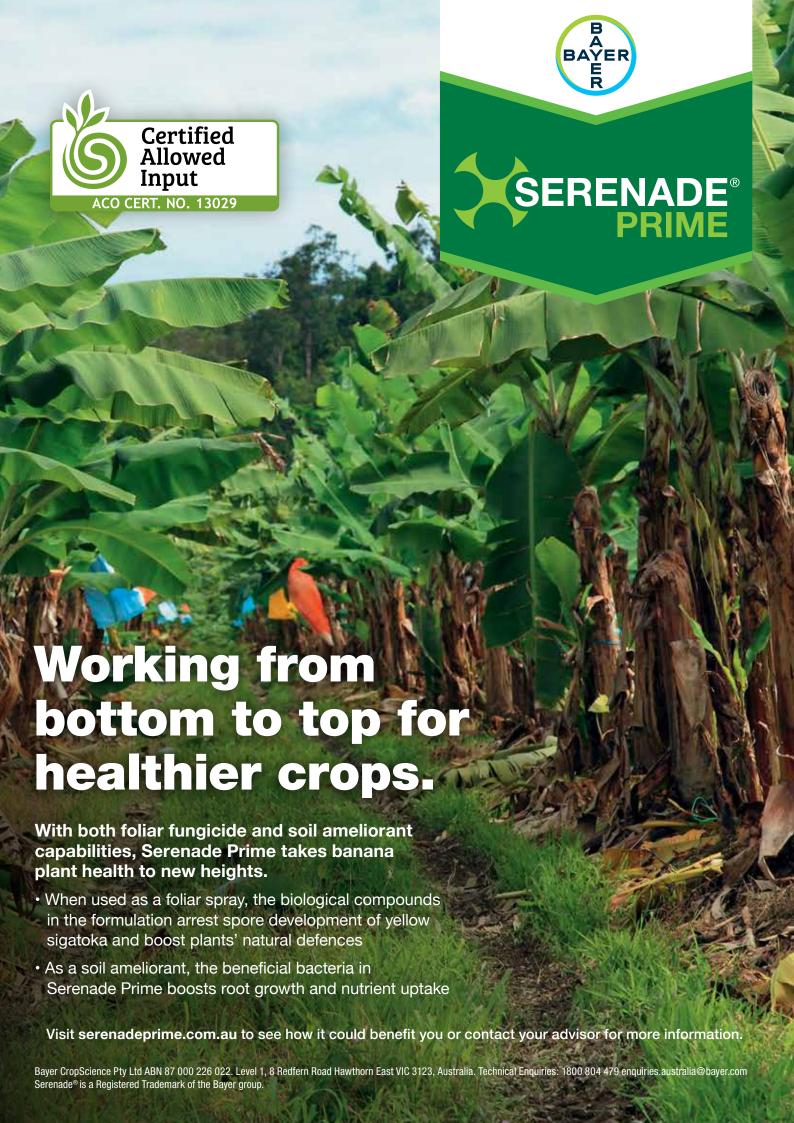


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BEST IN SHOW PAGES 40-43





4

CONTENTS

Issue: 65 | AUGUST 2022

REGULA	RS
CEO's report	

Panama TR4 stats	4
QBAN list	5
Marketing update	
INDIISTRY NFWS	
New NSW IDO	6
ABGC CEO retirement	6
Biosecurity on national stage	6
Sellers crowned for 7th time	
Going bananas for biosecurity	7
Board tours the Tweed	8
Cane offered as rotation crop	8
Chlorpyrifos review	
Freckle in the NT	10
New detection of TR4	11
Rain recovery for NSW	15
TR4 Transition	24-25
TR4 early destruction	26
	QBAN list

BANANA FEATURE

State of Industry	12-14
National Roadshows	16-17
Bunchy Top Project ends	22-23
Sweeter celebrate 20 years	34-35
Banana Bygone Era	38

DECEVDUR

IVESEMICH	
NT variety trials	18-19
Microbes Matter	20
Robotic Revolution	21
Why BBTV is hard to eradicate	27-28
Disease survey in the Torres Strait	32

BEST PRACTICE

bustainable energy co-op	.30
Nutrient management	.31
Essential earthworks	31
Next phase of BMP project	.32

BANANA EVENTS

Tour of the Tweed	39
Coffs Show	41
Innisfail Show	40-41
Tully Show	42-43
•	

Front page: North Queensland Banana grower Josephine Borsato of the Innisfail Banana Farming Company.



Congress in Cairns





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Deputy Chair

ALL MAIL TO

AUSTRALIAN BANANAS

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CEO COLUMN

Jim Pekin, CEO



Market Issues

The Australian Banana Growers' Council's (ABGC's) function includes providing a framework, within which individual banana farm businesses - our

members - can be profitable in the long term.

For the past 12 months or more, the ABGC Board has been considering market issues at each of its quarterly meetings as prices to growers (as we know) have generally been poor – worsening even more this year - and it is imperative that the situation for all growers be improved.

On 30 May - with the support of the Board - I wrote to major retailers and copied in all banana wholesalers, detailing the unprecedented cost pressures being experienced by Australian banana growers, across all regions and noted these costs are being borne wholly by growers.

I noted that bananas traditionally have been an affordable product for consumers and can continue to be a great value, even with modest increases in wholesale prices. Increases which can ultimately mean the difference between a profit or a loss for the grower.

ABGC asked for retailers' consideration of current cost pressures on growers in both the setting of retail prices at sustainable levels and in setting wholesale prices with growers and marketers to ensure the long term sustainability of the industry. Noting that a profitable industry benefits retailers, consumers and growers.

Supply Chain Engagement

In June, the ABGC Board endorsed a proposal to Hort Innovation (Hort) to provide banana levy investment support for a proposed Supply Chain Engagement Coordinator, a role employed by industry, ie working for the ABGC. I subsequently put forward a submission to Hort on this matter, which (at the time of writing) was being successfully progressed by Hort.

All going well, the industry will have an experienced Supply Chain Coordinator to:

- 1. Increase point of sale attractiveness
 - Work with major retailers and independents to educate staff on best practice merchandising, including correct product handling, display and storage.

- Hold annual training sessions with major retailers, distribution centres and category managers, with a focus on quality, handling, merchandising and storage. Review existing education that is provided to retailers on merchandising best practice.
- Encourage instore uptake of an ABGCproduced video showing correct handling, storage and merchandising of the category.
- 2. Promote the category
 - Work closely with Hort Innovation to ensure their banana marketing activities and projects are well integrated and communicated instore to achieve maximum results.
 - Work with supply chain businesses and HIA to understand their banana marketing and promotion plans and seek opportunities for alignment with levy-funded activities.
- 3. Communication
 - Improve the communication of information flow (both ways) across the supply chain for the benefit of growers and others in the supply chain.
 - Inform retailers and wholesalers on major supply issues and events, especially in cases of severe region-wide weather events.

This role cannot address pricing, volumes grown, rejected loads, retail prices or logistics, as these are all commercial matters.

ABGC recently hosted a visit by HIA marketing executives and new CEO Brett Fifield which included meetings with growers in South Johnstone and Mareeba. (On Pages 36/37 you'll find more information on the banana marketing program).

ABGC has been encouraging growers to check with their wholesalers on the market they are selling to.

Since COVID it seems that consumers have changed their ways. Working from home arrangements have resulted in more online and structured purchases and less impulse buying. More specifically, consumers appear to be shopping less frequently and less instore, and reducing food waste in the home.

Negative media around increasing costs of fruits and vegetables, has also changed some perceptions of the category, by budget conscious consumers.

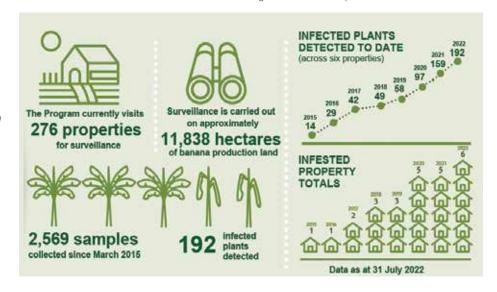
TR4 Transition

We are now well past the half-way mark in our transition to full industry management of the Panama TR4 Program in North Queensland.

When we began this journey in mid-2021, we knew that we were entering unchartered waters and there would be challenges along the way. While there have been some hurdles to overcome, the transition continues to progress. The outcomes are being based on the feedback received by many growers to our Discussion Paper earlier this year. Growers wanted containment of the disease via a cost-effective program when ABGC takes over leadership and management of it in mid-2023.

Growers feedback provided the cornerstones for the development of key strategic documents, including the soon-to-be released Code of Practice and the TR4 Management Plan.

The continued and valued support of Biosecurity Queensland (BQ) and the Panama TR4 Program Management Board has been pivotal in assisting the ABGC's Industry Transition Leader, Geoff Wilson guide the transition process.



ACTING CHAIR COLUMN

Leon Collins, ABGC Acting Chair



TR4

After almost two years without a new detection of Panama TR4 in the Tully Valley, our worst fears were realised when a sixth commercial banana farm was confirmed

with the disease in June.

It was news that all growers had been dreading. As a grower myself in the Valley, I can tell you, it was a discovery that I certainly didn't want to hear. Our thoughts were immediately with the farm's owners – S Lowe and Sons – their family and their workforce. I don't think any grower can fully understand the enormity of pressure and uncertainty felt in such a situation, unless you've had a TR4 detection yourself.

You'll see on Page 11 that ABGC Chair Stephen Lowe describes how he knew he could have been the next grower to become an IP, but still nothing prepared him for the reality of a detection. His sentiments certainly remind us that the more prepared you can be before a detection, by adopting and maintaining robust biosecurity

measures, the better your chances are of getting back into production, after positive PCR results are

The suspect plants on Lowe's farm were found during routine surveillance by Biosecurity Queensland and as we transition to industry management of this disease it again warrants ABGC continuing robust surveillance of Far North Oueensland farms when ABGC leads the future TR4 management plan.

Perhaps the only positive (a word I use very lightly) that we can take from this latest detection is that it occurred in the Tully Valley, where all six positive TR4 cases have been found since 2015.

Together as an industry, led by BQ and knowledge from world class R&D expertise, we have had incredible success in slowing the spread of this disease. Continuing efforts to maintain strong on-farm biosecurity protocols - involving both growers and the wider community - will certainly help protect your own farm, and the wider banana industry as well.

Banana Freckle

It was certainly a double whammy when it was confirmed that Banana Freckle had been discovered again in the Northern Territory, just one month

before the latest case of TR4.

The ABGC was notified by the NT Government in June that a single sample had confirmed the Freckle detection via PCR sequence analysis on a rural residential property at Rum Jungle.

At the time of writing this column there had been 29 premises with confirmed detections, located at the Rum Jungle-Batchelor region, Marrakai, Fly Creek and on the Tiwi Islands. Fortunately, only one of those detections was on a commercial banana property.

The ABGC had been working closely with the NT Government and local industry groups to ensure the best outcome for the banana industry nationally, as well as those directly affected in the NT and their local communities.

We applaud the work that has already been done by NT locals and banana growers in assisting with reporting suspect banana freckle plants and we would also implore interstate travelers to be aware that it is illegal for banana plants or fruit to be moved out of the NT.

To read more on the Freckle outbreak go to Page 10.

QBAN SCHEME FACILITIES

Mission Beach Tissue Culture Nursery	07 4068 8553 0418 299 90) 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
Sival Farming Tissue Culture Nursery	07 4068 8559 0418 299 90	o sdlavis4@bigpond.com	Dati Road, Walkamin QLD 4872
Yuruga Laboratory and Nursery	07 4093 3826 0427 933 79	1 admin@howefarms.com.au	5970 Kennedy Highway, Walkamin QLD 4872
Wide Bay Seedlings Pty Ltd	07 4129 6684 0427 371 35	3 office@wbseedlings.com.au	1971 Mungar Road, Pioneers Rest QLD 4650
Ausplant Nursery	07 4662 4934 0427 371 56	5 brady@ausplantnursery.com.au	Winton Street (PO Box 766), Dalby QLD 4405

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

	(in '000 tonnes):	
	2013	341
	2014	371
	2015	371
	2016	393
	2017	414
	2018	388
	2019	372
Ī	2020	382
	2021	403
	2022	375

BANANA LEVY RATE

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

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

1.69c /kg

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

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

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

ONG-SERVING CEO TO RETIRE FROM ABGC



After more than a decade as CEO of the Australian Banana Growers' Council, Jim Pekin will retire in November.

Mr Pekin was appointed to the role in the wake of Cyclone Yasi in 2011 and has worked tirelessly on behalf of commercial banana growers since.

Measures to ensure a smooth transition to a new CEO by November have been in place for some time, with the support from the ABGC Board and

Mr Pekin said that it had been a privilege to get to know, learn from and work with Board Members and other banana growers.

"Australian banana growers are world leaders at what they do, and I thank them for being so generous with their time, knowledge and friendliness," he said.

Growers will be kept up-to-date with news regarding the CEO position via regular ABGC communication channels.

NEW NSW I

By Lea Coghlan

When Steven Norman embarked on a four-year apprenticeship as a plumber in the suburbs of Brisbane after graduating from high school, the subtropical banana industry of northern NSW was far from his mind.

Dissatisfied with his chosen trade, Steven took an opportunity and travelled overseas, landing on an olive grove in Spain where he immersed himself into the culture, and worked there for four months. It was a watershed moment for

"That's when agriculture came back into my life," Steven said. "As a kid growing up in the northern suburbs in Brisbane, I was always growing things in the backyard."

Steven has drawn on his Spanish experience working with small scale farmers for his new position as the sub-tropical industry development officer (IDO) for the NSW Department of Agriculture. The banana industry in northern NSW is one of Steven's responsibilities. (Steven replaces Tom Flanagan).

"I'm fresh to the banana industry," he said. "As an industry developer I'm keen to bring my strengths to an industry that is new to me. My experience is in agronomic extension and understanding key practice change areas and farm practice development.

"A focus will be understanding where growers are having difficulties or better understanding their challenges, and providing research and support."

Steven's experience in agriculture spans several

He spent seven years working in wine production before progressing to a vineyard manager role in Victoria, during which he completed a degree in



New NSW industry development officer Steven Norman has hit the ground running since arriving two months ago.

agriculture science.

In 2021, he took up a position as a graduate extension agronomist with Farmacist Pty Ltd in conjunction with the Oueensland Farmers Federation.

Based in Mackay, he worked with the cane industry assisting researchers in fallow cropping, water quality and farm practice improvement and measuring sediment run-off and ways to reduce it.

Steven is keen to get to know and understand the horticulture industry of northern NSW and has spent the past two months since arriving meeting some growers and key people in the industry as well as learning the mechanics of the banana industry.

"My heart has always been in horticulture. I love the high value products of horticulture. The subtropics is closer to where my family lives – it's a valuable thing to be able to travel back to family

"I see myself being in a position where I can measure the values of the social, economic and environmental aspects of the industry, understand what the drivers are and help growers improve."

BANANA BIOSECURITY FOCUS AT SYMPOSIUM



The banana industry's journey with Panama disease Tropical Race 4 was featured at this year's Australian Biosecurity

Symposium on the Gold Coast.

SELLARS BANANAS CROWNED MOST SUCCESSFUL SHOW EXHIBITOR

By Lea Coghlan

Tully banana grower Naomi Brownrigg, Sellars Bananas, never takes her success for granted.

For the seventh time, Sellars Bananas was crowned the Most Successful Exhibitor at the Tully Show, having won the Champion Plant Bunch, Champion Pair of Ratoon Bunches, Champion Cluster Carton (13kg), Champion 15kg Cluster Carton Hand, Champion Carton (Tully District) and Champion Bunch (Tully District), along with a number of accolades at the Innisfail Show including the Most Outstanding Exhibit.

"As a small grower, you try to do a really good job," Naomi said.

"It's a good feeling to achieve at this level. It always surprises me a bit when you look at the bunches hanging – there's some really nice fruit – you have to be proud to be among the top bunches."

Naomi said consistency was key.

"I always look for something clean," she said. "It may not be the biggest."

"Consistency is everything. From caring for the bunch when it first comes out - injecting it on time, spraying properly and bagging properly so it's as clean as possible, and then getting it to the shed.

"Getting the bunches from the paddock to the shed to the show is always a bit of a challenge but we've got it down pat now."

Naomi said the show was a great opportunity for growers to showcase the industry.

"Now more than ever you can't get access to farms because of TR4 and I think our community does like to see one of the main industries we have," Naomi said.

"Most people don't see bananas on the bunch because consumers only see them in the shop as a cluster."

"To see them hanging as a bunch, especially those really big ones, you get an appreciation of how someone managed to handle that in the paddock to the shed."

See page 42 for results and photos from the banana competition at the Tully Show.



GOING BANANAS FOR BIOSECURITY

By Jael Napper

The Panama TR4 Program has teamed up with author Matilda Bishop in an innovative approach to engage Far North Queensland communities to protect banana farms from Panama disease tropical race 4 (Panama TR4).

"Charlie goes bananas!" is a story book for children to understand how biosecurity is everyone's responsibility," said Matilda, who launched the book with a live reading to school children in June.

"Charlie is a young boy who learns about Panama TR4 when visiting his grandfather in Far North Oueensland," Matilda said.

Panama TR4 Program Leader, Rhiannon Evans said the response has been incredible with 62 copies of the book ordered within weeks of the book's launch, and 13 school requests for live

"We're always looking for ways to inspire the next generation of biosecurity champions," Rhiannon

"The Cassowary Coast Regional Council has also

offered to stock the book for loan throughout their libraries and to display at their visitor information centres."

Tully-based banana grower and Acting Chair of the ABGC, Leon Collins said children could play an important role in promoting the importance of biosecurity throughout banana growing communities.

"With 95 per cent of Australia's bananas grown in Far North Queensland, our children's futures could be heavily impacted by Panama TR4 if it continues to spread," Leon said.

"If everyone does their bit, the next book we release will hopefully be 'Charlie grows bananas!"

The Panama TR4 Program has offered live readings of 'Charlie goes bananas!' to all primary schools across the Cassowary Coast. Free copies are available by order form at panamatr4protect. com.au. A video version can also be found on the Biosecurity Queensland YouTube channel.



TAKING IN THE TWEED

The ABGC board met at Coolangatta on the Gold Coast in May, giving directors and senior staff the chance to catch up with NSW Northern Rivers growers.

The board toured two banana farms in Northern NSW and met with ten growers for dinner at the Murwillumbah Services Club.

ABGC directors Doriana Mangili and Paul Inderbitzin gave presentations on their own farming experiences — Ms Mangili's with the Sweeter Banana Co-Operative (WA) and Mr Inderbitzin's with Kureen Farming (QLD).

The board meeting itself covered a range of issues including:

- The state of the industry and severe economic pressures
- The direction of marketing programs planned by Hort Innovation
- Chemical access, including for chlorphyrifos (see update on Page 9)
- The TR4 transition (see update on Page 24-25)

The next ABGC board meeting is scheduled for August 18 and 19 at South Johnstone.



Growers Robyne and Steven Edwards (far left) with ABGC Directors and senior staff including Leon Collins, Andrew Serra, Geoff Wilson, Doriana Mangili, Paul Inderbitzin, Stephen Lowe, Leanne Erakovic and Wayne Shookridge

SUGARCANE OFFERED AS BANANA ROTATION CROP

Banana growers are being asked to consider sugarcane as a profitable rotation crop.

MSF Sugar, which owns and operates the South Johnstone, Mulgrave and Tableland mills, is actively seeking more cane supply and wants banana growers to think about growing cane in banana fallows.

MSF Senior Cane Supply Manager Mick Ward said there were a number of reasons why banana growers should consider cane as a fallow crop.

"Cane produces big crops, needs very little fertiliser, has low labour inputs and provides a bunch of soil health benefits like reducing nematode populations," Mr Ward said.

"On top of that the economics are very favourable at present, with growers able to lock in some high sugar prices out to 2024 and 2025."

MSF is offering cash bonuses and no-interest loan incentives for growers moving to cane.

For further information contact; Dennis Wright on 0475 785 891, Ann Stephensen on 0418 438 358 or Fergus Darveniza on 0438 453 284.





ABGC Director Andrew Serra with ABGC Bunchy
Top Inspector Amardeep Singh on a property in
the Northern Rivers

GAP YEAR PROGRAM HELPING ADDRESS LABOUR SHORTAGES

Applications are open for the National Farmers' Federation AgCAREERSTART program, a 12-month employment program aimed at encouraging young school leavers to take a gap year and work in agriculture.

The program matches young Australians with paid on-farm jobs, while addressing barriers and attitudes to work in Australian agriculture

The program has seen school leavers learn new skills, while assisting farmers to fill critical labour shortages.

Under the program, participants are employed under award wages on qualified farms for up to 12 months, receiving essential training and the opportunity to join the farm after completing the program

Applications for both farmer hosts and

For more information and to register your interest visit www. agcareerstart.com.au

HORT AWARD CHANGES NOW IN EFFECT

The Fair Work Commission's decision in the Annual Wage Review increased the minimum rates in the Hort Award by the greater of 4.6% or \$40 per week.

An employee earning less than \$869.60 per week received a flat \$40 increase per week. Employees that earn above \$869.60 received a 4.6% wage increase per week.

The decision came into effect on 1 July 2022.

BUNCH PEST MANAGEMENT CHLORPYRIFOS REVIEW - WHAT YOU NEED TO KNOW

By Tegan Kukulies & Rosie Godwin

Products containing chlorpyrifos are currently under review in Australia. The prospect of managing bunch pests without these products is a cause for concern for many growers. These concerns and changing bunch management practices was discussed extensively at the mini-roadshow events in Far North Queensland in June 2022 (more on Pages 16-17).

The chlorpyrifos review

As part of the current review of chlorphyrifos products, the Australian Pesticides and Veterinary Medicines Authority (APVMA) will publish their proposed decision for products containing chlorpyrifos for agricultural use towards the end of 2022. This will be followed by a 3-month consultation phase and further consideration before the APVMA releases their final decision about future use or phase out.

The permit for bunch dusting chlorpyrifos (PER14240)

The minor use permit to apply chlorpyrifos products (containing 500g/kg chlorpyrifos) in a dust mixed with talc was due to expire on 30 September 2022. The application to extend this permit was successful. The permit is now valid until 31 July 2024, pending the outcomes of the **chlorpyrifos review**. Please note that the talc itself is not under review.

Important points to consider for bunch pest management

- Before use of any chemical:
 - Confirm the registration status by checking the Australian Pesticides and Veterinary Medicines Authority website: portal.apvma.gov.au
 - Check product label and permit rates.
- Consider resistance management. Rotate chemical groups and avoid bell injecting and treating the bunch with the same insecticide active ingredient.
- Control of banana rust thrips should be managed by treating both the soil-dwelling pupal stage and adults and larvae on the fruit and plant.
- Products containing chlorpyrifos to bunch
 - the emulsifiable concentrate (EC) formulation that contains solvents to dissolve the pesticide, may cause fruit burn on young fruit under poor drying conditions.

- the wettable powder (WP) formulation, dissolves in water. Growers have not reported fruit burn when applied at the label rate.
- Products containing bifenthrin for bell injection - only the suspension concentration (SC) formulations are registered for bell injection.
- The rate for bell injecting spinetoram, listed in the minor use permit (PER87198), is different to the label rate for bunch spraying with spinetoram. Ensure the correct rate is used to achieve control and reduce risk of resistance
- Good bunch spray coverage is important to get effective control of bunch pests.
- Staff training is important for calibration and application of pesticides. Additional training will be required for farms transitioning from bunch dusting to spraying.
- When changing from bunch dusting to spraying consider if other elements of bunch pest management may need to be changed to achieve maximum control of bunch pests including fungal organisms – e.g., practices to increase air flow in bunch covers.
- Regularly calibrate equipment and check application techniques and revisit product label and permit rates.
- Check the storage requirements of chemicals and only mix volumes required for immediate use.
- Always comply with WH&S directions on labels and permits when applying chemicals, including wearing personal protective equipment.

Growers who attended the mini-roadshow events expressed interest in investigating and sharing knowledge of different bunch spraying options. To assist industry to continue to produce quality bananas, the National Banana Development and Extension team are hoping to trial and demonstrate different spray set-ups to ensure efficient and effective coverage. The team are interested to hear from growers who are willing to share their knowledge and experience with bunch spraying and those wanting to trial bunch spraying on their farms.

Chemicals currently registered or permitted to be applied for bunch management

Active ingredient	Chemical group – mode of action	Bell injection	Bunch spraying	Bunch dusting
Acephate	1B	/	√	
Chlorpyrifos	1B		✓ EC formulation may cause fruit burn	√ (Permit 14240)
Diazinon	1B		✓ Has been reported to cause fruit burn	
Bifenthrin	3A	✓ Only SC formulation registered for bell injection		
Spinetoram	5	√ (Permit 87198)	1	
Spinosad	5		✓	

The information in this table is current as of 6 July 2022 for Oueensland. Always check the registration status of chemicals before use by checking on the Australian Pesticides and Veterinary Medicines Authority website: www.apvma.gov.au

Contact the National Banana Development and Extension Team on 07 4220 4152 or Rosie Godwin - rosie.godwin@abgc.org.au if you would like more information.









FRECKLE FOUND AGAIN

It's another devastating blow for banana growers in the Northern **Territory** – and a major concern for the industry at large.

Just three years after a successful eradication, the fungal disease banana freckle has again been detected in Australia's Top End.

By Amy Spear

In May this year, Alan Petersen and Julie-Ann Murphy received the news that no grower wants to hear: an exotic pest had been detected on their property.

For Al and Julie-Ann, the confirmation brought with it an awful sense of déjà vu. This was, of course, the second time banana freckle had been found on their property – the first in 2013.

While heartbreaking the first time, the new detection has thrown their business – Rum Jungle Organics – into unchartered territory.

When banana freckle was detected in the Northern Territory in 2013, authorities embarked on an extensive eradication program. It took its toll on banana lovers in the NT, and faced its fair share of criticism. However, banana Freckle was declared eradicated in February 2019.

Just over three years later - in May 2022 authorities confirmed a new detection. It has now been found at 29 premises in the Top End (as at 5 August 2022), including at Batchelor, Marrakai, Fly Creek and on the Tiwi Islands.

In its latest update before going to print, the NT Government said the commencement of a Banana Freckle Response Plan had been put on hold until

more detailed surveillance had been completed to better understand the extent of the spread and develop the best possible strategy moving forward.

At Rum Jungle Organics, the latest incursion may be the end of their 22-year banana farming journey.

Ms Murphy said they had still not recovered financially from the first freckle detection.

"We are heartbroken," she said. "Our hearts go into our farm, it is such a part of who we are as Julie-Ann and Alan."

The Australian Banana Growers' Council has been meeting regularly with the NT Government, the Northern Territory Farmers' Association and Greenlife Industry Australia.

"Our thoughts are with those directly affected by this, as well as with the banana industry as a whole," ABGC CEO Jim Pekin said. "If banana freckle were to make it to the major production areas in Far North Queensland, it would be devastating."

Mr Pekin thanked those who had reported suspicious plants so far and encouraged everyone to keep doing so.

"We would also implore interstate travelers to be aware that it is illegal for banana plants or fruit to be moved out of the NT," he added.

Rum Jungle Organics had strict biosecurity protocols in place and, in fact, won a Biosecurity Award in 2018. They sourced their plants from approved tissue culture nurseries.

At the time of writing, they had been in quarantine for almost two months and had lost 90 per cent of their income. Rum Jungle Organics has a loyal customer base at markets locally and in Darwin.

"We have received loads of support from the

community and this gladdens our heart but sadly does not feed us. We are very shaken by this. We are 64-years-old and cannot contemplate what the future holds now.

"We have survived fires, cyclones, storms, pests and diseases – but this one will take us out," Ms Murphy said. "We are older now and do not have the personal and financial resources to weather this

If you suspect your plants have banana freckle - or another pest or disease call the Exotic Plant Pest Hotline on 1800 084 881.

FRECKLE

- Banana freckle is a disease of banana leaves and fruit caused by a fungal pathogen
- It's a wet spore organism
- It's spread over short distances by water droplets and wind-driven rain and over larger distances by moving infected fruit, leaves and suckers
- Banana freckle appears as dark raised spots and feels like sandpaper on the leaves or fruit
- Banana freckle decreases productivity of banana plants
- The fruit is not marketable, but is safe to eat







Please note: the content of this article is current at the time of going to print. As the situation is constantly evolving, the ABGC asks growers check both the NT Government and ABGC websites for up-to-date information.

LEARNING TO LIVE WITH TR4

By Sonia Campbell

With his farm located in high-risk TR4 territory in the Tully Valley, Stephen Lowe always knew his could be the next property to become infested with the soilborne disease.

Yet, nothing could have fully prepared him for the day he received the heartbreaking news that suspect plants found amongst his plantation had returned positive PCR results, confirming his greatest fear.

"I'm absolutely not surprised that I was the next detection, but I am still shocked. I think you'll always be shocked once you've been told you've got TR4," he said.

On June 22, the property became the sixth commercial banana farm since 2015 to be identified with TR4 in the Tully Valley. Suspect plants were found during routine surveillance by Biosecurity Oueensland (BO).

The weeks that followed were a taxing time for Mr Lowe, his family and their staff, while trying to come to terms with the detection, learning to adapt to farming with TR4 and returning to full production.

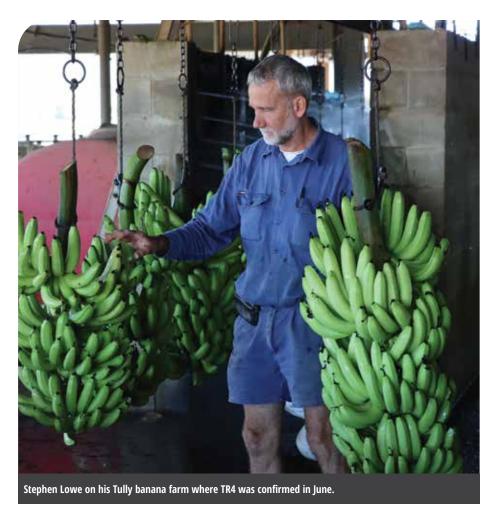
"There were no real surprises to me, because I suppose (as ABGC Chair and a Board Director) I've been involved in the whole process for the last six years. But that doesn't mean it was any easier," he said.

"You still have to deal with changing shoes 30 times a day, because you go somewhere, you realise you forgot something and you have to go back through a clean zone (with a boot exchange) get what you forgot and go back again.

"I guess we were prepared for that. And my staff, although they weren't as prepared, they adapted fairly easily. My staff have been great and I'm very appreciative of the efforts they have put in to ensure we could got back into production.

"The support I have received from fellow growers, in the way of phone calls and offers of support, has also been incredible, and also very humbling."

It had been almost two years since Tully had recorded its last TR4 detection (September 2020) and confirmation of the latest infested property was a timely reminder for growers of the importance of adopting and maintaining robust biosecurity measures, for the protection of individual farms and the wider banana industry.



Mr Lowe agrees and said without prior planning and installation of several key biosecurity measures on his farm, he would not have been able to return to production in such a short space of time.

"We were essentially unable to trade for 24 hours. So, we were back packing within 24 hours," he said.

"Many years ago, we put a policy in of changing footwear. So, we've had that in place for at least the last 5 years. But I guess the attempt there was to ensure soil didn't come onto the farm, but now the big thing is to ensure that soil and plant material doesn't go off the farm.

"Probably the biggest issue we had with biosecurity was getting a clean access road into the property. That was really a necessity, so that we didn't have to try and decontaminate every vehicle that came onto the farm.

"So, for the last three years we've improved our access road, we've sealed it, we've fenced it. Essentially our clean access road is the same as the main road. And that's how we access our farm and get fruit on and off."

Mr Lowe said sealing the access road and fencing it was a costly exercise, however it saved the farm weeks of lost production time after becoming infested with TR4.

"If you get TR4 and you want to be able to operate again quickly, then you essentially have to have that clean access to your property.

"If I hadn't have had that, I'm guessing I would have been out of production for a minimum of two weeks, possibly three weeks. So, depending on the price of returns at the time, that could be anywhere from at the moment (with low prices), for me a couple of hundred thousand dollars, or it could be worth anywhere up to \$600,000. So, that's what you've got to look at when you're looking at down time and loss of production."

"I guess it's hard to give advice, because it's something you are not going to come to terms with until you get TR4. But I guess my best advice is if you are planning to continue trading after you get TR4, you need to do some preparation in terms of access onto and off your farm."

WINTER PRICE REPRIEVE BRINGS HOPE, BUT WILL IT LAST?

MONTHS OF UNPRECEDENTED INDUSTRY STRAIN TAKE TOLL

By Sonia Campbell

Farming is often symbolized by both hardship and hope, and at the time of writing this article the banana industry was tempered by both.

In late July/early August, lower yields from an extended winter had finally pushed prices to a level above the cost of production for growers. But with Spring fast approaching, will this welcome reprieve last?

Prior to this, months of consecutive and unprecedented financial strain had many growers questioning just how much more industry could take. Cost of production pressures continued to deepen, financial losses were taking an increasingly crippling toll and consumer demand for bananas was failing to lift.

For most of industry it's been an unrelenting two years. A period that has included significant COVID-related challenges – from worker shortages to changes in consumer buying - prices consistently below the cost of production, severe weather events, quality issues, high production rates, and significant inflation of freight, fuel, fertilisers and chemicals from global economic influences.

Speaking just prior to the winter lift in farm gate returns, acting Australian Banana Growers' Chair Leon Collins said whether you were a large operator or small, almost every grower was suffering significant financial hardship.

"It has certainly taken the shine off the industry at the moment. People are thinking, "When is it going to turn around? Or is it even going to turn around? Where is our future in the grand scheme of things?"," Mr Collins said.

"Having such an extended time operating below the cost of production, it's just cruelled us. And it's indiscriminate. It doesn't matter if you are big or small, it affects everyone.

"And we can't keep enduring that. No one can."

Adapting under pressure

With production costs rising almost overnight, growers had little time to adapt. But there were also few options, particularly with consistent low returns. "People have been cutting down on their fertilizer rates, but that creates problems as well," Mr Collins said.

"You can't cut back on your cartons – which, by the way, they went up five per cent last week. And you can't cut down on your transport costs, because

that's a fixed price as well.

"Staffing levels are a big one. People have to watch their staff levels, but you still need a certain amount of people to keep production going. The cool weather has calmed down demand for staff at the moment, because we are not packing as much, but come September when we get that change of weather, things usually go boom again."

Many variables at play

With many growers cutting back on fertilizer usage, some predict this could affect the amount of fruit hitting the market floor, when supply is expected to return in Spring.

Innisfail grower Josephine Borsato believes inflation pressures that have affected some growers' farming practices, could have flow on affects to supply chain.

"We usually have a big flush of fruit come September, once the weather warms up and the hang time for fruit reduces," Ms Borsato said.

"But there's some growers who unfortunately haven't been able to put their usual inputs in and bunch size has definitely been affected. So, it will be interesting to see if we see lower yields affecting supply. There are so many variables at play, it's very unpredictable."

Making the most of better returns and signs of demand increase

For now, Mr Collins said growers were making the most of better returns and signs of a steady improvement in consumer demand - hoping both would help keep the industry buoyant.

"At the moment we are not going backwards anymore, however it will take some time to make up for the months of losses," he said.

"The last three weeks demand has increased. People are probably seeing value for money in our product. With the better prices, it's definitely a well needed reprieve, but we're all worried about how short lived it's going to be.

"We'd like to see these sorts of prices stay with us now. People are a fair way in now and they are not going to recover overnight."

Given the uncertainty, growers could be forgiven for craving a crystal ball.

HORT MEETINGS

In June, the ABGC hosted a visit to North Queensland by HIA marketing executives and new CEO Brett Fifield which included meetings with growers in South Johnstone and Mareeba.

The meetings gave growers the opportunity to discuss the banana marketing program with Hort Innovations marketing team. Jane Smith, General Manager Marketing, outlined key shifts to the marketing approach, while Head of Consumer Marketing, Gillian Reilly presented data showing trends in the banana category and the proposed marketing plan to drive consumer demand.



Growers gathered in South Johnstone (pictured 23 June) and Mareeba 24 June to discuss marketing and supply chain opportunities with Hort executives.

During question and answer time, growers expressed a number of concerns including; demand for bananas not matching supply, changes in consumer buying habits which had affected demand and if the marketing program could address these and other issues.

The Hort executives also toured several banana farms, learning more about banana production and supply chain issues.



Hort marketing executives and CEO Brett Fifield toured a number of banana farms during their visit to NQ to learn more about banana farming – pictured here with Innisfail growers Michael and Angelo Russo.

IMPROVING BANANA **SUPPLY CHAIN ENGAGEMENT**

As outlined by CEO Jim Pekin in his column (Page 4), the ABGC Board in June, endorsed a proposal for banana levy investment support for a proposed Supply Chain Engagement Coordinator, which at the time of going to print was being successfully progressed by Hort Innovation.

The role of this officer would be to address a number of market issues including;

- Increasing in-store point of sale attractiveness.
- Improve the communication of information both ways across supply chain for the benefit of growers and others in the supply
- Promotion of the category by working closely with HIA to ensure banana marketing activities and projects are well integrated and communicated instore to achieve maximum results.
- Inform retailers and wholesalers on major supply issues and events, especially with severe region-wide weather events.

The position would not address commercial matters such as pricing, volumes grown, rejected loads or retail prices.

The ABGC devised a proposed Scope of Works for the role, which included feedback sought from growers on the proposed position.

For more details refer to the CEO column on Page 4. The ABGC will keep growers updated on the new developments to progress this position when they occur.

RETAIL TRAINING TOOLS TO IMPROVE BANANA HANDLING AND MERCHANDISING IN STORES

The ABGC's Communications Project is producing retail staff training videos to improve the handling, storage and merchandising of bananas in stores.



Managing Director of Australian Produce Partners Richard Clayton during filming of new retail training videos being produced by the ABGC.

POINT OF SALE TO POSITIVELY FRAME THE WINTER CHILL **MESSAGE**

With some bananas ending up on retail shelves a little dull throughout winter, Hort Innovation developed A3 point of sale posters to help alleviate any consumer quality concerns.

The posters let customers know that although in winter some bananas may naturally lose some of their bright yellow glow, inside they were still as delicious and healthy as ever.

The 'Mellow Yellow' posters were offered to all major retailers to place in their banana displays.



RETAILERS ALERTED TO GROWERS' CHALLENGES

As highlighted in the CEO column on Page 4, in June the Australian Banana Growers' Council (ABGC), at the request of members, wrote to major Australian retailers to explain unprecedented cost pressures being experienced by banana growers nationally.

The letter noted significant rises production cost inputs for growers – including chemicals, fertilizer, freight, cartons and labour – all of which were being borne wholly by growers.

The ABGC asked retailers to consider these costs pressures in both the setting of retail prices at

sustainable levels and in setting the wholesale prices with growers and marketers with a view to ensuring the long-term sustainability for industry. Noting that a profitable industry would benefit retailers, consumers and growers.

A BUNCH OF LOVE FOR BANANAS

The ABGC's Communications Team has launched two social media campaigns since April to help drive banana sales and highlight the state of industry to consumers.

The initial campaign, #nana4afarmer, gave banana lovers some extra incentive to snap up their favourite fruit. The message was simple: when you buy a banana, you're not only purchasing the perfect energy snack, you're supporting Australian banana growers who are experiencing a time of unprecedented challenges.

The campaign included videos featuring banana growers — which reached thousands of people on Facebook alone. It also included other social media posts — on Facebook, Instagram and TikTok - as well as mainstream media coverage.

A follow-up campaign, #BananasOnABudget, has been running since 17 June and has focussed on delicious and affordable banana recipes, sparking conversation around the incredible value bananas offer at a time when household budgets are tight.

Each recipe shared features a cost-per-serve, highlighting the fact that bananas are a smart choice at the supermarket checkout.

The Communications Team enlisted the help of growers themselves to star in recipe-making videos on farm. This grower-focussed content has, by far, been the most popular amongst our social media followers.









WE'RE LOOKING FOR OUR NEXT SOCIAL MEDIA STAR!

The Communications Team would love to continue to feature banana growers in short videos to post on our social media channels.

These videos, by far, have proven to be the most popular with our social media followers. You don't have to have any acting skills or be social media sawy. Our team can come to you and simply film you making a yummy banana recipe and edit together the footage.

If you would like to help us keep the #BananasOnABudget campaign going, please contact Sonia Campbell on 0428 038 330.



Banana grower Josephine Borsato, Innisfail Banana Farming Company, and Jess Howe of Rock Ridge Farming on the Atherton Tablelands whipped up their favourite banana recipes to help boost the ABGC's #BananasOnABudget campaign. The videos created great engagement with the ABGC's social media followers, reaching thousands on Facebook, Tiktok and Instagram.





Australian Bananas helped to 'a-peel' to customers to buy more bananas in their regular shop, launching a media campaign in June highlighting challenges faced by industry including increased production costs, severe weather events and the aftermath of the pandemic.

A national media release, issued on 29 June, highlighted;

- Australian banana growers are calling on Aussies to buy local, fresh bananas which are currently in abundance.
- While there are price pressures in the fresh produce aisle, Australian bananas have a plentiful crop and are representing great value now more than ever.
- Australian Bananas are an iconic snack, bursting with goodness and nutrition to keep you full of energy all day long.

The PR/social media campaign had very strong traction with over 145 pieces of coverage across tv, radio, online and print. One of these was a five-minute interview with Lakeland banana grower and ABGC Director Paul Inderbitzen on The Morning Show (Channel 7). Mr Inderbitzin was the voice of industry during the campaign, undertaking a number of interviews for national, metro and regional television and radio.

As part of the campaign, Australian Bananas also created more budget-friendly recipes for their website and posted these on social media. These were shared on the ABGC Facebook page as well.

RAIN WREAKS HAVOC ON NSW RECOVERY PLANS

The fallout from flooding and extreme weather in New South Wales is still being felt by many growers.

The devastating event earlier this year — which also wreaked havoc in Southeast Queensland - claimed lives, homes, property and businesses. Signs of the devastation can still be seen throughout affected areas, with recovery an ongoing effort.

On banana farms, crops were largely spared but access and infrastructure are lingering concerns.

Peter Molenaar, who farms with his son Dan near Mullumbimby, told Australian Bananas magazine in April that it had been a disaster like no other for the Far North Coast of New South Wales.

The Molenaars felt incredibly lucky to only lose a small portion of their crop. However, high demand for contractors and ongoing wet weather throughout the region means they – and many others – are still waiting to complete repairs.

"We're doing okay but it's slow going," Mr Molenaar said. "We are waiting on contractors to come and replace the temporary structures with permanent ones, but getting contractors that are

experienced in dealing with these kind of unusual situations is proving very difficult."

While many growers have been able to access grants, the time taken to apply for and receive funds has been significant. The ABGC is also aware that smaller – but still viable – farms can slip through the cracks when it comes to the definition of 'primary producer' for this purpose.

Further south, the weather waiting game is also in full swing.

ABGC director and Taylors Arm grower, Stephen Spear, said infrastructure like roads and causeways are still in need of work.

"While our crops have been spared in recent events, access is still an issue and will be until things have a chance to dry out.

"We hope funding opportunities continue to take this into account – it's simply impossible to get the work done in many cases."

Peter and Dan Molenaar on their Mullumbimby farm earlier this year.

WET WEATHER MAY CONTINUE ON EAST COAST

In farming, few variables can make or break you like the weather.

While too little rain is never a good thing, many growers on the East Coast are hoping for at least a patch of drier weather to catch-up on a range of on-farm work.

From de-leafing and earthworks, through to repairs and upgrades – a lot hinges on decent prices and some drier ground to get started.

Unfortunately, the Bureau of Meteorology suggests the latter may not happen anytime

In June, upon announcing the end of the 2021-22 La Nina in the tropical Pacific, the BOM said there was around a 50 percent chance (double the normal likelihood) of an event forming again later this year (currently at WATCH status).

In addition, the long-range outlook remains wetter-than-average across much of Eastern Australia, consistent with model outlooks from other global forecast centres.

"Sea surface temperatures are currently warmer than average for much of the Australian coastline, particularly to the north and west," Dr Andrew Watkins, BOM's head of long-range forecasting, said at the time. "The pattern is likely to increase the chance of above average winter-spring rainfall for Australia."

In early August, the BOM confirmed that a negative Indian Ocean Dipole event was under way and would most likely continue over coming months. This typically increases the chance of winter and spring rainfall over much of southern and eastern Australia, along with warmer days than usual in northern Australia. Growers can access a range of forecasts and

resources at www.bom.gov.au

MINIMISING POTENTIAL BIOSECURITY RISKS FOR COFFS BYPASS

Submitted by Transport for NSW

To protect the banana farming industry in Coffs Harbour, the Coffs Harbour bypass project team developed a Panama Disease Control Management Plan.

This plan was developed in consultation with the Banana Growers Association and DPI Agriculture. It outlines specific control measures such as cleaning and wash down procedures for vehicles, equipment and personnel. It also details specific controls for managing high-risk materials such as vegetation and topsoil.

Transport for NSW has been working with local banana farmers over the past eighteen months to minimise the potential risk of spreading Panama Disease as a result of the construction of the bypass.

In June, a contract for the major construction work was awarded to Ferrovial Gamuda Joint Venture. The project's major contractor is committed to working with Transport for NSW to develop appropriate mitigation controls and ensure these procedures are considered within their construction methodology.

With major construction work starting in early 2023, Transport for NSW will continue to work closely with Ferrovial Gamuda to ensure the control measures are implemented.

For the major contractor, and the wider project team, the principle remains the same; "Come Clean, Leave Clean".





DAF NATIONAL BANANA **ROADSHOW SERIES ROLLS OUT**

More than 70 banana growers attended the recent Roadshow series in FNQ where the importance of pesticide resistance and bunch pest management were key take home messages.

By Lea Coghlan

The DAF Roadshow series, delivered by the National Banana Development and Extension Development Team based at South Johnstone and funded through Hort Innovation, engaged with growers in Tully, Innisfail and Mareeba.

Queensland Department of Agriculture and Fisheries (DAF) Senior Development Horticulturist Tegan Kukulies, who coordinated the three-part series in FNQ, said the main focus of the 2022 event was pest and disease management.

"We received great feedback from growers about their experiences with pest and disease management and will now take that information to the relevant stakeholders, and also use it to inform future short-term research trials that will help with bunch pest management," Ms Kukulies said.

"Interest among growers was particularly

heightened due to the current review into the use of chlorpyrifos and, understandably, growers were keen to explore what options there are available to treat common bunch pests and diseases," she said.

Pesticide resistance

Stewart Lindsay, DAF Team Leader Banana Production Systems, said pesticide resistance was not a new phenomenon, having been first reported in 1902 in the US.

He said resistance could occur in synthetic and natural products and generally evolved from natural selection, with pre-disposing factors in both the characteristics of the pests being treated, and products being used to treat them.

Mr Lindsay said there were some key factors growers should consider in their goal to minimise pesticide resistance.

"Reduce pesticide application and only use pesticides when absolutely necessary, as every time you apply a pesticide you apply selection pressure," Mr Lindsay said.

"It's important for growers to use an integrated pest management (IPM) approach, where there are non-chemical options to help reduce pesticide use. Regular monitoring is also important in IPM to identify times when it's absolutely necessary to apply pesticides."

Mr Lindsay also emphasised the importance of rotating between chemical groups and most importantly the need to apply products at the right rate, right volume and right time.

"In my 30-year experience, nine times out of ten when pesticides don't perform, the answer is often found in incorrect application," said Mr Lindsay.



Kim Badcock, Biosecurity Queensland, and Kathryn Dryden, ABGC.



Daniel Kane and Natasha Smith, Costas Tully, at the Tully roadshow.



Grant Leahy, Leahy's Bananas, and Max Grimbacher, Total Grower Services.



Robert Mayers, DAF, Louis Lardi and Phil Neibling,



Ryan Osborne and Shamli, Mackays, Tully.



Daniel Farrell, DAF, and Tam Peressini, DAF.



Laura Smith, Mackays, and Naomi Brownrigg, Sellars Bananas, caught up at DAF's Roadshow in



The Costas crew - Lee Warwick, Geoff Beattie, Jacquie Hammond and Samantha Russell – at the DAF Roadshow in Mareeba.



Luke Trabucco, TGT, Nico Bradenhorst, TGT, Eben De Bruyn, TGT, Stuart Heart, Stoller, and Sam Hermann, TGT, at the DAF Roadshow in Mareeba.



YELLOW SIGATOKA -MANAGEMENT AND RESEARCH

David East, DAF Plant Pathologist, shared knowledge around the fundamentals of yellow Sigatoka and managing it. From his research he had some key points to share.

"The trial work showed that current registered products provide good control of yellow Sigatoka under medium to high pressure," Mr East said.

Mr East's most recent trial work has showed that

there are some new chemistries that, if registered, would offer more control options for growers.

He also emphasised the need for growers to rotate between chemical groups and that protectant fungicides should be applied prior to the presence of the disease and systemic fungicides are only effective on very early stages of the disease, up to stage 2b.

He also stressed the importance of timely de-

leafing, as removing leaf spot from the canopy will reduce inoculum in the field and reinfection of the crop.

"Control of yellow Sigatoka relies on a combination of effective and timely de-leafing and fungicide application. Chemicals alone won't control the disease and you can't effectively spray your way of out of a problem."

BUNCH PEST TRIALS UNDERWAY TO ANSWER KEY QUESTIONS RAISED BY GROWERS

DAF Extension team members Shanara Veivers and Ingrid Jenkins gave attendees some insight into two bunch pest management trials that are underway.

The first is investigating early bagging compared to late bagging and the impact it has on bunch pests, including birds and bats. The second trial is looking at the effect of different volumes and timing of bell injection and bunch spray applications on bunch pest damage.

Both trials are in response to grower feedback given to the Banana Extension Team as part of consultation surveys undertaken over the last

"One of the most common themes raised during the surveys was that growers were having to bag bunches earlier than they normally do to reduce damage caused by birds and bats," Ms Veivers

"Some growers have recorded bagging bells as standard practice, while others are only bagging early at particular times of the year when there is more pressure."

Ms Jenkins said many growers have reported bunch pests as their biggest issue affecting yield and quality.

"We have also had conflicting reports in terms of the efficacy of new chemistries with some growers getting control and others stating they're not," Ms Jenkins said.

"The volume and timing trial is our first step in investigating where some of the problems may lie for growers not achieving adequate control with current registered products."

Ms Jenkins said that with limited options available and the cost of pesticide application, it was important to support growers to get the most out of the products available and as an industry maximise the longevity of current registered chemistries.



Chris and Jack Reid, Reidy's Bananans, with Shanara Veivers, DAF.



Sarah Strutt, Hort Innovation, and Shane Zonta,



Wayne McCarthy, Tropicana Bananas, Mareeba, and agronomist David McDowell.



Tegan Kukulies, DAF, and Peter Inderbitzen,

BUNCH PROTECTION -THE DOS AND DON'TS

Managing pesticide resistance is more critical than ever before due to limited treatment options available, **DAF Entomologist Richard Piper told** the roadshow.

MORE VARIETIES SHOWING RESISTANCE TO TR4 IN NT TRIALS

By Sharl Mintoff, Samantha Bond, Chris Kelly and Maxine Piggott, NT Department of Industry, Tourism and Trade, Darwin; and Jeff Daniells, Queensland Department of Agriculture and Fisheries, South Johnstone

Seven varieties in a banana variety trial in the Northern Territory have demonstrated TR4 resistance, in the plant crop, as good or better than that of Goldfinger.

In the December 2021 edition of Australian Bananas Magazine (Pg 18-19) we described a new TR4 varietal screening trial, which had commenced in December 2020 and ran for the final 12 months of the project - Improved plant protection for the banana industry (BA16001). Over the 12 months plant crop data was collected to determine the TR4 reaction of several new varieties that had become available for evaluation from plant breeding programs.

In this trial, 24 varieties were screened for resistance to TR4, and included three Cavendish selections, four novel hybrids from the CIRAD program in the French West Indies, four Lady Finger hybrids from the EMBRAPA program in Brazil, some parental lines used in the breeding program, and three Goldfinger mutant selections.

The Goldfinger mutant selections were generated as part of an earlier project (BA14014) in Queensland, to improve the eating characteristics of Goldfinger, whilst hoping to retain its TR4 resistance in the process.

METHODS

As per the previous trials, all plants were artificially inoculated at planting with millet colonised with TR4. Disease assessments commenced at the

first signs of external disease symptoms, with assessments occurring every two weeks, taking note of the presence of external and internal symptoms. The trial included three reference varieties of known susceptibility or resistance to TR4; Williams – Very Susceptible; Formosana (GCTCV 218) – Intermediate; and Goldfinger (FHIA-01) – Resistant. The disease resistance of each variety was determined by scoring the severity of disease and by grouping them 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 occurs.

Intermediate (I) — Plants that can withstand some infection and suffer low losses under natural infestation conditions, with most completing their crop cycle. However, 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.

IMAGES L-R: Certain varieties displaying resistance for Panama disease TR4, Goldfinger mutant 144, CIRAD hybrid X17 and parental line M61. The Williams variety showed significant signs of disease during the same time period.





RESULTS

Highly resistant and resistant

Parental lines M61 and Calcutta 124 both rated as highly resistant, as did the True-to-type Asia Pacific #1 and CIRAD hybrid X17. Encouragingly, two Goldfinger mutants 144 and 417, both showed no signs of infection by TR4. The Goldfinger resistant reference and Goldfinger mutant 544 both fell into the resistant category as a low amount of disease was noted in a small number of plants.

Intermediate

Cavendish varieties Formosana (Intermediate reference control) and Short Fruit Williams (Williams off-type) both fell into the intermediate rating. As did the EMBRAPA Lady Finger hybrid PA 12.03, the Highgate hybrid 2390-2 and Yangambi km5.

Susceptible and very susceptible

CIRAD hybrid lines 925, 918 and L9 all displayed susceptibility to TR4 in the plant crop, as did the EMBRAPA lines PV 03.44, JV 42.41, PA 03.22 and the Highgate hybrid Buccaneer. Two Cavendish varieties Williams and GCTCV 106 Selection both rated as very susceptible to TR4.

Although this trial only ran for the plant crop cycle, some interesting results were obtained. The TR4 resistance of the Goldfinger mutants is encouraging, as they were originally selected for their improved eating characteristics and appear to have retained their resistance to TR4 as hoped. The true-to-type Asia Pacific #1 had not yet completed harvest in the plant crop at the time the trial had to be wound up. However, it had no symptoms of TR4 externally or internally.

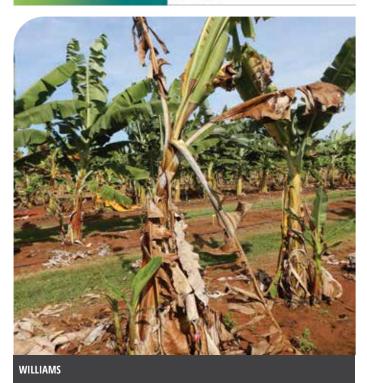
Interestingly, the Short Fruit Williams, showed a similar intermediate disease reaction to that of Formosana. Short Fruit Williams is, as the name suggests, a selection of Williams which has shorter fruit. It had occurred as a tissue culture off-type in north Queensland. We included it in this screening because it had some traits in common with TR4 resistant selections from Taiwan, notably its slightly longer crop cycle. This could indicate an association of certain characteristics, such as selections with slower crop cycle, possessing TR4 resistance, and thus the ability to locate potentially resistant variants when TR4 is not present.



Plant crop disease ratings of assessed varieties

Variety	Description	Rating
144	Goldfinger mutant selection	HR
417	Goldfinger mutant selection	HR
True-to-type AP#1	Cavendish ex Taiwan	HR
X17 (CIRAD 07)	Novel hybrid ex CIRAD	HR
Calcutta 124	Parental line	HR
M61	Parental line	HR
Goldfinger	Resistant TR4 reference	R
544	Goldfinger mutant selection	R
2390-2	Highgate hybrid ex Jamaica	
PA 12.03	Lady Finger hybrid ex EMBRAPA	l
Formosana	Cavendish ex Taiwan	1
Short Fruit Williams	Cavendish	
Yangambi km5	Dessert variety	I
925 (CIRAD 01)	Novel hybrid ex CIRAD	S
918 (CIRAD 02)	Novel hybrid ex CIRAD	S
PV 03.44	Lady Finger hybrid ex EMBRAPA	S
Buccaneer (T12)	Highgate hybrid ex Jamaica	S
L9 (CIRAD 08)	Novel hybrid ex CIRAD	S
JV 42.41	Lady Finger hybrid ex EMBRAPA	VS
Williams	Cavendish	VS
GCTCV 106 Selection	Cavendish ex Taiwan	VS
PA 03.22	Lady Finger hybrid ex EMBRAPA	VS

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



MICROBES MATTER: DISEASE SUPPRESSION IS AT THE CORE

By: Tony Pattison, Hazel Gaza Department of Agriculture and Fisheries, South Johnstone, Queensland Henry Birt, Olwen Paterson, Anna-Belle Clarke and Paul Dennis, The University of Queensland, St Lucia Queensland

Banana soils are full of life. In a typical banana soil, there are millions of different types of bacteria, fungi and thousands of other microorganisms like nematodes, protozoa, insects and worms.

As banana growers are all too aware, not all soil organisms are beneficial to growing bananas. Soils can harbour pests and pathogens like nematodes, bacterial corm rot and Panama disease, all of which reduce the growth of bananas and even kill the plants.

In the soil, most organisms are beneficial and help protect banana plants from diseases. But the diversity of different organisms makes managing them to protect the plant more challenging. On top of this, differences in soils and environmental conditions between banana farms creates more challenges.

There is one group of microorganisms found in bananas that are regarded as the "core microbiome." This group of microbes that are always associated with a host plant, like bananas, and are present, regardless of cultivar, soil type or location. Because these organisms are so persistent within the banana plant, it is thought that they play an important role in supporting plant health.

When considering the microorganisms that belong to the core banana microbiome, it is important to look at as many different situations and cultivars as possible. By using genetic tools, we have narrowed the core banana microbiome down to 36 bacteria and 21 fungi. This means that instead of having to look at millions of different types of microorganisms in banana soil to find which ones protect bananas from diseases, we only need to focus on around 50. About half of the core microbiome are important in soil and roots. The other half are more common in the corm, pseudostem and leaves of banana plants.

Of the 50 different core banana microorganisms, only about 30 (60%) can be grown in the laboratory. From those that can be grown in the laboratory, around 12 (40%) have been shown to reduce the growth of Fusarium species that causes Panama disease.

Further investigations are underway to understand how the core microbiome competes with and suppresses growth of Fusarium.

We are also investigating how to get more of the important disease suppressive core organisms back into banana plants.

We are trying two approaches to increase the number of core bacteria in banana plants. The first approach is to add them to banana plants. By inoculating plants with pure cultures of the different core bacteria, we can give the plants early protection. Because we know the organisms live in banana plants, they should persist when they move from the glasshouse to the field.

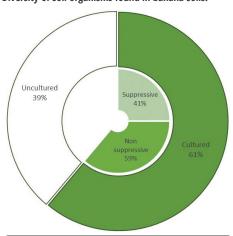
The second approach is to increase the numbers of core bacteria by using different farm management practices. Practices like ground covers, nutrient management, organic amendments, and rotation crops are being investigated to determine how they change the core banana microbiome. We also know that by increasing the total biomass, the total amount of soil microorganisms, we can reduce Fusarium's ability to colonise banana soils.

Soil microorganisms are proving to be another tool for banana growers to manage diseases.

By targeting the core banana microbiome and increasing microbial abundance, through either adding them to banana plants or through targeted farm management practices, it is possible to reduce disease losses and slow their spread.



Diversity of soil organisms found in banana soils.



The proportion of the core microbiome of banana that can be cultured in the laboratory and the proportion that can be cultured found to suppress *Fusarium spp.* (Panama disease) in the laboratory assay.



Laboratory petri dish assay of the core bacteria microorganism (white strips on agar plate) for the suppression of Fusarium oxysporum (Panama disease) (orange and white fungus at the centre of the agar plate).



Tissue cultured banana plant being dipped in a core bacterial solution before being grown in the glasshouse and challenged with Panama disease.

This work is supported by the Australian Centre for International Agricultural Research with support from the University of Queensland and the Queensland Government.



Hazel Gaza (DAF) extracts DNA from the soil in a banana paddock to check for core banana soil organisms that can suppress soil diseases.





ROBOTIC REVOLUTION

COULD AUTOMATION TAKE THE HASSLE OUT OF DE-HANDING?

De-handing is a crucial process on any commercial banana farm. Those responsible for the task set the pace of the packing shed and, as such, the quality of fruit heading to market.

De-handing is a learned skill but also happens to be manual, repetitive, and labour intensive, relying heavily on being able to hire and train experienced staff.

These characteristics - both good and bad - are why automation could completely change the de-handing game.

ARM Hub, through Hort Innovation and with support from the Australian Banana Growers' Council, has been researching the feasibility of an automated banana de-handing solution.

The researchers

The QUT/ ARM Hub team included Troy Cordie, Anthony Franze, Melissa Nugent, David Hedger and Dr Chris Lehnert.

The ABGC's Dr Rosie Godwin and Australian Hydraulic Services' Wayne Austin were also key in undertaking the project.

Dr Rosie Godwin, Research and Development Manager from the Australian Banana Growers' Council, said automation could provide some practical, positive change for industry.

"This is an option we've been wanting to investigate for some time," she said. "It's been wonderful to have ARM Hub and QUT come on board and really hit the ground running."

The challenge

The idea of automating this task is not new – in fact, ARM Hub found the first recorded attempt in 1985, consisting of a set of spinning blades suspended above a tank of water.

The spinning blades, and other earlier attempts, could not account for natural variations and resulted in damage to fruit.



ABGC's Dr Rosie Godwin (left) with Wayne Austin from Australian Hydraulic Services in Innisfail and Chris Lehnert from the QUT Centre for Robotics.

Fast forward to 2022 and new technology has opened up a world of possibilities.

Dr Godwin and Wayne Austin from Australian Hydraulic Services (Innisfail) have been closely involved with the project, including facilitating a trip to Far North Queensland to study packing sheds and speak directly with farmers.

QUT expert and Chief Investigator, Dr Chris Lehnert, along with ARMHub's mechatronics engineer Dr Troy Cordie and industrial designer Anthony Franze were able to get a detailed view of the production process and identify potential opportunities.

"Engaging with growers from various sized operations supported the ARM Hub team to develop deep insights into the banana de-handing process and understand the challenges associated with the automation task," Dr Cordie said.

A key advancement in recent years is technology to help robots adapt to natural variation. In the case of banana de-handing, computer vision built into the robotic system can identify appropriate cutting locations, assisted by the contrasting green and black abscission line present where the hand connects to the stalk.

Other challenges include sap, delicate banana skins and, of course, the use of knives and other cutting tools in close proximity to other staff.

What the project found

The project identified three possible automation solutions.

Option 1: Using two robotic arms and a perception package, the robot cuts the banana hands from the bunch and places them on the wheel/trough.

Option 2: The bananas are suspended in a tank of water and slowly lifted. As the bunch is lifted, the individual hands are removed.

Option 3: The banana bunch is angled to a tub of water and the hands are removed just above the water. Once in the water the hands are moved away with water jets.



Time and motion study was conducted across five farms, including filming manual dehanding.

More information contact: Melissa Nugent, Business Development Manager, ARM Hub on 0466 024 733, E:melissa.nugent@armhub.com.au or go to armhub.com.au You will be able to read the final report on the Hort Innovation website.

A closer look at 'Option 2'



- The submersion de-hander uses a robot arm, a lifting and positioning mechanism, a perception package and a cutting method (eg knife, water jet or laser).
- Standalone solution or could operate alongside one or more de-handers.
- As the banana bunch arrives on the overhead rail, the bunch is attached to the lifting and positioning mechanism and lowered into the tank. Once fully submerged, the lifting and positioning mechanism gradually lifts the bunch out of the tank. As the bunch rises out of the tank, the perception system identifies each hand and location for the cut. The robot arm cuts the hand from the bunch. Once removed from the bunch, the hand is moved away with a water iet.
- No additional requirement to handle the banana. The process is repeated for each hand on the bunch.
- A conveyor lifts the hands from the tank onto the trough/wheel.

What's next

The project team has proposed a further two-year project to develop a prototype robotic de-hander which can be used to demonstrate the solution and answer more detailed questions about its application. These questions would include a costbenefit analysis and determining the intricacies of cutting. Industry-wide benchmarks for the robotic de-hander would also need to be agreed upon.

While still some way off, automation does seem a feasible solution for this common and timeconsuming task. There are an identifiable core set of tasks for de-handing, which can inform the establishment of a robotic system. Robots can support a consistent level of quality, irrespective of external factors. While they would require routine maintenance and a shift in production processes, they certainly don't need much downtime.

Robotics and automated farming systems could also help achieve supply in the face of any future labour shortages experienced in regional areas.

PROJECT FINISHES ON (BUNCHY) TOP



It can be a challenge to detect and is potentially devastating for Australia's banana industry, but as the latest phase of the National Bunchy Top Project has drawn to a close, the disease remains behind containment lines and awareness continues to grow.

The National Bunchy Top Project has been operating over the last twelve years through a series of Hort Innovation-funded projects. Phase 4, which just wrapped up its' 3-year contribution, aimed to build on the successful work of iterations that had come before.

The key outcome is simple: Bunchy Top (BBTV) has been effectively contained to the existing control zones within Southeast Queensland and Northern New South Wales and the 95 per cent of commercial production outside those zones remains protected. Exclusion is vastly more cost-effective than eradication, with the benefit estimated at \$15.9-27 million in 2012.

Phase 4 was delivered by the ABGC, led by Dr Rosie Godwin, and managed by Project Manager Grant Telford.

"Bunchy Top Virus is the world's worst viral pathogen of bananas so suppression and containment within the existing biosecurity zones is critical to the industry," Dr Godwin said. "The last thing the industry needs is another significant

production constraint."

Mr Telford said control and containment has been achieved through a targeted and cost-effective program of surveillance and infected plant destruction.

"Importantly, our team has also been working tirelessly on an awareness and education program, that has been delivered to growers, consultants and members of the community," he added.

During Phase 4, the Project has increased the number of growers detecting and destroying BBTV on their own farms, attended a number of community events and produced resources for a range of audiences.

"As always, a special shout out must go to our Bunchy Top inspectors. Their ability to spot this devastating disease in its earliest stages is the stuff of legends in the affected regions," Mr Telford said.

"The inspectors have also been working closely with growers to join the team's efforts and improve their capacity to survey their own farms."

The team understands the limitations growers have in detecting biosecurity threats, particularly Bunchy Top, which can be a challenge to spot in its early stages. In addition, many growers in affected zones are employed full-time in other occupations. Training has reflected these issues and resources have been made readily available for those wishing to learn in their own time.

Of course, one of the toughest challenges faced by the National Bunchy Top Project is working in an environment where current commercial farms are surrounded by both former plantations and evergrowing residential land. Communications material was distributed to the community more broadly throughout this phase of the project via garden expos, local government newsletters and electronic media.

Behind the scenes, extensive data has been collected which will ensure future efforts to contain the disease are hitting the mark.

"Interestingly, COVID and weather events provided an insight as to what would happen if the project

BUNCHY TOP



was discontinued. We simply couldn't get to the same number of properties and the number of infections we saw when we could get back out into the field reflected that."

Most of the infestation recorded in commercial plantations was detected across a small number of properties in each state. The team continues to work closely with these growers.

As the team does not directly deal with possible human assisted movement and introduction of BBTV, the team has also developed and promoted a Code of Practice for the sourcing and planting of bananas which provides growers with some reasonable and practical steps to minimise this biosecurity risk and assist them in meeting their biosecurity obligations and duties.

In order to continue the changes adopted in Phase 4 of this project, the Project team recommended that active investment in BBTV detection and destruction continue.

A new two-and-a-half-year project, to manage Bunchy Top and other diseases, began on 1 July



Dr Rosie Godwin and Grant East in the field.

and is also delivered by ABGC and the Bunchy Top team. The project will deliver surveillance and grower education in a range of production zones.

"We have developed a number of strategies for the new project to deal with cases where a grower may have no interest in improving biosecurity, including focussing on surrounding properties and referring potential breeches of biosecurity related requirements to the relevant agency where needed," Mr Telford said.

"In addition, we believe that future investment should support the registration of chemicals and any research that may help control aphids — the primary vector of the disease.

"Finally, important cultural controls – for example de-leafing, controlling weeds, de-suckering and managing other diseases – need ongoing promotion."

Mr Telford thanked the project staff, past and present, and growers who have given up their time and energy throughout Phase 4 of this project.

THE PROJECT **IN NUMBERS**

- 8159 commercial banana plants detected and destroyed
- **6178** in New South Wales, 1981 in Queensland
- **95%** of commercial production is outside the zone and remains protected

THE GROWER **EXPERIENCE**

The latest video produced by the National Bunchy Top Project highlights the experience of those on the front line of the fight against **Bunchy Top.**

The video features inspectors and growers from Southeast Queensland and Northern New South Wales, detailing the lessons they've learned and the impact this devastating virus has had on their livelihoods.

Lindsay Wheeler's farm in Southeast Queensland has been in the family for almost 60 years.

He has nearly lost his farm to BBTV a number of times.

"It takes a tremendous amount of time out of your week to do the work [to deal with Bunchy Top]," he said. "It's a loss of money, into the thousands of dollars when it gets really bad, and if it's let go, you need to completely eradicate the farm and start again."

When the National Bunchy Top Project started, more than a decade ago, Lindsay was destroying about 140 plants every four weeks. It took roughly three years to scale that number back to 10.

Lindsay puts this down to the help he's received from the Bunchy Top inspectors: "Without their eyes, I couldn't have done it."

To hear more of Lindsay's experience, as well as from other growers and inspectors, please visit the Banana Bunchy Top Project on Facebook.



BANANA FUND nnovation

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

RESOURCES FOR GROWERS

- To view videos, fact sheets and contact information, please visit: https://abgc.org.au/banana-bunchy-top/
- To view the Biosecurity Code of Practice for the sourcing of planting material, please visit: https://abgc.org.au/biosecurity/
- To report suspected Bunchy Top, call the Bunchy Top Hotline on 1800 068 371 or email photos and details to info@abgc.org.au
- Check out the Banana Bunchy Top Project on Facebook

PANAMA TR4

DISCUSSIONS PAVE WAY FORWARD FOR TR4 MANAGEMENT

Far North Queensland growers have stepped up to have their say about the future management of TR4, with Discussion Paper consultations paving the way for a new Panama TR4 Program.

Australian Banana Growers' Council's Industry Transition Leader, Geoff Wilson said the enormous engagement from growers offered valuable insights into their priorities in managing disease.

"The consultations were held across a series of small grower meetings, as well as individual meetings and phone conversations," Geoff said.

"Throughout the discussions 123 growers were consulted, representing 79% of banana production land in Far North Queensland."

Grower feedback on managing Panama TR4 is now being considered throughout the development of key strategic documents. These include the Code of Practice and new surveillance and compliance strategies.

In December 2021, the ABGC published a Discussion Paper for the Panama TR4 Program's transition to industry management. The Paper explored how the ABGC will be making decisions that will change the size, structure, and priorities of the current Program to continue protecting the industry from disease with 40% of the current annual budget — from \$4m to \$1.6m.

One-on-one grower consultation meetings and group meetings were conducted throughout the first quarter of 2022 to receive feedback on the items detailed in the Paper.



Acting Chair Leon Collins at a Discussion Paper

Here are the interim outcomes of the consultations:

Surveillance in Far North Queensland (FNQ) The Discussion Paper sought to understand how growers feel about the current surveillance methodology and frequency.		
Grower feedback	ABGC response to feedback	
Surveillance is seen as the most important part of the new Program.	Surveillance will remain a key priority of the new Program. A surveillance strategy is yet to be finalised.	
Growers are comfortable with the current surveillance methodology, however efforts should be made to shorten the amount of time spent on-farm for greater efficiency.	The new surveillance strategy will closely follow Biosecurity Queensland's current surveillance methodology, with investigations under way to realise efficiencies wherever possible.	
All FNQ farms should continue to be surveyed once in 12 months, and 'high risk' farms every 3 months.	The new surveillance strategy will closely follow Biosecurity Queensland's current schedule for FNQ and 'high risk' properties, however it will require annual review according to risk profile and Program capabilities, and in accordance with the escalation of the disease.	
Surveillance on infested properties (IPs) must continue. Where the IP is fully compliant, build capacity for that grower to take on more responsibility for ongoing self-surveillance.	The new surveillance strategy will explore the individual IP's capability to self-survey for disease management. Where possible that property's rotation for Program surveillance may decrease according to risk profile, and in accordance with the escalation of the disease.	
Sampling and diagnostics	and in decoration that the established the disease.	

Sampling and diagnostics

The Discussion Paper sought to understand how growers feel about whether samples should continue to be collected from infested properties and sent to a laboratory for diagnostics, and who should reasonably fund the cost of sampling and diagnostics.

Grower feedback	ABGC response to feedback
Most growers felt it important to know the rate at which the disease is spreading so requested that samples should continue to be collected from infested properties and sent to the laboratory for diagnostics. Whereas other growers felt it safe to assume under certain guidelines that experienced IP growers could self-diagnose and destroy suspect plants without the need for diagnostics which would save resources for higher risk detections.	The strategy for sampling and diagnostics will include trigger levels for review in the face of disease escalation.
Growers do not wish to self-fund diagnostics and believe that the Queensland Government can help share responsibility through a co-funded diagnostic arrangement.	The ABGC has written to and met with Minister Furner to request a co-funding arrangement that would support the Queensland Government supplying in-kind laboratory support for diagnostics.

Destruction of infected plants

The Discussion Paper sought to understand how growers feel about the current destruction protocol.

Grower feedback	ABGC response to feedback
Most growers didn't demonstrate a strong understanding of how infected plants are currently destroyed, however trusted that the current method should continue based on the slow rate of disease spread.	The ABGC will use the results of research on the destruction protocol as commissioned by the Panama TR4 Program Management Board to guide future decisions.
Some IP growers suggested that, with further investigation, smaller destruction zones might be considered.	The ABGC will use the results of research on the destruction protocol as commissioned by the Panama TR4 Program Management Board to guide future decisions.

Compliance of infested properties (IPs) and a Code of Practice (Code)

The Discussion Paper sought to understand how growers feel about a Code of Practice with mandatory measures to manage compliance of infected properties, and valuntary measures to mitigate disease spread.

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Grower feedback	ABGC response to feedback
Ensuring high-risk farms in Tully Valley are prepared should continue to be a priority for ABGC. Both in terms of reducing the risk of becoming TR4 positive, but also preparing them to manage the impact of a positive detection.	Yes. Agreed.
Growers are comfortable identifying good biosecurity practices such as footbaths, boot exchanges, zoning and fencing/ barriers as voluntary provisions that could be included in a Code, however not all had implemented them on their farm.	The Code will encourage all growers to implement on-farm biosecurity measures on their farms wherever possible and the ABGC will continue to support growers with this.
Growers are not comfortable commenting on mandatory provisions that should apply to IPs, except to stop soil and plant movement off the farm.	The ABGC acknowledges that stopping the movement of soil and plant material are key objectives in containing the disease, and have been consulting with IPs to determine mandatory measures within the Code.
All growers want ongoing government involvement for hard enforcement of non-compliant IPs if required.	The ABGC has garnered key support and early engagement from Queensland Government stakeholders to have mandatory measures of the Code adopted into legislation. Development of the Code is funded by the Panama TR4 Program Management Board which is comprised of equal government and industry representatives. Government stakeholders are also included in the Code reference group to ensure it stays on course for adoption.

meeting in Tully

PROPOSED CODE OF PRACTICE FOR **MANAGEMENT AND CONTROL OF TR4**

By Jael Napper

A more streamlined, modern approach to the regulation of managing the biosecurity risks associated with Panama TR4 is on the horizon thanks to the development of a new Banana Industry Code of Practice.

The ABGC's proposed 'Code of Practice for the Management and Control of Panama disease tropical race 4 in Queensland' is being designed with a focus on common sense measures that place the needs of all banana growers at the forefront of managing disease risk.

Principal consultant in managing the Code's development with the ABGC, Grant Telford from Biosecurity Solutions Australia, explained how growers will benefit from this innovative approach to regulation.

"Through a Code adopted under the *Biosecurity Act* 2014 we will be able to maintain all of the proven and necessary parts of current government rules and remove practices found to be unnecessary - or tweak those to remove excess red tape," Grant said.

The rules Grant refers to are within Queensland's Biosecurity Regulation 2016, the Biosecurity

Manual and Notices of infestation which dictate management and control rules placed on infested properties.

"By aggregating government rules into one single source of information, we will be improving access to information about biosecurity obligations in a practical, user-friendly way."

While this is welcome news to those who find the current regulations difficult to follow. Grant assures that the Code won't dilute the government's ability to act against anyone who chooses to do the wrong thing.

"Queensland's Biosecurity Act 2014 provides for a suite of different legislative tools to be considered so we'll be repackaging the rules as opposed to replacing them," Grant said.

"This is an important first step in empowering horticultural industries in partnership with the Queensland government to take charge and responsibility for their own biosecurity futures." At the time of print, a project reference group comprised of banana growers, the ABGC and government stakeholders were finalising a proposed draft Code which will be published for wider stakeholder consultation. The ABGC will alert all growers to the draft Code as soon as it's available for review through e-bulletin and SMS notification.

All growers who are not currently registered to receive ABGC alerts should contact Amy Spear on 0439 005 946 or email amy.spear@abgc.org.au.

For all other enquiries about the Code and to submit an expression of interest to receive a draft of the Code as soon as it's published, contact the ABGC's Industry Transition Leader, Geoff Wilson by calling 0418 644 068 or email geoff@abgc.org.au Updates will be published on abgc.org.au



Why should everyone care about on-farm biosecurity?

Protect your farm and family from Panama TR4.

People who care about you and your business should respect your on-farm biosecurity rules.

Protect your fellow banana growers from Panama TR4.

The disease can easily spread if there are not the right barriers in place to stop it.

Be part of the community's fight against Panama TR4.

If everyone does their part, we have a greater chance of limiting the impact of the disease on your future and our community.

If you need help with on-farm biosecurity

Call the National Banana Development and Extension team on 07 4220 4152 or email tegan.kukulies@daf.qld.gov.au.

Self-help resources are available to you

Call the Panama TR4 Program for a copy of the Grower Kit on 07 4091 8140 or email panamatr4@daf.qld.gov.au. For a digital copy search 'Panama TR4 Grower Kit' online.

For more information visit panamatr4protect.com.au or call 13 25 23

The Panama TR4 Program is a joint initiative between the Queensland Government and the Australian Banana Growers' Council



EARLY DESTRUCTION OF PANAMA TR4 INFECTED PLANTS ON INFESTED PROPERTIES

Welcome changes for Panama TR4 infested property owners as the destruction process for new infected plants begins earlier at PCR.

It has long been known that the early detection and destruction of plants with Panama TR4 helps to slow the spread of the disease. With 100% consistency between the two key diagnostic tests for disease presence since 2017, a policy change approved by the Panama TR4 Program Management Board aims to help further limit the potential for disease spread.

The destruction process

When a plant is confirmed to have Panama TR4, the grower is responsible for destroying the plant in a way that will contain the disease as much as possible. The process growers must follow is outlined in Section 12 of the Queensland biosecurity manual and includes the destruction of banana plants in a specified area around the infected plant. This area is called the destruction zone.

Reducing the biosecurity risk

The aim of the destruction process is to reduce the biosecurity risk posed by Panama TR4. Rapid plant destruction reduces the build-up of fungal spores and limits the potential for disease spread. Destroying plants that have been confirmed to have the disease gives growers a better chance of continuing to farm with Panama TR4.

The destruction zone

The destruction zone is the area of land where banana plants that pose a biosecurity risk related to Panama TR4 have been destroyed and the area remains free of banana plants. It occupies an area 10 metres along the row in both directions from the infected plant and includes the inter-rows. The same number of banana plants in each row, either side of the row where the infected banana plant is located, are also destroyed.

The policy change

Since 2017, the diagnostic process confirming that Panama TR4 is present in a plant takes between three and six weeks. It includes two key diagnostic tests performed at the Plant Biosecurity Laboratory in the EcoSciences Precinct at Dutton Park in Brisbane. The two tests are the polymerase chain reaction (PCR) test and vegetative compatibility group (VCG) test. Both tests commence when



Panama TR4 Program staff sampling a plant suspected of having Panama TR4.

Fusarium odoratissimum (the fungal species of Panama TR4) cultures are isolated from the sample and are run concurrently.

The length of time required for a PCR diagnosis is 7-10 days from the commencement of the test, whereas a VCG diagnosis takes up to six weeks to finalise. Since 2015 the VCG diagnosis has been the definitive diagnosis for the disease. However, PCR diagnostic markers identified in 2017 have been 100% consistent with VCG results and are therefore considered as reliable as the VCG result.

As of 30 March 2022, PCR diagnosis is the definitive diagnosis for Panama TR4. This change significantly reduces the length of time the infected plant remains standing (from six weeks down to approximately 10 days).

What does this mean for growers?

Infested property owners will be given the option to have samples progressed to VCG testing. This additional diagnosis will be at the grower's expense. If the infested property owner does not request the sample go through to VCG diagnosis, the sample will be processed through to PCR only

at no cost to the grower. If the PCR test result is positive to Panama TR4, the destruction process will be required immediately whether the grower requests further testing to VCG or not.

Destroying plants at PCR will reduce the length of time the infected plant remains standing and potential for the fungus to produce spores. It will reduce the biosecurity risk posed by Panama TR4 to about one month from the plant being sampled.

Why have these changes taken place?

We know that Panama TR4 is present on an infested property, so detecting the disease early and destroying plants as soon as they are confirmed positive to the disease will help reduce inoculum build up on the farm. Last year's Epidemiological Review, which was commissioned by the Panama TR4 Program Management Board, confirmed that early detection and early destruction helps reduce the amount of inoculum produced. Helping the grower act quicky by destroying plants early reduces the chance for fungal spores to build up and infect other plants, which is critical to the ongoing viability of their farms.

WHY BANANA BUNCHY TOP DISEASE IS HARD TO ERADICATE

By John Thomas (UQ), Kathy Crew (DAF) Banana bunchy top disease (BBTD) occurs in many locations throughout northern NSW and southern Queensland.

The disease was first recognised in Australia in 1913 and by the mid-1920s had devastated the Australian industry, which was based in this region at that stage, causing losses of 90 to 95% of production. The research work of Charles Magee at the time revealed that the disease was caused by a virus (banana bunchy top virus, BBTV) which was transmitted by the banana aphid and in infected planting material. He devised a successful control program which enabled the resurrection of the industry. His strategy of inspection, destruction of infected plants, use of clean planting material, and quarantine remains the basis of BBTD control to this day.

However, despite the generally low incidence of BBTD in the region today, occasional flare-ups still occur, and the virus has rarely been eradicated from a district. Why is this so?

In his research, Magee was only able to transmit the virus by aphids when they fed on a symptomatic leaf. Excellent subsequent epidemiological and computer modelling work by Rob Allen predicted that aphids were only likely to spread the virus after about four new leaves had been formed on the newly infected plant. This allowed enough time for the infected plant to develop symptoms and for the aphid vector to acquire enough virus to be infective.

Figure 1. BBTV symptoms in a plant with many symptomatic leaves. Photo: J. Thomas, UQ.



Figure 3. Checking the youngest leaf of each stem for symptoms. L-R: Nga Tran, John Thomas, Mona Moradi Vajargah. Photo: K. Crew, DAF.

The BBTD control program is based on inspection intervals timed to allow the location and eradication of most infected plants within this window.

As part of Hort Innovation project BA19002, we have been studying an outbreak of BBTD on a plantation in northern NSW where the disease persists at a high level, despite the control program.

By selecting "hot spot" areas in the plantation and carefully inspecting all plants in the area individually, stem by stem, we have shown that the inspectors' high rate of positive identifications (>80%) is being maintained here. However, using laboratory tests on leaf samples from these plants, we found that BBTV was detectable in some recently infected plants before they showed symptoms. In other plants, the virus was detected in the symptomless leaf formed immediately prior to the first leaf to show symptoms.

This should not be a concern for disease spread if the virus was not transmitted from these symptomless, but infected, leaves. However to our surprise, when we fed aphids on these leaves, the virus was transmitted to healthy banana plants. Furthermore, the rate of virus transmission was similar regardless of whether the aphids fed on infected leaves with symptoms or without symptoms.

The map (Figure 5) shows a survey area where symptomatic (red) and pre-symptomatic (yellow) plants were located amongst the healthy (green) plants. We found that the virus was transmitted



Figure 2. The banana aphid, Pentalonia nigronervosa. Adult aphids are about 1 mm long. Photo: J. Thomas, UQ.



Figure 4. The laboratory testing team subsampling field samples. L-R: Kathy Crew, Nga Tran, John Thomas, Mona Moradi Vajargah, Megan Vance. Photo: D. Baker.

from thirteen symptomless leaves, eight of which remained symptomless over the whole three-week observation period.

Our next step is to determine whether these infectious, asymptomatic leaves are produced by BBTV-infected plants year-round or in a seasonally dependent pattern.

This plantation was poorly managed, with limited de-leafing, providing a sheltered environment for the banana aphids to multiply. De-suckering was also limited, thus providing more susceptible young plants (favoured by the aphid) that are often obscured by the dead leaf skirts. We suspect that the higher aphid numbers along with the higher number than expected of infection sources present as symptomless, infected leaves and obscured, infected suckers, combine to promote and prolong the epidemic.

KEY MESSAGES

- BBTV-infected plants can be infectious prior to development of leaves with symptoms
- Removing newly infected plants promptly slows the spread of the virus
- 4-week inspection cycles during the summer months in high disease pressure situations can reduce but may not completely suppress the outbreak
- Any reductions in inspection frequency will allow the epidemic to take off
- Plantations need to be well-maintained to limit aphid vector numbers
- Grower participation in detection and eradication between formal inspections is likely to have a significant beneficial impact on control.

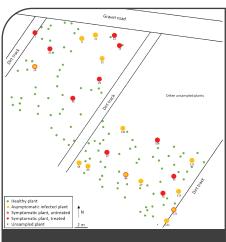


Figure 5. Map of plants assessed in this study.

CHEERS WEATHERSHIELD: THE FORMULATION YOU CAN RELY ON

With its sophisticated stable WeatherShield formulation - Colin Campbells Chemicals (CCC) brand - Cheers 720, has become one of Australia's market leaders for chlorothalonil - the fungicide recognised as the basis for disease control in Australia.

Chlorothalanil was first registered in 1966. It was developed initially by Diamond Alkali Co. (USA) which became known as Diamond Shamrock in 1967 after a merger.

To supply the Asia-Pacific with greater efficiency Diamond Shamrock established a joint venture with a Japanese chemical company in 1968. The joint venture now known as SDS Biotech opened a dedicated chlorothalanil synthesising and manufacturing plant in Yokahama.

In 1971, CCC was one of two companies in Australia to be given exclusive rights by Diamond Shamrock to introduce chlorothalonil to the Australian market. They first marketed the product under the international trade name Daconil 2787 750 WP.

In 2001, global acquisitions resulted in the transfer of the Daconil trade name and CCC's original product was renamed Dacogreen. CCC branched out to the horticultural market with their original chlorothalanil formulation in 2002 with Cheers 720

A major formulation upgrade occurred in 2008, where its already superior adhesion technology was further improved with a WeatherShield formulation for Dacogreeen and Cheers.

Mr Ramsay Zreikat, National Sales Manager at CCC says, "Cheers WeatherShield is now one of our biggest selling products., with major uses on bananas, lentils, chickpeas, faba beans and tomatoes just to name a few.

Dino and Carly Rocca of Spring Creek Produce in Tolga have seen the results first-hand.

"Anybody growing bananas, knows the battle banana farmers have in combating leaf spot and leaf speckle especially in the tropics of Far North Queensland," Mr Rocca said.

"Cheers WeatherShield has proven to be a vital part of our integrated pest management program since

"We find that when sprayed it helps protect leaves from further infestation and holds on the leaf for a longer period of time, therefore providing longer protection.

"Due to the longer protection period of Cheers WeatherShield we find it a cost-effective product to use to protect our plantation."

Still sourced from SDS Biotech, Cheers is a first-class Japanese formulated product, which continues to be recognised as the superior formulation for its ability to stick, mix and store better.

Mr Zreikat explains why Cheers' long shelf-life is so important.

"One complaint that we often hear from retailers around Australia is that chlorothalanil doesn't store well from year to year. Retailers tell us that some chlorothalonil brands they have in stock have separated even after a few months of storage. However, Cheers' high-quality formulation has demonstrated both in real time and through accelerated storage tests that it stores well for over two years."

The product's stability was further proven in 2019

when a retailer had Cheers stock manufactured in 2017 and after the mandatory shaking of the container, CCC thoroughly inspected the product. The result showed no visible signs of settling, separation or solidifying.

The next test CCC conducted was to see how the product sprayed out. For the trial we used the high application rate of 19L in 500L water per hectare. At this rate if the formulation was not right, it would be noticed. Instead, the 2017 manufactured Cheers WeatherShield product poured from the container, mixed, and sprayed out perfectly – as if it were made that same day.

The positive results achieved with Cheers 720 have been observed by growers across Australia.

South Australian grower, Mr Will Murdoch from RG & LE Murdoch says, "I have been using Cheers 720 for a number of seasons now with no issues. This is a high-quality product which gives me the confidence to order in 1,000lt IBC's to create a closed system which becomes safer for all employees and makes for an easier product to

Similarly, Ken and Amanda Arbuckle from Rosie's Reds Papaya based in North Queensland know Cheers is a product they can trust.

"We recently (18 months ago) switched our aerial and ground fungicide program to Cheers 720. We have noted amazing performance of the product in our papaya and banana crops. We shall continue using this product as it adds profit to our business."









Cheers® 720

Superior Chlorothalonil formulation.

Sticks better • Mixes better • Stores better



No storage worries from one year to the next

After a set period of standing, some products can separate and create sediment.

The quality of Cheers® WeatherShield® will not diminish whether you use it today or next season.

Cheers® WeatherShield® shows no aggregation and does not block sprayers compared to generic formulations. Our advanced formulation has superior sticking and rainfast properties. The product flows consistently without the sediment or separation issues found in generic formulations.

Call us today or visit our website to find out more about the benefits of Cheers® WeatherShield®.



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PROPOSED SUSTAINABLE ENERGY CO-OP

By Lea Coghlan

Most Australian banana growers want to reduce their reliance on the electricity grid, with three-quarters implementing a sustainability policy to achieve this, results from an industry energy and sustainability survey have found.

Australian Banana Growers' Council (ABGC) has partnered with Maximum Energy to develop a sustainable energy co-operative, the first stage of which has been to survey growers on their energy needs and approach to sustainability.

The survey remains open and can be accessed at https://maximumenergy.surveysparrow.com/s/Sustainable-Energy-Co-Operative-Survey/tt-40263f7906?

Maximum Energy National Business Development Manager Chris Galletti said the majority of growers surveyed to date indicated energy costs were in the top three of their overall operating costs.

"Growers indicated that profitability was a key

investment driver, followed by a commitment to change and environmental sustainability.

"There is a growing recognition among growers of the need to meet consumer expectations on sustainability.

"A large number of growers that were surveyed already have a sustainability policy in place, and nearly half of those have set a target to be net zero. However, less than 20% of growers surveyed understand what their current co2 emissions are.

"Nearly all of the growers surveyed expressed interest in reducing reliance on the grid and increasing energy autonomy and two-thirds were interested in being part of an energy sharing cooperative."

Mr Galletti said a handful of growers had progressed to the second stage of the project which is being offered to growers free of charge.

"The second stage will provide them with a highlevel analysis and feasibility of their sites (utilising billing data) which reveals consumption profile, pattern insights, solar or solar expansion potential and an initial battery energy storage system (BESS) feasibility.

"Two of those growers will be investigating a sustainable energy transition plan which will provide them with a custom framework that will help them track, implement and provide overall governance as they pursue their net zero sustainability targets."

ABGC Research and Development Manager Rosie Godwin said: "The next phase of the project will be to develop a pilot project for a renewable energy sharing cooperative, and we are currently investigating a low-cost and partially funded mechanism to help growers participate.

"This would be amongst the first in Australian horticulture and would provide energy resilience and over time, energy autonomy for banana growers and contribute to an overall improvement in their farm profitability."



IT'S ACTION ON NUTRIENT **MANAGEMENT PLANNING**

Growers across Australia could benefit from a soon-to-be-released video, on how to achieve effective nutrient management for optimal plant and soil health results.

Some may be surprised to learn that their traditional nutrient application rates may be higher than necessary to run a productive farming business. With the cost of production going up, advice on the possibility of lowering those costs would no doubt be welcome.

ABGC's Molly Blake is coordinating the nutrient management planning process with independent agronomists and growers on the Cassowary Coast. "The short video will take growers through the steps involved in planning their nutrient applications," she said. "This includes the '4Rs' – Right product, Right time, Right place, and Right method."

"Each farm has different nutritional needs depending on a range of factors including soil type, soil health, farm layout, and topography. By getting the 4Rs right, growers can potentially reduce the amount of fertiliser they use whilst still providing their plants and soil with the nutrients they need for improved fruit quality and disease resilience," she said.

With the increased cost of inputs, there is no better time for growers to access the services offered by the ABGC's Best Practice team who are sharing information on a range of topics including nutrient management and farm planning/sediment management.

Amelia Foster is the ABGC Best Practice Team Coordinator. "We are working hard to establish good relationships with growers and offer them useful tools to help manage the challenges they face in maintaining productivity, particularly in this time of high fertiliser and fuel costs," she said.

Not only can these tools benefit banana farming businesses, but they can support growers to continue the industry's efforts to foster environmental stewardship.

Growers in the Wet Tropics region are therefore invited to express interest in getting support from the Team to develop a custom nutrient management plan for their farm.

To express interest, contact ABGC's Best Practice Team via bmp@abgc.org.au The video will be available in the coming months via the ABGC's YouTube channel, Facebook page, and website at abgc.org.au

The video is funded by the Queensland Government through the Office of the Great Barrier Reef as part of the ongoing commitment to improving water

Strict biosecurity measures are always maintained by Best Practice staff and associated visitors/contractors when entering and leaving farms.



Filming in the field for a new nutrient management planning video, produced by the ABGC's Best Practice team.

TIMING ESSENTIAL FOR EARTHMOVING

It's the right time of year to be doing earthworks on-farm such as cultivation, inter-row renovations, and road and drainage maintenance.

Efforts are being made by many growers to get this type of work done as early as possible in the dry season, so that ground cover can have time to re-establish before the wet. Some growers are capitalizing on the farm planning advice being offered by ABGC's Best Practice Team to complement and guide their own ideas for farm/ paddock design and layout.

By getting the timing right, growers retain the topsoil on their farms so they can grow healthy plants in the long-term. If disturbance of the soil occurs too close to the wet season, it is at a high risk of being lost.

Kathryn Dryden is one of ABGC's Best Practice Extension Officers for the Wet Tropics region. "We've seen a great uptake of growers actively encouraging healthy ground cover on their farms," she said.

"This has contributed to a large portion of the industry embracing the importance of roots in the ground where possible to hold the soil in place."

Further to ground cover, some growers are better planning their farms and paddocks for soil conservation.

"In order to slow water flow and minimise soil loss, slopes of more than 3% should be contoured with appropriate drainage incorporated," Kathryn said.

There are also a range of structural measures that growers can consider such as inter-row profiles, diversion banks, vegetated waterways, and reinforced traffic areas. Flatter blocks can benefit from laser leveling and row profiles where possible to help keep wheels out of the water. This minimizes bogs and ruts.

ABGC's Best Practice team are building capacity to offer guidance to growers on soil conservation and farm planning. If you've got a block you'd like to discuss, contact them via bmp@abgc.org.au or call 0447 000 203.



Soil conservation expert Darryl Evans recently visited the Cassowary Coast and was able to spend some time with growers, giving them guidance around their farm planning ideas.

OGBR WORK ON NEXT PHASE OF BMP

The success of the ABGC's Best Management Practices (BMP) program was recognised during a visit by a team from the Queensland Government's Department of Environment and Science (DES).

The team spent three days in the Far North, working with the BMP team to review the delivery of the Banana BMP program over the past three and a half years (funded through the Queensland Government's Reef Water Quality Program). The Queensland Government is collaborating with ABGC to plan the next four-year phase of the program to ensure priorities for the banana industry are responded to.

To date, the BMP program has provided extension support and incentives to help growers change practice to better align their farming systems with recommended best practice.

Program Managers Chris Johnson and Jean Erbacher from the Office of the Great Barrier Reef, Department of Environment and Science, praised ABGC and the industry for embracing the program.

"Banana growers have been quite unique in their approach and overwhelmingly positive," Mr Johnson said.

"I think there is a real, genuine interest in better understanding those practices that are critical for farming productively and profitability as well as improving water quality.

"We have found the industry is very much open to change and improving knowledge around best practice.

"The outcome that the Queensland Government is seeking is improved Reef water quality, but we can't do anything alone."

The team very much appreciated visiting two different farms, one within the Utchee Creek catchment and a larger scale operation on flat farming country.

"Thanks to the growers for taking the time in sharing their views on the challenges facing the industry and how DES might help in the future," Ms Erbacher said.

ABGC Industry Strategy Manager Michelle McKinlay said the ABGC and OGBR had worked hard to understand each other's perspectives, limitations and challenges.

"We each have a greater appreciation for what can actually be achieved," Ms McKinlay said.

"This underpins the constructive working relationship between the banana industry and government.



Mena Creek grower Sukhpal Singh hosted teams from the Office of Great Barrier Reef and ABGC BMP Team.

"The BMP team is working with growers to demonstrate that farming to best practice isn't a costly "add-on". It can help save money which is really important when input costs are so expensive."

Mr Johnson said the industry was making solid inroads into adopting various environmental on-farm improvements.

"There are good trends in the adoption of interrow cover," Mr Johnson said.

"Growers are also investing considerable time into a project looking at nutrient management practices on farm.

"We look for that triple bottom line benefit to ensure we have productive, sustainable farms for the long-term - that's what it is about."

EXOTIC DISEASE SURVEILLANCE IN TORRES STRAIT

Dr Lilia Carvalhais is a plant pathologist from the University of Queensland (UQ) engaged through the Horticultural Innovation Australia (HIA) grant **Strengthening the Banana Industry** Diagnostic Capacity (BA16005).

Dr Carvalhais recently participated in a plant health surveillance field trip to Torres Strait with the Australian Government Department of Agriculture, Water and the Environment's Northern Australia Quarantine Strategy (NAQS). The NAQS conducts annual plant health surveys, facilitates the employment of biosecurity operational staff and works with ranger groups and communities to identify potential new threats to Australia's agriculture and native flora in Torres Strait. Led by Dr Richard Davis, the field trip was based on Horn Island with surveillance also conducted on the islands of Mabuyag, Moa, Mer, Kerriri, Masig, Dauan, Boigu and Warraber.

Plant health surveillance in Torres Strait is vital for Australia's biosecurity. Biosecurity risks can reach Australia through the movement of people and goods by sea and air, through traditional trade

between Papua New Guinea (PNG) and Torres Strait, and by natural pathways such as wind, tide and animal migration. Some serious pests and diseases are managed in Torres Strait that have not reached the Australian mainland.

PNG is only 3.6 kilometres from the closest Torres Strait Island of Saibe, contributing to a natural pathway for potential threats to crops and Australian native species. Coming into effect in 1985, the Torres Strait Treaty* enables traditional trade activities of inhabitants between the Torres Strait Protected Zone and the 13 Treaty Villages of PNG. This increases the risk of movement of pests, diseases and weeds between the two countries. Biosecurity regulations are in place to deal with these potential human-mediated threats.

"Regular surveillance is the key to Australia's success in the early detection, prevention and management of biosecurity risks," Dr Carvalhais said. "It was also exciting to tell school kids what we were doing to increase awareness about biosecurity in Torres Strait and encouraging to see how interested they were. It is essential to get the community on board to help maintain vigilance

for unwanted pests and diseases."

The inspection of banana plants for banana skipper (Erionota thrax) was a priority during the survey and was deemed absent after examining nearly 1,470 banana stems. Most of the backyard gardens had cooking bananas which are resistant to black Sigatokas.

*Treaty between Australia and the Independent State of Papua New Guinea concerning Sovereignty and Maritime Boundaries in the area between the two Countries, including the area known as Torres Strait, and Related Matters.



From left to right: Dr Lilia Carvalhais, plant pathologist from the University of Queensland and from the Northern Australia Quarantine Strategy's plant heath team, Stephen Mckenna, botanist, Richard Davis, plant pathologist and Michael Gorton, entomologist, conducting plant health surveillance in Torres Strait.

CONGRESS RETURNS TO CAIRNS IN 2023

The Australian Banana Industry Congress (ABIC) will return to tropical Far North Queensland in 2023.

Planning is well underway for the banana industry's largest national event, with Congress to be held at the Cairns Convention Centre from 17-19 May,

Building on the success of the 2021 event, the ABIC Planning Committee has begun shaping an informative and thought-provoking two-day plenary program with an engaging speaker line up, covering topics such as:

- Business motivation and staying ahead of the game
- Succession planning
- Overcoming industry challenges
- Workforce challenges
- Retail and grower panels

- Waste management
- Robotics, automation and other on-farm innovation
- Mental health
- Latest R&D

The speaker program, tradeshow and Banana Ball and Awards night will be hosted at the Convention Centre, while the Reef Hotel Casino will host the Banana Bar, Welcome Reception and be the main hotel for Congress delegates.

Over the past year, growers have faced unprecedented challenges and hopefully Congress 2023 will be a chance for growers to get off farm for some much needed down-time, celebration,

networking and chance to discuss the future of the industry.

The Planning Committee is going to great lengths to ensure the event is value for money and packed with innovation, inspiration, and practical learnings that growers can take home and apply on farm.

More details on all activities associated with Congress, including registration details, sponsorship opportunities, Banana Women's Network activities, off-site tour details and a comprehensive Plenary Program will be added to the Congress website over coming weeks.

Keep an eye out for all the latest news on the website at www.bananacongress.org.au.

For partnership or exhibition opportunities at Congress please contact Thomas Howden at MCI Australia on 02 9213 4016 or email; thomas.howden@wearemci.com For general information about Congress please contact Sonia Campbell on 0428 038 330 or email; sonia@abgc.org.au





IN THE EARLY 1990S, THE WESTERN AUSTRALIAN BANANA INDUSTRY IN CARNARVON WAS IN STEEP DECLINE. SO, A GROUP OF GROWERS TOOK THE BOLD MOVE TO TAKE BACK CONTROL OF THE MARKETING OF THEIR PRODUCE AND FORMED THE SWEETER BANANA GROUP.

By Lea Coghlan

This year marks two decades since the Sweeter Banana Co-Operative was launched in Carnarvon. Founding members Tom and Margaret Day and Bruce and Darrell Munro have provided insight into the journey since, which has been built on a shared passion for the industry, and solid friendships.

"It was no longer feasible to carry on sending as individual growers to the central markets with inconsistent quality control and no feedback as to what was happening with our product," Bruce Munro said.

"We realised we had to do something to turn it around."

In the initial stages, the group of founding farmers met on a monthly basis, sharing information about prices, quality and growing issues.

Their approach to major market agents initially fell on deaf ears with agents sceptical about a model that involved working together, but eventually they came on board firstly with Mercer Mooney, who supported the concept with some initial seed funding.

"We were able to employ a quality control person

to travel between the properties and establish a standard," founding member Tom Day said. "This system continued until we were able to establish a packing shed that operates today."

"Now the markets see the benefit of growers working together," Sweeter's Business Manager Doriana Mangili added. "It's one phone call and we do the consultation and planning in conjunction with the market needs."

Today there are 17 grower members who supply to Sweeter Bananas. All product is packed to order at the central packhouse for retail and non-retail markets.

Doriana said the co-operative was fortunate to draw on the expertise of individual members.

"I think one of the things that makes the cooperative so strong is the sum of its parts are greater that the individuals," she said.

"There are the ideas people that come up with the concepts and then people like Darrell Munro who is a very methodical and a systems-based person.

"She designed a database system and an intranet site in 2002 in order to have all the right processes to create transparency in a co-operative and allow us to run as a logistics system, which is essentially what we are.

"Growers can log into the intranet site and see what they packed, the price they received and which market they sent it to and how they compare to other growers.

"There are rankings on all sorts of measures including quality, cartons per bunch and productivity.

WA NEWS

"Growers also bring their life skills to the cooperative including those with trade qualifications, transport industry experience, business skills and excellent experienced growers who can mentor and train new members."

Promotion and marketing have been key to the success of Sweeter Bananas, with unique ideas like the lunchbox banana proving to be a stroke of genius.

The lunchbox banana bag has a dual purpose - to brand and identify as the Original Lunchbox Banana TM, and protect the sensitive skins from marking.

"We have built our strategy on building the image that the subtropical banana has a superior taste advantage," Tom said.

"We have promoted this image in many ways over the years including handing out up to 40,000 samples at the Perth Royal Show each year."

Direct relationships with retailers have fostered twoway communication and while it's never been an easy journey, it's an open one.

"Getting direct relationships with retailers helped us understand their needs and for them to understand how we work and the differences with our products," Doriana said.

"That has been key and essential...you can have the conversation, it might be difficult but at least you are having it. The Buy West Eat Best program, the WA government sponsored marketing program for WA products, has also helped to set our bananas apart from others in the market."

Bruce said demand for the product from the retail clients would largely dictate the future.

"We need a critical number and once we can't supply the chain stores with what they want, that's when we may run into trouble," Bruce said.

"At the moment, everyone is happy – there's new plantings going in every year.

"Currently, our supply is meeting the demand so the future is pretty good.

"The co-operative has had a lot of support from the Western Australia Government, local government, the Carnaryon Banana Trust Fund and the community.

"While we know there will always be challenges, the co-operative has proved that growers working together can make a difference, improve the

Doriana said Sweeter Bananas winning the inaugural People's Choice Favourite West Australian Product at the 2021 WA Good Food Guide awards was a watershed moment for the co-operative.

product, improve returns and, in turn, create a

happy and prosperous life."

"That was such a thrill for all of our members and the culmination of 20 years of hard work to have our banana recognised as set apart from the rest of the market," Doriana said.

"This was a win not just for the co-operative but for the banana industry to come up trumps over more exotic products like cheeses and seafood and other value-added food products in the market. It just shows how much our customers really love our bananas."



Sweeter's Business Manager Doriana Mangili accepting the Product of the Year Award in 2021.





WHATEVER YOUR THING,

By Hort Innovation

The challenge for Australian Bananas in 2022 was to develop an enduring, engaging and disruptive brand campaign to promote the natural energy provided by bananas while also communicating how versatile bananas are at fueling our passions.

Australian Bananas relaunched the iconic 'Make Your Body Sing' soundtrack with a distinctive tongue-in-cheek brand platform promoting a faux range of bananas, each specifically suited to a popular Aussie pastime. First launched in 1994, many consumers instantly recall the song, reminding them that bananas are a great natural energy source on hand to help you do all the things you love, no matter who you are and what you're doing.

Competitors in the energy space have been innovating for years, while bananas have not changed for millennia. Australian Bananas takes a unique approach through this playful campaign encouraging Australians to reappraise the humble banana and prompting consumers to consider bananas for more occasions, more often. The positioning of Australian Bananas as the go-to snack for honest-to-goodness natural energy allows the fruit to considered as a convenient, healthy solution with breakfast and throughout the day.

The effective creative, backed by research insights and coupled with a focused media plan to optimise spend, promotes the banana category at a time

when growers are experiencing unprecedented challenges including, but not limited to, escalating farm input costs, worker shortages and weather events.

Activities

With 91 per cent* of Australian households (8.95 million households) already purchasing bananas, the media approach needed to cast the net wide. Through this approach, the campaign includes light buyers who represent a growth opportunity for bananas, by increasing their consumption frequency.

Hort Innovation promoted the campaign from January to June through an integrated marketing program including television, broadcast video-on-demand, out-of-home display panels outside supermarkets, radio, public relations and social media. The campaign leveraged a complimentary selection of media channels to ensure key messages were delivered to consumers across the path to purchase; to raise awareness, drive consideration and contribute to conversion.

Activities focused on building the association of Australian Bananas with energy, and tapping into opportunities to communicate the banana message during key cultural events. The first was back-to-school in January to ensure bananas are the go-to fruit in the lunchbox, following an influx of seasonal fruit choices throughout Summer. The second was National Banana Day, 1 May, to build consumer interest in the lead-up to winter.

Results

The 'Make Your Body Sing' campaign performed well in both pre-launch and post-launch effectiveness measures as detailed below.

PRE-LAUNCH

Pre-launch, the Australian Bananas campaign was assessed on its advertising effectiveness, using quantitative research.

The results conducted with research company Cubery showed that the bananas advertising exceeded all other advertisements tested by Cubery in Australia. Cubery tests approximately 500 advertisements annually, measuring their effectiveness, with the Australian Bananas







MAKE YOUR BODY SING!

advertisement falling into the top five per cent of advertisements Cubery has tested globally.

The Australian Bananas television advertising exceeded norms across all key measures to:

- 1) Captivate: 71 versus 59 norm to stand out and grab attention
- 2) Connect: 81 versus 59 norm to instantly recall the product/brand
- 3) Compel: 77 versus 58 norm to motivate behavioural change through the positive influence of thoughts, feelings and behaviours.

Not only was the advertisement enjoyed by consumers, the campaign also conveys the key messages that we want people to take out of it; with each message tested measuring significantly higher than the norm, including 'a snack high in energy' 94 versus norm of 78.

In addition, qualitative research found the Australian Bananas message a warm, inclusive, and nostalgic portrayal of the way bananas fuel the activities consumers love, bringing bananas front of mind for more occasions, more often.

Examples of consumer responses shared include "Bananas are for everything, they're a winner. It's relatable, nostalgic and appeals to more generations and more activities" and "It left a positive impression about how good bananas are as fuel for nearly anything."

POST LAUNCH

Post-launch, the key success measures were reach, frequency and opportunities to see the banana advertising and content. The banana media campaign has reached 24.4 million Australians, equivalent to reaching 98 per cent of the target market; grocery buyers aged 25-54.

All KPIs for reach, frequency and opportunities to see the banana key messages have been met or exceeded, driven by the following activities:

- Television/ Broadcast video on demand (catch up tv): View the advertisement here: https://www.youtube. com/watch?v=ToI4YBStdlc
- **Radio:** listen to the radio advertisement here: https://www.youtube.com/ watch?v=4|ZNgLwcb4M
- Out of home: Panels outside of supermarkets

Further to media, public relations media outreach and social media have created 205.3 million opportunities to see the banana key messages (the number of exposures or opportunities the audience has to view the content), driven by the following activities:

Public Relations, Back to School: Achieved 73 pieces of coverage, generating over 51.9 million opportunities to see the banana key messages

View the 'Back to School Banana' themed video shared with media here: www.youtube.com/watch?v=jUq2W_jdKzg

- **Public Relations, National Banana Day:** Achieved 105 pieces of coverage, generating over 131 million opportunities to see the banana key messages View the 'Karaoke Banana' themed video shared with media here: www.youtube.com/watch?v=HsYGcbRLQEQ
- **Social media:** Achieved 22.4 million opportunities to see the banana key messages, at an average engagement rate on Facebook and Instagram of 7.47 per cent, versus food and beverage global average of less than 1 per cent*.

To further support understanding of consumer impact, research conducted during the campaign period provided key campaign diagnostics that measure the Australian Banana campaign's impact on consumer perception. Results were overwhelmingly positive with each measure exceeding norm; 'easy to understand' 77 per cent versus 62 per cent norm, 'believable' 68 per cent versus 48 per cent norm, 'relevant to people like me' 56 per cent versus 42 per cent norm and 'enjoyable campaign' 61 per cent versus 47 per cent norm.



NRL great and much-loved Innisfail export, Billy Slater, is continuing in his role as grower ambassador for Australian Bananas.

Following a long-standing history in the role, Slater has again committed to promoting the nation's favourite fruit and the people who grow it.

The Melbourne Storm and Maroons star has previously fronted public relations campaigns, shared his love of the fruit on social media and stopped by at Banana Congress.



BANANA BYGONE ERA

By Lea Coghlan

Former banana grower and industry leader Lachlan (Lachie) Rick OAM may have retired from the industry he loved in 1995 but he has continued a connection through a wonderful collection of banana memorabilia.

His father, Frank, bought the family's first farm, a 16 hectare-banana block, in 1951 at a time when the Far North Queensland banana industry was in its infancy. He later added to this with a second 33 hectare-farm at the end of Boyett Road.

"I was growing bananas before I left school," Lachie remembers.

"One day the ol fella said to me how about you pay the rates this year. I said 'I will go one better — I will buy you out'."

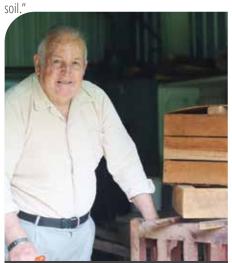
This heralded the start of the second generation of the Rick family in the industry, with Lachie and his two brothers, Frank and Charles, taking over the operation as a partnership. They continued to operate as F Rick and Sons, while their father took a job with National Parks, albeit keeping a close watch on the operation.

The partnership purchased a third farm, 114 hectares, halfway to El Arish where they grew a world-record bunch weighing 236 pounds and four ounces in 1976 (the record has been broken several times since). One of the farms still remains in the Rick family today.

Lachie said the greatest thing about growing bananas was seeing the end result at harvest.

"When you got a good crop off it was a great achievement," Lachie said.

"We were always trying to grow the biggest bunch – it was easier on the alluvial soils than on the red



Former Tully banana grower Lachie Rick (OAM) with a nailing down clamp from his banana memorabilia collection.

Challenges

"When we first started, we use to send to local markets in Townsville, Rockhampton and Mackay and the crop was only grown in winter (end of April to the beginning of September) as there was no refrigerated transport," Lachie said.

"The bananas produced in the southern growing areas did fill out as quick in the winter as in the summer. The southern blokes woke up and moved up and that created an oversupply situation.

"We had a couple of bad years; I remember 1966/67 was a glut year.

"It was that bad that two of our merchants in Sydney told us to only send 300 cartons a week each, and for that they would guarantee \$2/carton.

"In those days \$2/carton, that was profitable to grow bananas.

"We would normally send more than 1000 cartons a week."

Lachie said tough times were part and parcel of growing bananas, with seasonal conditions very much dictating production.

"A lot depends on your seasons and how big a volume of fruit you get," Lachie said.

"It's very hard to control because of different growing conditions.

"But we seemed to survive. We never ever got into debt until 1991/92, which was another year of over production.

"We ran up an overdraft of about \$110,000 which was a lot of money in those days.

"You think, how am I going to get out of this. Things can change that quick. There was a shortfall in supply and prices went up and we had the fruit at the right time to be able to clear the debt."

A window to history

Lachie, 82, has collected a series of banana memorabilia and estimates some of the items would be more than 70 years old.

His collection includes a nailing down clamp and press - used to put the lids on banana cases — and guillotines which were used to cut planting material. Lachie would like the items to be put on display — "when I'm gone, they'll go to the dump" — and said

they gave today's growers an idea of the industry in

Lachie with a guillotine that was used to cut the ends off the banana bunches.

"When we first started off we grew bananas among the stumps and logs, before bulldozers were used for land clearing," Lachie recalled.

"On a new block we would clear the scrub by using an axe, brush hook, crosscut saw and springboard. The scrub was felled and left for about three months to dry out and then a fire was put through it. It was then logged and burnt. The black bean logs were used split for fence posts and sold to the Tully Sugar Mill.

"A roadway was cleared through the middle of the paddock and the bunches were carried out to the truck. It was hard work if you had to carry them some distance."

De-handing was done on the floor and a bucket of water thrown over to congeal the sap flow, Lachie said.

The operation was very much a family affair, with the three boys and their mother, Marion, cutting and packing.

"We would cut, de-hand, make cartons, pack and load onto a truck, then transport to El Arish and load into railway wagons," Lachie said.

"There was no such thing as modern equipment like A frame trailers, bunch lifters or packing wheels.

"Our packing line consisted of fibreglass trays which the fruit was de-handed onto and graded and then pushed through a wash, to then be packed into cartons." Then came the packing wheel.

Leadership

Lachie gave back to the industry through various leadership positions.

He served on the banana sectoral group from 1982 to 1988, took a three-year break and returned for a second four-year stint, during which he served as chair of the Australian Banana Growers' Council and as also as chairman of the banana sectoral group committee.

its infancy.

BOARD TOURS THE TWEED

During the May Board meeting, directors and senior staff had the opportunity to catch up with a number of NSW Northern Rivers growers during farm visits and a dinner.



(Clockwise from back left): Stephen Spear, Stephen Lowe, Amardeep Singh and Neville Singh.



ABGC Executive Officer Leanne Erakovic with Director Andrew Serra.



(Clockwise from front left): Jason Thomson, Steven Edwards with (on the other side of the table) Paul Inderbitzin and Dan Molenaar.



Andy Everest and Peter Molenaar



Colin and Preston Singh



Trevor Black, Wayne Shoobridge and Leon Collins.

WOMEN EMPOWERED BY NETWORKING

A revitalized Banana Women's Network has come back bigger and better than ever on the Cassowary Coast, helping to empower growers through a sense of community.

Driven by the ABGC, the network meets regularly helping to lift spirits in tough economic times and encouraging their individual contributions to their banana farming businesses.

The network's focus is on the needs of banana farming women, which are to create opportunities to meet each other in a fun, social setting. Personal development is also potentially on offer, particularly in areas relating to mental health, farm management, supporting partners and family, and general wellbeing.

The network was given new energy earlier this year with a 'reconnect dinner', held at Mission Beach. Those who came along were asked what they wanted out of the network and what activities/events they'd like to participate in.

Despite COVID and influenza disrupting numbers, there were still over twenty women who attended.

"All the ladies were very nice. My daughter and I got to know some of them at our table. We had fun," said Innisfail grower Kellie Cauchi.

Fellow Innisfail grower Josephine Borsato sees the network as being one of value and importance.

"Many women hold some sort of role on the farm and are an important support and influence when it comes to decision-making for a smoother running business," Josephine said.

The Banana Races in Innisfail on August 13 was set to be the network's next opportunity to gather at one of the banana industry's biggest social events of the year.

ABGC's Extension Officer, Kathryn Dryden said all members of the network were encouraged to incorporate "a splash of bright cheery yellow" into their race-day outfits, with prizes for the most inventive/creative use of the colour, as well as the

best accessory.

"The yellow featured around the races will bring some attention to the network while importantly being a great conversation starter, which is what the network is all about," Kathryn said.

Josephine was looking forward to going the event.

"It's good to have things like this to look forward to, especially through these significantly tough times I think the network has loads of potential to help us better support each other, our partners, and our farming businesses," she said.

All banana farming women from the Wet Tropics region are invited to join the @ BananaWomen'sNetwork Facebook group which is the main platform where conversations can be had, and information on events are shared. For those not on Facebook, contact bmp@abgc.org.au to go on the mailing list.

BANANA PACKING ACTION FROM INNISFAIL SHOW

The competition was thick and fast in the annual banana packing competition at the Innisfail Show.



Innisfail team of Ron Vatoko and Christoph Nabanga, Storm Boys, took out the banana packing competition at the 2022 Innisfail Show.



Queensland team Damien Johnson, Ray Sambo, Erin Spagnolo and Ava Silvia took out the State of Origin competition in the banana packing.



The banana packing competition was a highlight

of the Innisfail Show.









Innisfail Banana Packing Results

1st – Storm Boys (Ron Vatoko and Christoph Nabanga)

(Naomi Brownrigg and Anne Rikini)

State of Origin Competition

Winner: Queensland (Erin Spagnolo, Ava Silvia, Ray Sambo and Damien Johnson).

BANANA COMPETITION WINNERS

Class 1: Champion Ratoon Bunch

Plant Bunch

Plant Bunch

Class 6: Best Two

Class 7: Champion Carton of Hands,

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

Class 9: Champion Cluster Carton Large 13 kg in 6 per layer

Class 10: Champion International Cluster Carton 15kg carton

Class 11: Best three (3) Clusters

Class 12: Champion

Class 13: Heaviest

Class 14: Champion

Pair of Hands

Class 15: Heaviest Freak Banana (Any

Single Banana

of Ex Large Hands Any Other Variety Not mentioned

Class 19: Open Heaviest Ratoon

Class 20: Open Heaviest Plant Bunch

Class 21: Champion Lady Finger Bunch

2nd Woopen Ck Bananas Class 22: Champion Lady Finger Carton Hand Pack

Class 23: Most Successful Exhibition on Aggregate Points

Dante Celledonii Memorial Trophy: Highly Commended Award

Most Outstanding

INNISFAIL SHOW WEIGH-IN

Cassowary Coast growers took the opportunity to show off their best bunches of bananas in the Innisfail Show Banana Competition. The official weigh-in was a great chance for growers to catch up.



Tully grower Sellars Bananas was crowned Best Ratoon Bunch at the Innisfail Show.



Competition runners-up Naomi Brownrigg and Anne Rikini, On a Mission, in action.













Queensland team Damien Johnson, Ray Sambo, Erin Spagnolo and Ava Silvia took out the State of Origin competition in the banana packing



Di Carlos Bananas awarded Best Two Ratoon Bunches.

COFFS BANANAS A HIT AT SHOW

Coffs BGA members Phil Bicknell and Jeff Eggins, pictured with some banana loving locals, were on hand at the Coffs Harbour Show to share bananas and local growing information. The Coffs Harbour Show was held on the 13-15 May.





TULLY'S BEST BANANAS ON SHOW



Jack Reid, Reidy's Bananas, took out the champion bunch and heaviest plant bunch.



Champion pair of plant bunches awarded to Mackays Mullins Road.



Champion plant bunch won by Reidy's Bananas.



A 73.5kg bunch from Serra Farming took out the heaviest bunch.



Sellars Bananas won the champion plant bunch.

Most Successful

Bunch

Heaviest Bunch

CHAMPION BUNCH TULLY DISTRICT Heaviest Plant Bunch

Champion 12kg Lady Finger Caron

Ratoon Bunches Champion Pair of

Plant Bunches

Champion Ex-Large

Cluster Carton

Champion Cluster

Champion 15kg

Cluster Carton Hand

Champion Pair of

Heaviest Single

Best 3 Clusters Open Heaviest Bunch

Open heaviest plant

Champion Carton

Tully District

Tully District



Entries in the banana competition at the 2022 **Tully Show.**



Sellars Bananas took out champion carton (Tully district) and champion cluster carton (13kg).



Champion lady finger bunch awarded to Valley View Bananas.

TULLY WEIGH-IN

There was another good turn-out at the official weigh-in at the Tully Show banana exhibit on 21 July. The night attracted growers and industry partners for the arrival of exhibits at the showgrounds, where judging took place the following morning. Results page 42.



















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