in containing the spread of this disease cannot be underestimated," Ms Evans said.

"I'd like to thank our foot soldiers who tirelessly spend their days surveying banana properties, and the growers who have been so accommodating in taking part in the surveillance program."

This financial year's surveillance will repeat the same cycle with every banana property in the Northern Banana Biosecurity Zone surveyed at least once by 30 June 2022. For further information contact the Panama TR4 Program Manager Operations, Donna Campagnolo on 0476 846 793 or email donna.campagnolo@daf.qld.gov.au.

Panama TR4 Program surveillance officers take a moment to recognise their mission complete before starting the new financial year.

Panama TR4 surveillance officer surveying a banana farm.

FESTIVAL GOERS EMBRACE THE PANAMA TR4 MESSAGE

Torrential rain didn't dampen the spirit of Innisfail's Feast of the Senses, with festival goers proving that the Panama TR4 message is sinking in.
What can you do to help protect banana farms from Panama TR4?

This was the question being asked by Panama TR4 Program officers at Innisfail's Feast of the Senses last month, recording a positive response from 86 engagements on the day.

Hosting a stall to educate the community about a banana disease was an interesting challenge amongst sumptuous fresh local dishes, exotic tropical fruits and 100 mm of rain! Lured by a giant jar of banana lollies, festival goers were engaged in the conversation with Program officers about Panama TR4, and how it can be spread. The result was very positive.

Engagement Officer Jael Napper showing off the Panama TR4 Program show bags.

Engagement Officer Rebecca Breaden has been representing the Program at events for two years and noticed a vast improvement in the community's level of understanding about the disease.

"People were very interested in chatting with us about the ways they help reduce the chance of spreading Panama TR4 and appeared to have a good understanding of what the disease is," Ms Breaden said.

"It's encouraging to know that the message is sinking in, that it's here to stay and it's up to everyone to help protect the banana industry, local jobs and communities."

Six years since Queensland's first detection, the Panama TR4 Program's message seems to have embedded itself into the community. It's hoped that this collective ownership of protecting against Panama TR4 will put industry in a prime position to take over the management of this disease as the Program works toward a transition to industry in 2023.

PANAMA TR4 PROGRAM PRESENTS UNITED FRONT AT AUSTRALIAN BANANA INDUSTRY CONGRESS

Biosecurity Queensland and the Australian Banana Growers' Council embraced their first official opportunity to publicly co-represent the Panama TR4 Program at this year's Congress.

This unique partnership was officially presented at the Australian Banana Industry Congress in Cairns earlier this year, with an exhibition booth jointly hosted by Biosecurity Queensland and ABGC staff.

The Congress was attended by 470 people, including 140 growers, offering the ultimate opportunity to engage with Australia's commercial banana industry.

Through their bright yellow exhibit, Program Leader Rhiannon Evans wanted to ensure that every attendee was aware of the opportunity to engage with team members about the disease.

"Our booth and friendly team members were warmly embraced by Congress attendees, and I dare say there wouldn't have been a person who attended who didn't notice us there," Rhiannon said.

"We recorded 49 meaningful conversations about Panama TR4 over two days, and throughout the Congress there was a steady flow of guests to our booth."

With Congress only happening once every two years, the Program embraced this opportunity to engage with such a vast cross section of the banana industry with their call to action of 'get in the zone' and '#PanamaTR4protect'. One further message was added to the agenda this time around, with government soon to take the back bench in Panama TR4 management, growers must now decide how they want the disease to be managed into the future.

Biosecurity Queensland and Australian Banana Growers' Council team members represent the Panama TR4 Program at the Australian Banana Industry Congress.

UNDER THE MICROSCOPE: XANTHOMONAS WILT

A regular feature in Australian Bananas magazine, Under the Microscope profiles the industry's emerging and exotic diseases. Sometimes you just need the facts, fast.

What is Xanthomonas wilt?

Xanthomonas wilt is caused by a bacterium Xanthomonas vasicola pathovar musacearum. It causes disease symptoms similar to the other bacterial wilts affecting banana, Moko and Blood disease.

What are the symptoms?

- Wilting of the male bell bracts
- Drying of the rachis and exudation of ooze from the male bell
- Fruit stalk internally discolored and exuding bacterial ooze when cut
- Premature ripening of some fingers in the bunch
- Cut fruit shows rusty brown stains in the fruit pulp (Fig 1)
- Yellowing, wilting and collapse of leaves (Fig 2)
- Brown streaks in the vascular tissue of cut pseudostems
- Yellow to cream colored ooze exuding from the cut pseudostem (Fig 3)
- The sequence of symptoms depends on the initial site of the infection

How does it spread?

The Xanthomonas bacterium can be spread in infected plant material, fruit, soil and water, insects birds and bats. It is also easily transmitted by tools used to cut leaves and fruit.

Where in the world is it found?

Xanthomonas wilt originates from Ethiopia where it caused a wilt on Ensete, also known as the Ethiopian or false banana (Ensete ventricosum). In 2001 it was found in Uganda and from then onwards it spread rapidly through East Africa where it causes significant damage to most banana varieties including the East African Highland Bananas (AAA), which is a staple food crop in that region. Australia is free of Xanthomonas wilt.

What are we doing to protect our industry?

- Strict regulation concerning import of plant material
- Development of diagnostics and surveillance together with scientists from Africa
- Increase awareness among industry stakeholders

What can I do to protect my farm?

- Use only disease-free planting material
- Check your farm frequently for new pests and unusual symptoms
- Maintain good biosecurity practices

Figure 1.

Figure 2.

Figure 3.

Photos and text provided by Prof André Drenth, University of Queensland as part of project BA16005 Stengthening the banana industry diagnostic capacity.

QBAN SCHEME FACILITIES

Mission Beach Tissue Culture Nursery	07 4068 8553 0418 299 900	sdlavis4@bigpond.com	Lindsay Road (PO Box 326), Mission Beach QLD 4852
P.G. Berry-Porter - Trading as Kool Bananas	07 4068 9382	shazza141@bigpond.com	18 Casuarina Cres (PO Box 191), Mission Beach QLD 4852
Lowes Tc Pty Ltd - LABORATORY & NURSERY (NSW)	02 4389 8750	Greg@lowestc.com.au Patricia@lowestc.com.au Natasha@lowestc.com.au	202 Tumbi Road, Tumbi Umbi NSW 2261
Tablelands Tissue Culture Nursery	07 4068 8559 0418 299 900	sdlavis4@bigpond.com	Dati Road, Walkamin QLD 4872
Yuruga Laboratory and Nursery	07 4093 3826 0427 933 791	admin@howefarms.com.au	5970 Kennedy Highway, Walkamin QLD 4872
Wide Bay Seedlings Pty Ltd	07 4129 6684 0427 371 353	office@wbseedlings.com.au	1971 Mungar Road, Pioneers Rest QLD 4650
Ausplant Nursery	07 4662 4934 0427 371 566	brady@ausplantnursery.com.au	Winton Street (PO Box 766), Dalby QLD 4405

BLOOD DISEASE RESEARCH IN INDONESIA STRENGTHENS AUSTRALIA'S BIOSECURITY

To help protect Australia's banana industry from bacterial wilts Jane Ray, who works in Prof André Drenth's team on a HIA project, relocated for some time to Indonesia with funding support from the Endeavour Foundation and the Australian Plant Biosecurity Science Foundation.

The objective was to gain an understanding of the distribution and epidemiology of banana Blood disease, which is currently rapidly spreading across Indonesia.

Blood disease is a bacterial wilt of bananas caused by *Ralstonia syzygii* subsp. *celebesensis*, a high priority pest exotic to Australia. The disease symptoms include; reddish-brown staining of the inside of the pseudostem, red discolouration and rotting of the fruit pulp turing them inedible, wilting and dying of the leaves, and eventually death of the whole plant.

To address this emerging threat to Australian banana production, Ms Ray conducted her PhD research on Blood disease in Indonesia through a collaboration with Gadjah Mada University. The project - supported through several funding sources detailed below - was part of Prof Drenth's project "Strengthening the Banana Industry Diagnostic Capacity" (Hort Innovation Grant BA16005).

The disease first reported in South Sulawesi, Indonesia, in 1905 originates from wild bananas. After this initial outbreak in banana plantations, the Dutch colonial administration instigated a quarantine order restricting the movement of bananas from this region. This quarantine was very effective as it prevented spread for over 60 years. However, the disease escaped in 1987, and lack of an eradication has seen it spread rapidly across Indonesia.

In collaboration with Indonesian researchers, Ms Ray conducted several surveys across Indonesia. The surveys established its current distribution and found the disease had significantly expanded its geographic range in the past two decades. The disease is spreading rapidly and easily jumps between islands of the Indonesian archipelago. It has also recently been reported from peninsular Malaysia.

To better understand infection and to test the susceptibility of Cavendish to Blood disease, Jane established a field trial with over 350 banana plants. She also had a large number of small banana plants in pots. Using this material, she showed that the disease is highly tool transmissible. Infection occurs through the male and female parts of the inflorescence. Local dispersal is through insects, birds and bats moving the bacterium from diseased to healthy plants, and long-distance dispersal is through movement of infected plant material. Planting of 160 Cavendish plants also revealed that they were highly susceptible to Blood disease. Past research in Sulawesi and Jane's recent Indonesian surveys revealed that most banana varieties are highly susceptible to this disease.

Heightened awareness of Blood disease and establishing a program to control the disease in Indonesia is vital to prevent further spread even closer to Australia. Prof Drenth's team has developed a diagnostic assay for this pathogen. Early detection is key to protecting Australian bananas from this disease. In addition to awareness, the use of disease-free planting materials and maintaining good biosecurity practice is required. Through this project, we have a greater understanding of the biology and epidemiology of Blood disease. We have identified several knowledge gaps in the management of this disease in case of an incursion that would benefit from further research.

Survey team collecting samples to confirm the presence of Blood disease in Sumba Indonesia. Left to Right; Yomina Mallo, Jenny E. R. Markus, Jane Ray, and Jeny Hency.

All laboratory work on the bacterium was conducted at Gadjah Mada University Indonesia. Left to Right; Prof. André Drenth, Prof. Siti Subandiyah and Jane Ray.

At emergence the banana inflorescence was sealed in cloth bags to protect plants from infection of Blood disease.

Blood disease symptoms in Cavendish fruit, the fruit is green on the outside but discoloured on the inside.

Blood disease in Cavendish caused the banana leaves to wilt, yellow and die, eventually the whole plant collapses.

Jane Ray inoculating the female flowers of a Cavendish banana with the Blood disease bacterium at the trial site in Indonesia.

Project Funding: Jane Ray was funded through an RTP scholarship from the University of Queensland, Endeavour Research Leadership Award and Hort Innovation grant BA16005. Operating costs were funded through the Plant Biosecurity CRC, project S120063, "Blood disease of banana diagnostics and distribution" and the Australian Plant Biosecurity Science Foundation grant PBSF016, "Reversing the impact of banana blood disease in Indonesia".

STANDING OUT FROM THE BUNCH

By Tate Connolly, Marketing Manager Hort Innovation

Recent consumer research for the Banana industry (conducted Kantar on behalf of Hort Innovation and funded by the R&D levy) unearthed some interesting and important insights that are helping to shape the future growth strategy for the industry.

6 Things you need to know about Australian Bananas from the consumer

1 For consumers, bananas are as vibrant as they've ever been

Brand tracking shows that Australian Bananas remain the snack of choice in Australia today. In fact, when it comes to claimed behaviour, volume growth has continued over the last three years, with average annual banana consumption per person increasing from ~150 in 2018 to ~170 in 2021.

A whopping 28% of the population claim to eat bananas on a daily basis with the average consumption of 5.1 bananas per week.

The percentage of Young Families claiming "I often see and hear something about bananas" increased from 49% in 2018 to 57% today demonstrating the increasing effectiveness of our communications.

2 Young Families remain Bananas primary consumer. The impact of COVID-19 has only amplified the relevance of bananas in their lives

Young Families continue to be the biggest volume consumers of bananas. 77% of the cohort consume bananas more than once a week, and 33% daily.

They are also the most addressable and attainable target. They snack more than any other cohort, snack more in the mornings, love the versatility of bananas and are prepared to pay more for them than any other audience.

COVID-19 has made health both for themselves and their families an even higher priority in their lives. But their lives remain as time-pressured and stressful as ever.

Whilst they are generally cost-conscious, they are prepared to pay more for healthy food, making the opportunity with this audience is not just volume but potentially value driven too.

3 The demand for energy is growing in the early morning, and banana consumption is already moving with it

One impact of COVID-19 is that people are seeking to be more present in their lives, to be more connected to the people in their lives, and to invest more in the moments they have with them.

They still seek energy, but its role is no longer to enhance productivity in their work. Its role is to help people get on top of life at the start of the day, so they can be more present and feel more optimistic about the day ahead of them. For Young Families today, energy needs account for 17% of early morning snacking occasions, increasing from 8% in 2018.

The energy bananas have traditionally promised to consumers remains as relevant as ever.

4 Bananas' growth opportunity is frequency across both mid-morning and early morning occasions

Young Families and Mid-morning occasions remain where the core of bananas are consumed. 24% of all banana occasions for Young families still exist in this day part. Furthermore, our traditional strengths in these occasions – providing **energy, convenience and flavour** - remain as relevant to health-minded Young Families as they ever have.

However, these same needs, and in particular energy, are finding increased relevance in earlier morning occasions, specifically in the before breakfast and instead of breakfast occasions, with 20% of Young Family banana consumption occurring before/ instead of breakfast.

5 Outside of other fruits, some of Bananas key competitors are cereal and energy bars

In both 'instead of breakfast' and mid-morning consumption occasions bananas face a number of consistent competitors: most prominently muesli and energy bars.

In these two occasions bananas hold 9% and 8% of share today. Muesli and cereal bars hold 6% and 8%. This combined 14% is a source of gain and potential growth for the industry.

Bananas have absolute right to win against muesli/ energy bars because they can consistently deliver to the key drivers of consumer choice (energy, flavour and convenience) across both occasions.

6 Simple, positive optimism in these current times will cut through

These consumer insights provide a foundation on which the industry can build a plan to drive consumer demand. Knowing who are the most lucrative audience, in the young families, and understanding the opportunity to shift communications to them slightly earlier time of day, alongside their energy need is the key to remaining relevant in our consumers' lives.

As a result, the core objective of our three-year marketing strategy is to:

'Drive consumption in early mornings whilst retaining bananas strength in mid-morning snacking' – making Australian Bananas *the* way to start your day.

The marketing campaign is supported by a range of activities designed achieve this objective and sustain Australian Bananas as the iconic brand it has become. These include, but are not limited to TV, Radio, Out of Home, Digital, Social Media, Retail, Press Office, Ambassadors are more.

During winter, the always on PR and Social Media continues but Australian Bananas advertising, including a new creative campaign, will return later this year with a launch aligned to back to school. Keep an eye out in ABGC communications for more updates.

NATIONAL BANANA DAY

National Banana Day (May 1) aims to remind consumers why bananas are Australia's most consumed fruit.

The marketing activities bring about engagement and awareness through a mutli-channel campaign. 2021 was all about getting Australians moving, fuelled by their favourite snack.

The campaign, led by Australian Bananas (Hort Innovation) encouraged people to be active in any way they liked – whether it be lunging in the living room (hello lockdown), catching a wave or taking a stroll through the neighbourhood.

The initiative was supported by social media, PR and the team of Australian Bananas ambassadors.

Social Media

Paid social media activity generated a reach of 692,101. Coverage included owned and shared social media with ambassadors and retailers, on Facebook. Instagram and Tiktok. The majority of posts were shared pre-event to raise awareness, with a few special features on the day itself.

Laura Enever: The top surfer promoted National Banana Day throughout April to her 408,000 instagram followers, including through social media and interviews. Australian Bananas also ran a competition to win a private surf clinic with the sporting star.

Billy Slater: NRL legend and long-time industry supporter Billy Slater hosted a live workout on Instagram on May 1.

Susie Burrell: Sought after dietician Susie Burrell shared a range of banana heavy recipes to get people moving in the lead up to the big day.

NRL legend and longtime banana ambassador Billy Slater shared a live workout on May 1.

A post shared by ambassador and top surfer Laura Enever which generated almost 3000 likes.

Retailers across the country were involved in National Banana Day in a number of ways, including through Point of Sale kits, catalogue features and an incentive program to increase instore visibility and staff engagement.

Woolworths

- Displayed POS kits throughout stores and decked out staff in Australian Bananas merchandise
- Developed an incentive program with Mackays Marketing which resulted in their Loganholme store winning the National Australian Banana Day trophy for best engagement and uplift

Loganholme Produce Manager Morelle and 2IC Brayden with Michael Symonds (WOW Qld State Buyer), Brad Harvey (MBM WOW Category Manager) and Daniel MacKay (MacKay Farming Group).

Coles

- Raised over $24,000 from a 10c per kg donation to Little Athletics Australia
- National Banana Day featured on Coles radio, as well in the April magazine and weekly catalogue
- A number of stores also dressed up their banana displays and even their team members

Aldi

- National Banana Day featured in an in-store leaflet, encouraging people to purchase bananas with 20c for every kg sold donated to Camp Quality.
- Posted a recipe on social media featuring the National Banana Day logo

IGA

- Celebrated by distributing an email featuring key banana information, recipes and tips

Outdoors

Digital panels in NSW and Victoria were provided by JCDecaux, to the value of more than $33,000.

PR

The total audience reach for PR (including major online, print and broadcast media) was 982,370. Traditional spend in this area had been higher in previous years, with a strategic decision made to focus more on digital and retailer communications for 2021.

Industry

As always, the banana industry came out in support of its dedicated growers and those across the supply chain who help keep Australia's favourite fruit in homes across the country. The ABGC shared photos and videos throughout the day on Facebook (@AustBananaGrowers), generating plenty of engagement and promoting our dynamic industry. If you missed it, make sure you visit the page and check out the fantastic submitted content – thank you to everyone who sent their incredible photos and videos through!

The team at Nutrano celebrated the day with the #bananachallenge on TikTok

Amarjit Bananas in Coffs Harbour

BAYER BIG FISH CHALLENGE REELING IN FUNDS FOR WOMEN'S MENTAL WELLBEING

The Bayer Big Fish Challenge has committed an additional $15,000 in 2021 for an AgSpirit Retreat to start quality conversations and support women's mental wellbeing.

With the Challenge now in its fourth consecutive year with charity partner The Fly Program, Bayer National Key Account Manager Ben Thompson was delighted to announce that rural women can be nominated for the AgSpirit Retreat for women.

"The Bayer Big Fish Challenge is widely supported by rural communities across Australia and is raising awareness of the importance of mental wellbeing," Mr Thompson said.

"This friendly fishing competition has already raised more than $100,000 over four years which funds AgSpirit Retreats run by The Fly Program to help rural people in need of a well-deserved mental health break," Mr Thompson said.

"What's impressive is that nearly 10 per cent of all anglers already participating in the Challenge are women and we know that it's often the ladies giving their loved ones a nudge to attend a retreat.

"To acknowledge this, we are excited to offer a Retreat for women and give them an opportunity to escape from the pressures of everyday life," Mr Thompson said

The Bayer Big Fish Challenge seeks to tackle rural mental wellbeing through a friendly fishing competition. Each year registered individuals and teams upload the fish they catch through the Bayer Big Fish Challenge App. Bayer then contributes one dollar per centimetre of the largest fish per type caught by each team or individual to facilitate a number of fully funded wellbeing programs.

Bayer Big Fish Challenge participant and member of an all women's team, Dior Fletcher said she is excited about the womens' Retreat and is encouraging all women from regional Australia to join the Challenge and nominate those in need.

"Fishing is an incredible way to connect and come together to openly talk about our mental health and wellbeing in a safe and enjoyable environment," Ms Fletcher said.

The AgSpirit Retreat for women will be held from 19-22 November this year, with the AgSpirit Retreat for men planned for 5-8 November, 2021

Registrations are now open for the 2021 Bayer Big Fish Challenge. Participants in the Challenge can nominate people for an AgSpirit Retreat via the Bayer Big Fish Challenge app available from the website.

About Bayer

Bayer is a global enterprise with core competencies in the life science fields of health care and nutrition. Its products and services are designed to benefit people by supporting efforts to overcome the major challenges presented by a growing and aging global population.

The company has operated in Australia since 1925 and has a long-term commitment to the health and nutrition of all Australians. Locally, Bayer currently employs almost 900 people across the country and is dedicated to servicing the needs of rural and remote communities. Bayer is committed to the principles of sustainable development, and the Bayer brand stands for trust, reliability, and quality throughout the world.

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MEET VJ SINGH

Can you tell us how you got into banana farming on the Cassowary Coast?

My parents have been farming in Moresby since 1994, my father started a cane and banana farm here after working for Queensland Rail for 20 years. He was a farmer in India, and it was his dream to start a farm in Australia. I took over the farm in 2008 after my father passed away and year after year converted it all to bananas. In my time farming, what I've learned is that consistency and routine really matters in producing a good crop.

Is your family a fan of bananas?

Yes we all are - especially my son who's 7 months old loves them!

What do you find the most challenging about farming in FNQ?

The weather - that can be the most challenging thing. Cyclones can make things hard - especially when you have been doing all the right things growing a crop year-round, to see a cyclone come through and damage the crop is really hard. Finding staff is also a challenge at the moment, I'm lucky to have a few good staff but it's difficult to get enough staff to do all the work that needs to be done. Hopefully, things change soon.

Is there anything that you're doing on your farm that you're proud of?

Producing quality bananas and seeing the hard work going in to make quality bunches is really rewarding. Growing good bananas year-round is the key to success and longevity.

I've just installed an automated fertigation system that's helping me save a lot of time, money and resources putting out nutrients. It is helping me do a better job on my bananas and making it so much easier!

What do you enjoy outside from the farm?

After a long day at the farm spending quality time with family. I've got a young son so that takes a lot of mine and my wife Natasha's time. There is nothing better than that.

Is there anything else about yourself that you'd like to share?

Having been thrown into farming at a young age it has had its fair share of ups and downs. But when everything consistently flows together it is a great feeling. Seeing the hard work convert into success and seeing your end product being sold in shops all over Australia. Being a farmer is tough but I'm proud to be a farmer.

ORIGIN DEBUT

Shouting and cheering on State of Origin night is pretty common place – but chances are there would have been some extra excitement in Tully this year.

Thomas Flegler, from the well-known Flegler banana growing family, made his debut for Queensland in the side's Game III win over New South Wales.

"It's pretty awesome, I can't keep the smile off my face," the young gun said on the Maroons' Facebook page after he came off the field.

A 'Walk of a Lifetime' needs plenty of fuel and what better way to fill up than by snacking on a nutritious banana!

NRL legend Chris Walker stopped in Innisfail as part of his almost 2000km walk from Cairns the Gold Coast, raising money for a number of charities through Fund My Challenge.

Banana growers Jo Borsato and Steve Lizzio – along with Benny Banana – met Mr Walker and fellow footy star Nate Myles to donate to the cause and pass on some tasty fruit.

In fact, Mr Lizzio worked with Blenners Transport to ensure Mr Walker had bananas throughout his journey south – an effort that got as far as Bowen before COVID-19 forced plans to change.

You can read more about Chris Walker's fundraising at fundmychallenge.com.

BEST ON SHOW

After a year hiatus due to Covid-19, the banana community was in full swing at the Innisfail show on the 8-9th of July.

Plenty of champion fruit were to be seen in the banana display with Most Outstanding Exhibit being awarded to Mengotti Pty Ltd and Most Successful Exhibition on Aggregate Points to Di Carlo Bananas.

Despite the absence of backpackers this year, the packing competition didn't disappoint. The competition shed was aloud with cheers from the local Innisfail and broader FNQ banana community.

Nine teams from five farms across Tully and Innisfail put their packing skills to the test in a friendly battle for pride, prize money and some fancy golden banana trophies. The competition demonstrates all the work that goes into packing commercial quality bananas sold at supermarkets: dehanding, sorting, clustering, and packing.

Naomi Travers, competition organiser, said: "There are plenty of new faces in the competition this year and it's always an exciting atmosphere amongst the competitors having fun and giving it a crack."

Team On a Mission, Naomi Brownrigg and Anne Vikini, each took home $1000 prize money and runners up Birthday Boys, Ron Vatoko and Hosi Vatoko, were awarded $500 each for their efforts thanks to competition sponsor Frank Lowe & Sons. Congratulations to all volunteers, sponsors, competitors, and the Innisfail Show Society for another great competition.

Picture: Maria Girgenti

Results from Innisfail Show:

Champion Ratoon Bunch
Sellars Bananas

Champion Plant Bunch
Sellars Bananas

Heaviest Ratoon Bunch
Innisfail Banana Farming Company

Heaviest Plant Bunch
Reidys Bananas

Best Two Ratoon Bunches
Di Carlo Bananas

Best Two Plant Bunches
Sellars Bananas

Champion Carton of Hands, Ex Large
M & G Dunne Bananas

Champion Cluster Carton Extra Large
13kg in 6 per layer carton only
Sellars Bananas

Champion Cluster Carton Large
13 kg in 6 per layer carton only
Sellars Bananas

Champion International Cluster Carton
15kg carton only
Mengotti Pty Ltd

Encouragement Award
Sellars Bananas

Best three (3) Clusters
Di Carlo Bananas

Champion Hand
Di Carlo Bananas

Heaviest Hand
Di Carlo Bananas

Champion Pair of Hands
Di Carlo Bananas

Heaviest Freak Banana (Any Variety)
Valley View Bananas

Heaviest Single Banana
Di Carlo Bananas

Best Six Singles
Di Carlo Bananas

Best Carton of Ex Large Hands - Any Other Variety
Woopen Ck Bananas

Open Heaviest Ratoon Bunch
Reidys Bananas 82.65kg

CHAMPION LADY FINGER BUNCH
Woopen Ck Bananas

CHAMPION LADY FINGER CARTON HAND PACK Woopen Ck Bananas

Most Successful Exhibition on Aggregate Points
Di Carlo Bananas

Highly Commended Award
Sellars Bananas

Most Outstanding Exhibit
Mengotti Pty Ltd

Results from Packing compition:

Winners:
On a Mission
Naomi Brownrigg
Anne Rikini

Runners Up:
Birthday Boys
Ron Vatoko
Hosi Vatoko

TULLY SHOW

Judges at this year's Tully Show had a tough job on their hands as some of the highest quality fruit was entered in this year's banana exhibit.

Despite unfavourable growing conditions seasoned judge Dennis Lindsay praised the standard of exhibited bunches and cartons.

"The display was excellent considering the growing year we've had. The bunch size, the uniformity and colour was exceptional this year," he said.

Fellow judge Stewart Lindsay agreed. "Typically you look at all the bunches and cartons in each class and you immediately pick the top three or four and then go back and look amongst those (to select a winning entry), but we had to have a close look at all the exhibits this time, because there wasn't a lot between them," he said.

Naomi Brownrigg from Sellars Bananas at Mission Beach walked away with the honour of Most Successful Exhibitor for the sixth year, after winning seven categories, including; Champion Bunch, Champion Pair of Plant Bunches, Champion Hand, Champion 15kg XL, Heaviest Freak, Champion Cluster Carton Ex Large (Tully Dist) and Champion Bunch (Tully Dist).

It came on the back of a successful showing at the Innisfail Show, two weeks prior, where she also managed to pick up seven class entries.

"It feels a bit surreal, and definitely a déjà vu moment. Honestly, I never expect to win and when you enter bunches, you always feel a bit inadequate alongside the other entries," she said after her Tully win.

"There have been plenty of challenges of late with every business you talk to, and bananas are always a challenging crop as there are so many things that go wrong on a regular basis that are often out of your control. That is why I love the Innisfail and Tully shows as I like to mingle with the other growers and get a sense of how everyone is going. I truly believe that exhibiting fruit is a great learning experience to become a better grower and a great chance to meet other growers."

Fittingly, Naomi was awarded the inaugural Belinda Nissen Memorial Shield for Most Successful Exhibitor. A trophy named in her late sister's honour.

"It was great winning the first year of the memorial trophy. We (Belinda and I) enjoyed exhibiting fruit together, mostly just for the fun of it. I think she would have been proud. When things get tough, I just think of her and how bloody tough and brave she was and that helps me put everything in perspective."

Most Successful Exhibitor Naomi Brownrigg

Judges Stewart Lindsay (left) and Dennis Lindsay.

Results from Tully Show:

Champion Bunch
Sellars Bananas

Champion Plant Bunch
Reidy's Bananas

Heaviest Bunch
Serra Farming

Heaviest Plant Bunch
Reidys Bananas

Champion Lady Finger Bunch
Woopen Creek Bananas

Champion 12kg Lady Finger Carton
Costa Bananas

Best Pair of Ratoon Bunches
Flegler GroupA

Champion Pair of Plant Bunches
Sellars Bananas

Champion Carton of Hands, Ex Large
Di Carlo Bananas

Champion Cluster Carton Large
M&G Dunn

Champion Cluster Carton
Mackays Ranch Rd

Champion Hand
Sellars Bananas

Champion Pair of Hands
Di Carlo Bananas

Champion 15kg XL
Sellers Bananas

Heaviest Hand
Mackays Ranch Rd

Best 6 Singles
Di Carlo Bananas

Heaviest Single
M&G Dunn

Heaviest Freak
Sellars Bananas

Best 3 Clusters
Di Carlo Bananas

Open Heaviest Plant Bunch
JR&V Dickinson

Champion Cluster Carton Ex Large (Tully Dist)
Sellars Bananas

Champion Bunch (Tully Dist)
Sellars Bananas

Most Successful Exhibitor
Sellars Bananas

TULLY SHOW SOCIALS

FEAST OF THE SENSES

Bananas were once again a massive hit at the 2021 Feast of the Senses in Innisfail, with festival goers flocking to the bright yellow stall.

A shout out to all the volunteers who gave up their time to man the stall and showcase the fantastic local produce on April 18.

AUSTRALIAN BANANAS AT FNQ ROTARY FIELD DAY

The ABGC best practice team stepped up to the task of running a banana stall at this year's FNQ Rotary Field Day for the very first time, held at the Mareeba Rodeo Ground from 26-28 May.

The biennial event is Northern Australia's largest agricultural field day, with over 600 exhibitors on display across the 3 days. Despite a little bit of wet weather in usually sunny Mareeba, visitors did not shy away, flocking in their thousands through the gates each day.

The ABGC team had a great time chatting all things bananas with locals and tourists as well as catching up with many of FNQs banana growers who came out for the event. The highlight of the stall was a hefty banana bunch kindly donated by Walkamin's Serra Farming. People were invited to guess the weight of the bunch and go into the draw to win a hamper of local delicacies and banana merchandise. While guesses ranged everywhere from 15kg to 1 tonne, the ultimate winner was Mo Pederson from TAFE Queensland who's guess of 62.7kg was the closest to the official weight of 63.5kg.

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