Final report

Project title:

Multi-pest surveillance and grower education to manage banana pests and diseases

Project leader:

Dr Rosie Godwin

Delivery partner:

Australian Banana Growers' Council

Report author/s:

Grant Telford

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BA21003

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Level 7
141 Walker Street
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Telephone: (02) 8295 2300

www.horticulture.com.au

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Public summary

The uncontrolled spread of pests and diseases has the potential to have a catastrophic impact on the Australian banana industry if left unchecked.

The presence of Banana bunchy top virus (Bunchy Top) on a property can make a business unviable within 18 months if left uncontrolled, and Bunchy Top symptoms alongside heavy infestation of Leaf Spot and Leaf Speckle can mask symptoms of the devastating Panama Wilt Tropical Race 4 (TR4) as well as reduce the efficacy of surveillance, detection and containment. Additionally, the industry is under constant threat of incursions of other exotic pests and diseases such as Black Sigatoka, Banana Freckle, Moko and phytoplasmas. Increased awareness and early detection afford the best opportunity to eradicate these diseases should they enter Australia. A nationally coordinated approach is required that involves participation by government, industry and individual growers.

The *'Multi-pest surveillance and grower education project to manage banana pests and diseases project'* commenced in July 2022 and was completed on 25 March 2025. The project incorporates work from previous projects dealing with Banana Bunchy Top disease containment and grower education in Northern New South Wales (NNSW) and Southeast Queensland) (SE QLD) ;(BA18000), and the management of banana pests and diseases in North Queensland (NQ); (BA17005).

To assist in mitigating those risks, BA21003 has:

- Conducted multi-pest surveillance across the major production regions of the banana industry where important priority pests and diseases occur and collect data to monitor status of these pests.
- Built capacity and capability within the banana industry through participation, training and involvement of growers in surveillance and control activities and produce supporting resources to educate growers and the community to better detect, control, manage and contain these pests and diseases on their own properties.
- Driven ongoing government, community and research and development support in banana industry pest and disease containment and control as part of a shared biosecurity approach.

The project has supported and achieved the containment of Bunchy Top within known control zones in SEQ and NNSW and has allowed for the ongoing viability of banana plantations where it has been detected. Since project inception a total of 1281 farm inspection visits were conducted with 5582 infected plants identified and destroyed (preventing further infection and spread).

Grower participation initiatives, supported by education in training, have seen 17% of infected plants in NNSW and 84% of infected plants in SEQ destroyed by growers over the life of the project. Other engagement activities conducted under the project have seen numerous educational materials including videos and articles produced and available to commercial and residential growers that support self-detection and destruction of infected plants on-farm now and into the future.

In NQ, 1933 leaf spot assessment and educational visits were delivered between 1 July 2022 and March 2025. Inspection outcomes confirm that the recommended disease levels remain consistent with voluntary industry standards. These visits have also included on-farm biosecurity assessments that have demonstrated either maintenance or improvement in recommended on-farm biosecurity preparedness measures.

Keywords

Banana; bunchy top virus; Bunchy Top; leaf spot disease; yellow sigatoka; banana pest control; banana pest surveillance; banana biosecurity engagement; banana biosecurity training; banana on-farm biosecurity adoption; Australian Banana Growers' Council.

Introduction

Bananas are Australia's number one selling supermarket product (in volume), with over five million eaten daily, and all of which are grown in Australia. Prior to project commencement, in 2018/19 banana production was 372,000 tonnes, with a farm gate value of $587 million and contributing $1.3 billion to the national economy (including flow-on benefits). While Queensland accounts for 94 % of Australia's 12,500 ha of banana production, almost all of that is in North Queensland (NQ), mainly around the Cassowary Coast region (Tully, Innisfail and Kennedy), south of Cairns, Atherton Tablelands and Lakeland. Production occurs to a lesser (but still important) extent in New South Wales (NSW), Western Australia (WA), South-East Queensland (SE Qld), and the Northern Territory (NT).

Both Leaf Spot (yellow Sigatoka) and Leaf Speckle are significant endemic diseases of bananas that if uncontrolled, are major production constraints and have the potential to mask an outbreak of the similar, but more destructive exotic disease, black Sigatoka. Additionally, the banana industry in NQ is facing an enormous challenge to contain and manage TR4 and other exotic pests and diseases pose constant and serious threats. Panama TR4 in particular, has the potential to devastate the entire industry. Maintaining effective surveillance, prevention and the control of exotic and endemic pests and disease is crucial to the ongoing viability of the Australian banana industry and requires ongoing investment, activity and vigilance.

Bunchy Top Virus was introduced into Australia from Fiji more than 100 years ago and rapidly spread having a severe impact on production. The Australian industry at the time was located mainly in NSW and south-east QLD and large-scale disease management programs, supported by government regulations, were required to enable production to continue. These management programs and the impact of Bunchy Top has waxed and waned since then. As the major production base has moved to far north QLD and the southern industry diminished, the relative impact of Bunchy Top on the national industry has reduced. Bunchy Top however, still has significant impact locally in parts of south-east QLD and northern NSW, and its threat to the national industry if left unchecked remains high. Bunchy Top is currently under active containment in SE QLD and northern NSW, meaning that 97% of the Australian banana industry remains free of the disease.

State government involvement in biosecurity regulation has diminished with the expectation that industry will take on a greater responsibility to manage biosecurity risks into the future. For example, BQ now provides a responsive regulatory service only to reports of excessive levels of leaf spot in NQ, or Bunchy Top infestation bordering a biosecurity zone to meet their own General Biosecurity Obligation.

With the reduction in surveillance and regulatory activities by government, this methodology relies entirely on individual growers or other informed members of the community identifying outbreaks or incursions and reporting them. This situation represented an unacceptably high-risk level to the industry and therefore investment is required to keep the banana industry viable as a whole. Government biosecurity authorities acknowledge industry's investment in these programs and provide valuable regulatory and policy support to the project.

Methodology

Research Services

ABGC has undertaken BA21003 as single project that has incorporated the previous BA18000 Bunchy Top project and the BA17005 Leaf Spot and Biosecurity Preparedness project to be delivered across both northern NSW and QLD.

The focus was directed at delivering an effective project to ensure Bunchy Top remains contained to the known Bunchy Top biosecurity containment zones **and** that Leaf Spot in NQ remains supressed to accepted industry standards.

The project has also strived to ensure commercial growers wherever possible are more involved with, and take greater responsibility for, bunchy top and Leaf Spot management.

The Leaf Spot work in NQ work commenced as part of the BA21003 project in March 2022 when project BA17005 was completed.

The following activities were conducted as part of the BA21003 project to deliver project outcomes:

For Bunchy Top

ABGC has implemented a targeted and cost-effective surveillance project to contain, control and reduce the impact of Bunchy Top in northern NSW and SE Qld under this Project utilising the experienced team, and has undertaken project management and delivery services established under BA18000 transitioning to the BA21003 project in July 2022. The inspection strategy was informed by current levels of incidence of Bunchy Top identified under BA18000 and the baseline surveillance strategy outlined below. This focussed on the category of farm and the infection status and data from BA15006 and 15007 and subsequent learnings under BA18000 including the cost-effective use of field officers across northern NSW and SE Qld.

Farm Category	A	B	C	D	E
Number of Bunchy Top detections in the last 12 months	0	0	1	1-10	>10
Time since last positive detection	Never	≥24 months	≤12 months	≤12 months	≤12 months

Revisit interval	1 year	1 year	1 month after infection is recorded and removed for as long as infection is recorded at successive visits. If no new infections recorded, switch to 3-month intervals for 1-12 months followed by 6-month intervals for 13-24 months.
Inspection intensity and destruction of infected plants	Every plant		
Grower involvement (expectation – trained in inspection procedures).	Present where reasonable and practical.		Grower accompanies team at each visit.
Grower involvement (expectation – trained in destruction procedures).	Present where reasonable and practical.		Grower accompanies team at each visit and destroys own plants when found competent.

Further, the Project continued to collect and manage data collected to inform program monitoring and evaluation, optimise surveillance practices and retained for other research purposes such as transmission and latency.

For Leaf Spot

ABGC has undertaken and facilitated leaf spot management in NQ by engaging a full-time Biosecurity Liaison Officer to work closely with commercial banana plantations, community, Biosecurity Queensland (BQ) and others in the NQ industry. Successes in delivery was informed from Project BA17005.

The Biosecurity Liaison Officer worked across the NQ production areas (Rollingstone to Lakeland, including Mareeba) and has visited each property twice a year facilitating effective management of banana pests and diseases by:

- educating growers on the symptoms of important endemic and exotic diseases, effective integrated pest and disease management, biosecurity best management practice and on-farm biosecurity measures.
- sharing information with and between growers, aerial operators, chemical sellers, government and university research staff.
- undertaking pest and disease inspections and advising growers how to meet their general biosecurity obligation.
- collating, reviewing and analysing inspection data to inform future biosecurity approaches.
- alerting BQ when any other suspect banana diseases are found.
- collecting voucher specimens through inspections of commercial and residential properties.
- supporting NQ banana growers in best practice disease management and adoption of on-farm biosecurity measures with face-to-face visits conducted twice annually.

This initiative has assisted and encouraged growers to access information and accepted advice to improve their pest and disease control.

An awareness and education program was instigated

This was delivered to growers, consultants, collaborating partners and the community. Previously there was little involvement or responsibility taken by growers and the community in managing Bunchy Top in particular. ABGC built on the social research project undertaken and transition to greater responsibility under BA18000 to guide communications and enlist the support of growers to manage Bunchy Top.

Growers and Consultants

A goal of this project was to increase the participation of growers in the surveillance of their farms, provide training in the detection of disease and control of disease and take ownership for management of biosecurity threats. This training was also extended to consultants and encompassed activities such as one-on-one training, formal training events, field days and roadshows.

Awareness materials such as brochures, posters, newsletters and electronic media were disseminated in collaboration with the ABGC Communications project.

Biosecurity authorities

Closer collaborative relationships were fostered with biosecurity authorities such as BQ and Biosecurity NSW for improved cost-effectiveness in disease surveillance, management and education. This has involved sharing data (non-confidential data) and involving government staff in extension and training opportunities.

The community and high-risk residential plantings

This project was not aimed at having commercial growers take responsibility for non-commercial disease reservoirs. The aim instead has been to raise awareness of disease management amongst community particularly along the northern line of the Bunchy Top biosecurity zone (e.g. Cooroy) and to a lesser extent in other areas. A range of communication materials have been delivered through a variety of media e.g. garden expos, local government newsletters and electronic media.

The project has relied upon close linkages with the National Extension Project (Qld and NSW) and the Banana Industry Communication Project to disseminate information developed by the Project to facilitate adoption. The project will has also made available trained project officers in NQ and NSW to increase their awareness of Bunchy Top and improve their ability to detect and manage relevant banana diseases.

NQ

The ABGC has reappointed the current full- time Biosecurity Liaison Officer to work closely with commercial banana plantations, community, BQ and others in the NQ industry. The current Biosecurity Liaison Officer is experienced, has well established relationships with growers, proven track record and has an excellent understanding of the NQ industry. He has worked across NQ production areas visiting all commercial farms twice a year. The role assisted and encouraged growers to access information to improve their pest and disease control.

The Project was primarily managed by the Project Manager, overseen by the Project Leader (ABGC R&D Manager). and supported by the CEO, Project Officer, plus finance and administration staff.

As in the past and current projects, some of the data collection, analysis and mapping has been outsourced to an appropriate company with this capability, however direct control on data has been managed by ABGC.

Results and discussion

A targeted and cost-effective surveillance program was delivered over the life of the project which successfully contained, controlled, and reduced the impact of Bunchy Top on banana growers in the target areas of SEQ and NNSW; supported Leaf Spot control to the accepted industry standard, and assisted in the maintenance and improvement of on-farm biosecurity measure on banana plantations in NQ.

For Bunchy Top, a total of 6735 commercial banana plants were detected and destroyed across NSW and Qld solely as a result of the investment in this project. Of those, 4731 were detected in the NSW Control Zone and 2004 in the Queensland Southern Biosecurity Zone. Without project control efforts, those 6735 infected banana plants would have invariably multiplied exponentially and contributed to further infestation within and to other banana growing properties in the respective control zones and potentially spread beyond those zones. Approximately 95% of commercial banana production occurs outside of those zones and remains protected.

- In Qld, over the life of this project (Bunchy Top component - 1 Jul 2022 - 28 Feb 2025), of the 20 properties visited - 14 properties (or 70%) were found free of Bunchy Top, 1 property was found to have 5 infected plants in total over the period, 2 properties were only found to have 1 infected plant over the period, and the remaining 3 properties had over 100 infected plants each in total.
- In NSW, over the life of this project (Bunchy Top component - 1 Jul 2022 - 28 Feb 2025), of the 110 properties visited in NSW- 34 (or 31%) were found free of Bunchy Top over the entire period, 12 (or 11%) had only ever had 1 infected plant detected, 25 had more than 1 and less than 10 infected plants detected (23%), 19 growers had more than 10 but less than 50 infected plants detected (17%), and 19 growers had had more than 50 infected plants detected (17%).
- Detail on activities and results of these activities are provided within Appendix 1 and Appendix 2 to this report.

For Leaf Spot assessment and control, the NQ banana industry continues to achieve close to 100% compliance with relevant voluntary leaf spot standards to leaf spot control and other foliar disease surveillance and management. This high level of compliance may be directly attributable to the work of the Biosecurity Liaison Officer. Detail on activities

and results are provided within Appendix 3 to this report. On a small number of occasions follow-up visits were required to encourage compliance.

For biosecurity preparedness and advice in North Queensland, the project has noted maintenance and continual improvement in biosecurity preparedness across production areas within each production district. Appendix 3 provides detail on activities, and results across each round of assessment. In some districts within the NQ production area further work is required.

Across all activities, the effectiveness and efficiency of the surveillance program was supported by the training and retention of high-quality field staff and the development and implementation of standard operating procedures used by the surveillance staff.

Surveillance data was collected, analysed and used to inform project strategy and future research efforts.

Extensive surveillance data has been collected, analysed and used to inform project strategy as described in more detail in outputs, outcomes and the appendices. Most of the infestation, or non-compliance with industry standards, recorded in commercial plantations was detected across a small number of properties in each State. These properties were the greatest draw on project resources and funds. Communication with these property owners (or direct observation) indicate that these enterprises tended to be:

- bordering on commercial unviability because of issues unrelated to disease infestation,
- older growers with an uncertain transition plan to retirement or sale,
- reallocation of resources to deal with weather events or staff shortages
- mixed cropping where other crops are of higher priority as a result of market circumstances, or a
- combination of factors mentioned above.

There are only two mechanisms of spread for bunchy top disease, the movement of infected banana planting material and the banana aphid. Development and promotion of a Code of Practice for planting material gives growers the reasonable and practical steps they can take to meet their biosecurity duty or obligation to minimise the risk of spreading bunchy top virus in planting material.

For Bunchy Top

Control of aphids can be achieved through the proactive application of appropriate registered chemical in combination with undertaking cultural practices to deny an aphid access to material on which they can propagate (or hide). Cultural practices include stripping of dead banana leaves from a plant (de-leafing) and de-suckering (denying aphids host material present on a banana clump that will ultimately not be used for future banana fruit production) and keeping weeds low in plantations.

Proactive chemical control is not currently available to a growers, although through this project chemical companies have been provided support in field trials to enable the registration of products specifically for aphid control on bananas. Cultural practices that support aphid control in whole or in part are typically not observed as general practice within the area of operation of the project within the control zones established within Qld or NSW. On the most heavily infested properties, routine cultural practices as mentioned above are generally not being undertaken.

The project also observed that poorly maintained plantations (where there is minimal de-suckering, weed control and de-leafing to control foliar diseases), early detection of Bunchy Top is significantly more challenging. Awareness and education resources were developed to assist growers understand the relationship between agronomic management and successful Bunchy Top management.

For Leaf Spot control and biosecurity preparedness

Generally, Project staff noted higher levels of non-compliance to leaf spot standards on properties subject to other challenges including weather events and staff shortages. It is unclear why there is a disparity on adoption of biosecurity measures between on-farm biosecurity measures between production areas. This could be a case of growers in particular areas not recognising risks, peer interactions, or insufficient information provided to these growers to understand biosecurity risks. Further analysis may be warranted to address this challenge.

An education and awareness program instigated.

The key aim of the education and awareness program was to increase responsibility and involvement in banana pest disease management by commercial growers, biosecurity authorities and communities. This also included advice on the

use of planting material and improving the awareness of risks that planting material poses. Thie education program was informed by social research conducted in previous projects. A great array of resources was developed and disseminated to growers, the community and other stakeholders. The quantity and range of materials developed and distributed may be found in Appendix 4.

Past phases of this project, which essentially provided a free service in bunchy top detection and management to a small part of the national industry to suppress the disease in those areas and protect the rest of the national industry is important however, it is a model which is expensive and no longer sustainable.

The initiatives in this project therefore have made a good start in driving a cultural change in bunchy top management to enhance the ability and responsibility of growers in the bunchy top zones to manage the disease. This will need to be supported in any follow-on project to continue to drive adoption of sustainable biosecurity practices.

Outputs

The Project has delivered required outputs in accordance with its M&E Plan and Annual Work Plans (see Appendix 1 – Annual plan achievements/outcomes). A summary is provided below in Table 1 - Outputs Summary.

Table 1 - Outputs Summary

Output	Description	Detail
Surveillance, detection and control data.	Conduct multi-pest surveillance and control activities across the major banana production regions where important priority pests and diseases occur and collect data to monitor status of these pests.	Bunchy Top remains controlled and contained within current control areas. Evidence requirements for achievement of this output are included within Appendix 1 and Appendix 2 of this report. Leaf spot disease continues to be controlled in North Queensland to Industry standards AND biosecurity preparedness activities are encouraged and supported. Evidence requirements for achievement of this output are included within Appendix 1 and Appendix 3 of this report.
Grower training and adoption data. Extension material for training growers and biosecurity personnel. Social media for raising awareness in the community. Publications e.g. magazine articles, bulletins, fact sheets etc.	Drive ongoing grower, community and government support in banana industry pest and disease containment and control as part of a shared biosecurity approach. Build capacity and capability within the banana industry through participation, training and involvement of growers in surveillance and control activities on their own farms and produce supporting resources to educate growers and the community.	Grower education and supporting resources have been a major focus of this Project. Evidence requirements for achievement of this output are included within Appendix 1and in particular Appendix 4 of this report.
Effective collaboration with government and Australian and International researchers to facilitate Bunchy Top regulatory control and scientific research.	Liaison with researchers and assistance in experiments, field trials	Through this Project, collaboration with government agencies and research organisations has been of critical importance. Evidence requirements for achievement of this output are included within Appendix 1 of this report.

Outcomes

The project has achieved key outcomes throughout the life of the project supporting Industry supply, productivity and sustainability – this has included maintaining control of BBTV within designated control zones, and supporting control of Leaf Spot and on-farm biosecurity preparedness measures in NQ. The Project has demonstrated that it has taken steps to improve the efficiency of Project resources through active engagement with key stakeholders including industry, government and the community.

Table 2. Outcome summary

Outcome	Alignment to fund outcome, strategy and KPI	Description	Evidence
Outcome 1: Industry supply, productivity and sustainability	Continued monitoring for, and control and containment of, serious endemic banana pests and diseases.	• Conduct Bunchy Top surveillance in control zones in accordance with scientific advice. • Visit all plantations in NQ twice a year, assess disease prevalence and provide advice consistent with industry standards, collect voucher specimens of suspicious disease symptoms, and conduct on-farm biosecurity preparedness visits and provide advice on scope for improvement.	Evidence of achievement of this outcome is included within Appendix 1, Appendix 2and Appendix 3 of this report.
	Improved grower and industry knowledge on surveillance and monitoring methods, identification and management of key pests and diseases of banana and enhanced industry capability and capacity in large scale surveillance. Knowledge and tools developed for detection of multiple high priority banana pests and diseases and evidence of initial adoption of these tools.	• For Bunchy Top initiatives, 61% of growers in NSW have made themselves available for training during visits, and 68% of QLD growers during visits. Over the life of the project, in NSW, 17% of all infected plants were destroyed by the grower, and in QLD 87% of infected plants were destroyed by the grower. • In NQ, all remedial activity was performed by the grower.	• Evidence of achievement of this outcome is included within Appendix 1, Appendix 2 and Appendix 3 of this report
	The status of priority pests and diseases across major	A communication component of the Project	Evidence of achievement of this outcome is included

	banana production regions monitored and understood by industry, supporting industry preparedness to manage major banana pests and diseases.	includes advice on pest status.	within Appendix 1 and Appendix 4.

Monitoring and evaluation

A Monitoring and Evaluation (M&E) Plan was developed for the project to ensure a foundational basis for review and evaluation and the drive continual improvement.

The Plan focussed around on key domains to be considered – Effectiveness, Relevance, Process appropriateness and Efficiency.

Key evaluation questions were developed to clarify areas of operation and consider continual improvement opportunities to be reflected in Annual Operational Plans. Table 3 below provides an end of project evaluation of these key questions.

Table 3. Key Evaluation Questions

Key Evaluation Question	Project performance	Continuous improvement opportunities
1. To what extent has the project achieved its expected outcomes? • To what extent has the status of priority pests and diseases across major banana production regions been understood by the banana industry, supporting industry preparedness to manage major banana pests and diseases? To what extent has this project successfully monitored, controlled and contained serious endemic banana pests and diseases in the regions in which it operates? • To what extent has the project improved grower and industry knowledge on surveillance and monitoring methods, identification and management of key banana pests and diseases, and to what extent has the enhanced industry capability and capacity in large scale surveillance • To what extent has knowledge and tools been developed for detection of multiple high priority banana pests and diseases and what evidence is there for the initial adoption of these tools.	• Across all activities, the project can confirm an improvement in Bunchy Top control and containment, Leaf spot control to industry standards, and on-farm biosecurity preparedness. Evidence of this is provided in Appendix 1 and 2 of this report. • Grower and industry knowledge has been improved through face-to-face training. For Bunchy Top, 61% of growers in NSW have made themselves available for training during visits, and 68% of QLD growers during visits. For Leaf Spot, assessment and control advice has resulted in compliance with industry standards. • In NQ, Project efforts have resulted in a very high level of on farm biosecurity preparedness – especially when compared to other industry growers.	• Through this Project, engagement with growers has shown a significant improvement in disease preparedness, incidence, prevalence and control outcomes. • However, final results have demonstrated the ongoing need to continue these efforts. • Evidence to suggest the benefit of Project initiatives, and the need for continual improvement is demonstrated in Appendix 1, Appendix 2 and Appendix 3 of this report
2. How relevant was the project to	This Project has prevented the	This Project has prevented the

the needs of intended beneficiaries?	realisation of the following impacts to banana production in Australia. Ongoing management of endemic diseases through continued industry investment could be seen as costly however if unsupported, losses through on-farm management of: • Leaf diseases (yellow Sigatoka and Leaf Speckle) have been estimated at $30-40 million per year (S. Lindsay pers comms); and • losses from an incursion of BBTV in North Queensland (NQ) where 95% of the industry is located, have been estimated at $15.9-27.0 million per year (Cook et al 2012).	potential realisation of losses occurring through an absence of control and spread. In instances where Project involved has required direct intervention, further education and direction will be required.
3. How well have intended beneficiaries been engaged in the project?	All industry participants (beneficiaries) have received face-to-face consultation on the Project and its objectives at least once a year. Project staff report improved attitudes to project objectives and greater receptiveness to initiatives driven by the project.	For a small number of participants, advice has not been complied with. As a result, additional Project policies may need to be put in place to deal with non-compliance.
4. To what extent were engagement processes appropriate to the target audience/s of the project?	Engagement processes have proven to be highly successful in the delivery of this Project. The Project has actively considered the value of each activity undertaken by assessing results and metrics.	The Project suggests that for its engagement activities, its approach to assessment of outputs and engagement continues.
5. What efforts did the project make to improve efficiency?	For each new iteration of Projects undertaken by ABGC to address endemic pest and disease risks, improvements in efficiency and outcomes have been demonstrated through budgetary considerations for each future project	Continue to take advantage of learnings through the outcomes of activities and outcomes. Make adjustments where necessary.

Recommendations

Prior to the completion of this Project, significant consideration of this Project and its outcomes were considered by a range of stakeholders. An outline of discussions is provided below:

- Future project discussions commenced with Hort Innovation representatives at the ABGC office in Rocklea on 23 October 2024 to consider the merits of, and development of, a follow-on project. This meeting included Hort Innovation portfolio leaders, project staff, scientific experts and growers.
- A concept brief was submitted to the R&D SIAP in December, out of session, outlining a future project model considering the risks, opportunities and implications of not addressing these ongoing risks to the industry.

The following recommendations consider the above consultation and learnings gained during the project:

1. Any future Project should consider the risk of disease spread by other stakeholders including retail nursery producers and consider the risk and possible options to control Bunchy Top should it spread outside of established control

zones.

2. Active investment in detection and destruction activity directed at growers (and the community) coupled with engagement through education and training is still required at this point in time.
3. Project investment should not be continued on an infested property where:
    - a grower shows no interest in being trained and investing in their own biosecurity future by taking proactive and appropriate steps to detect and destroy infestation on their own property; and
    - containment can be achieved through lesser investment by focusing detection, destruction and training resources on surrounding properties (if any) that may be subject to an increased risk of infestation.
4. For a property that does not meet the criteria specified in recommendation 3), a grower is referred to the relevant State Government agency for assessment as to whether they are meeting their General Biosecurity Obligation or General Biosecurity Duty in that jurisdiction.
5. Any future investment continues to assist in supporting the registration of chemicals by external parties that may contribute to proactive and reactive control of aphids as the primary vector of the disease.
6. Any future investment continues to assist in furthering research and development into disease control.
7. Promotion of best practice in cultural controls must continue.
8. Any future investment includes actively consulting with relevant State government about that government playing its part in accordance with their legislation and shared biosecurity responsibility principles.

Refereed scientific publications

Nil.

Intellectual property

No project IP or commercialisation to report.

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Appendices

- Appendix 1 – Report on delivery of Annual Work Plans
- Appendix 2 – Report on Bunchy Top project component deliverables
- Appendix 3 – Report on Leaf Spot and Biosecurity Preparedness project component
- Appendix 4 - Project Stakeholder Engagement Report

Appendix 1 – Report on delivery of Annual Work Plans

Additional detail on project activity and outcomes are included within Appendix 2, Appendix 3 and Appendix 4 of this report.

Annual Work Plan Year 1 (1 July 2022 to 30 June 2023).

NOTE – The Banana Bunchy Top component of the full project commenced 1 July 2022. North Queensland Leaf Spot and Biosecurity Preparedness activities from March 2022 are rolled into this Annual Work Plan.

Project code: BA21003 Multi-pest surveillance and grower education to manage banana pests and diseases.

YEAR 1 - Criteria/ Theme	Action	When / how often	Progress
Continued monitoring for, and control and containment of, serious endemic banana pests and diseases.	In Southeast QLD and Northern NSW visit commercial banana plantations within the Bunchy Top control zones in accordance with the Inspection Schedule# and inspect banana plants for the presence of Bunchy Top. Flag infested plants for destruction. Make a record of inspections and findings.	Each property visited at least once per year or more frequently in accordance with the Inspection Schedule#.	**Achieved** **NSW - 572 inspections** were undertaken. 116 growers were visited. **1958 infected plants** were identified. **SEQ - 71 inspections** were undertaken. 21 growers were visited. **1679 infected plants were identified**.
	In Southeast QLD and Northern NSW ensure Bunchy Top infested plants are destroyed either by the inspection team or the grower in accordance with the Grower Involvement Policy. Make a record of findings.	After detection of each infected plant based on inspection findings.	**Achieved** **NSW - Total infected plants destroyed was 1958. 58% of infected plants identified by the team were destroyed by growers**. **SEQ - Total infected plants destroyed was 1679. 93% of infected plants identified by the team were destroyed by growers**.
	Inspect all properties in Northern QLD for the presence and infestation status of banana leaf spot (leaf speckle/ yellow sigatoka). Provide advice to each grower on inspection findings. Provide advice to the grower on control actions to be taken. Make a record of inspections, findings and advice provided.	Each property to be visited twice a year. (approx. 260 properties)	**Achieved** **Each property visited at least twice during Year 1**. Additional follow-up visits were also conducted where required. **447 visits were conducted for Round 2 between 22 June 2022 and 13 January 2023. 398 visits were conducted for Round 3 between 10 January 2023 and 27 July 2023.** Near 100% compliance noted at the completion of each round.
	Conduct incidental surveillance in Northern Queensland, concurrent with leaf spot inspection, for unusual plant symptoms such as TR4 and any diseases exotic to the area (e.g., black sigatoka, bunchy top virus or banana freckle). Take action (reporting or sampling for	As required during each visit on detection of suspicious symptoms.	**Achieved** **6 voucher specimens collected** (from March 2022 to 30 June 2023). **No exotic pests detected**.

YEAR 1 - Criteria/ Theme	Action	When / how often	Progress
	analysis) if serious pests are suspected to be present.		
Build capacity and capability within the banana industry through participation, training and involvement of growers in surveillance and control activities.	In Southeast Queensland and Northern NSW, increase involvement of growers particularly in familiarisation with symptoms of Bunchy Top and the destruction of bunchy top affected plants. Category D&E growers (and those that do not respond and those with obvious infection) will be targeted as a priority. For each farm visited a record of the a) presence of the owner/grower; b) involvement in bunchy top detection; and c) level of participation in the destruction of infested plants.	During each farm visit in accordance with the Grower Involvement Policy.	**Achieved** **NSW** - 347 of 572 on-farm grower visits with grower in attendance recorded. **61% of total visits had the grower in attendance. 58% of infected plants identified were destroyed by the grower**. **SEQ** - 43 of 71 on-farm grower visits with grower in attendance recorded. **61% of total visits had the grower in attendance. 93% of infected plants were destroyed by the grower**.
	In Northern Queensland visit each property and assess measures taken by a grower to adopt on-farm biosecurity disease control measures. Provide advice on implementation where required and record results.	During each visit.	**Achieved** Between 23 June 22 and July 2023, a total of **565 on-farm biosecurity assessments and educational visits were performed across two rounds of assessments**. Progress in preparedness noted. **In most growing regions preparedness has been maintained or improved**.
Drive ongoing government and research and development support in banana industry, and government pest and disease containment and control measures as part of a shared biosecurity approach.	Cooperate with Prof John Thomas and Dr Kathy Crew's team to conduct field research, conducted under project BA19002. Facilitate field trials with growers and provide relevant inspection data.	Ongoing as requested.	**Achieved** **Trial establishment and trial visits were arranged on two properties**. Detection data provided for NSW and SEQ latency trials were provided monthly during the duration of each trial. **Data provided for Bunchy Top modelling** provided as requested. Face to face meeting undertaken on 2 February 2023 to discuss trial findings to date and future opportunity for improvement.
	Work with biosecurity authorities to effectively manage endemic banana pest detections and control initiatives. Maintain support and focus on Industry driven initiatives including Codes of Practice backed up by regulatory instruments. Provide relevant detection	Ongoing as required.	**Achieved** **NSW- Two inspections conducted on residential properties from information provided by NSW DPI**. One report made to NSW DPI in relation to access to a residential property where Bunchy Top was

YEAR 1 - Criteria/ Theme	Action	When / how often	Progress
	data. Report cases of non-compliance where identified.		present. Compliance agreement to destroy the infested plants provided by NSW DPI. **SEQ – One instance of movement of plants outside of the infested zone reported to BQ** and investigated. Plants were destroyed by BQ.
Use communications networks to educate growers and the community to better detect, control, manage and contain these pests and diseases on their own properties.	Magazine articles produced for distribution through the Australian Bananas magazine.	1 per year.	**Achieved** **3 articles published**. Articles published in Issue 65, August 2022; Issue 66, December 2022; and Issue 67, April 2023 of the Australian Bananas magazine. See Appendix 4
	Articles and videos developed and posted on social media platforms including Facebook and Instagram through the project's page. Videos hosted on the ABGC YouTube channel.	12 social media posts per year. 2 videos produced and posted.	**Achieved** **21 social media posts** published. **4 videos produced** and posted. See Appendix 4
	Up to date project information and resources are made available and up to date for publishing on State Government biosecurity-related websites.	Ongoing and as required.	**Achieved** **Review of Bunchy Top information on Better Bananas webpage** performed and feedback provided to QDAF on 12/1/23.
	Up to date project information and resources are made available on the project's dedicated ABGC webpage.	Ongoing and as required.	**Achieved** **A review of the dedicated ABGC webpage was conducted on 24/2/23** with updates provided to the ABGC communications officer. **In June 2023, an additional review was conducted with a change in ABGC's web template**. Additional changes were made to the Bunchy Top website to incorporate further information and promote access to new videos developed by the project.
Engage directly with banana industry grower groups, government or research bodies, and the community to provide presentations/ workshops/ training to	Grower group (e.g., BGA's or more local grower groups) presentations/ workshops.	2 per year.	**Achieved** The team attended and provided a presentation to: **Coffs Harbor growers on 3/11/22**. Further, the NSW Sub Tropical Horticulture Development Officer made

YEAR 1 - Criteria/ Theme	Action	When / how often	Progress
facilitate better detection, control, management and containment of relevant banana pests and diseases on their own properties.			Bunchy Top related resources available to growers at the **Nambucca BGA meeting on 1/11/22**. The project Policy Officer (Northern NSW) and Plant Protection Officer (NQ) attended the 2023 **Australian Banana Congress between 17 and 19/5/23** and provided advice and offered resource materials to growers on Banana Bunchy Top virus, leaf spot and on-farm biosecurity from the *Multi-pest surveillance and grower education to manage banana pests and diseases* Project (BA21003) booth.
	Community events, e.g., local garden clubs, gardening expos	2 per year.	**Achieved** **A presentation was delivered on Bunchy Top at the Buderim Garden Club meeting on 9/6/23**. There were 70 plus attendees and the project team member (SEQ) spoke to approximately 20 attendees at the afternoon tea/question time about bananas and Bunchy Top. **A presentation was delivered by the project SEQ officer on Bunchy Top at the Queensland Garden Expo**. The expo is a significant event for all horticulturalists in Queensland and is attended by thousands of people over the expo period. *Note – although delivered in early July 2023, significant planning and preparation was conducted in advance in June 2023, including promotional materials provided to the organiser, so is listed as a Year 1 deliverable.*
	Government bodies (e.g., local biosecurity inspectors or industry development staff) training events	2 per year.	**Achieved** **NSW- The NSW DPI Sub Tropical Horticulture Development Officer** attended an inspection of a Bunchy Top infested property and was made familiar with the work of the project, disease symptoms and cultural control

YEAR 1 - Criteria/ Theme	Action	When / how often	Progress
			measures that support risk minimisation of disease spread. **SEQ- A new Inspector placed at Maroochy Research Station in SE QLD attended Bunchy Top training**, and responding to a report from the Bunchy Top team on the movement of residential plants from inside the control zone to a place outside of the control zone. The plants in question were destroyed however Bunchy Top was not detected.
Maximise operational efficiency and preparedness	Check and update data including number of plantations, area, surveillance data, and infection categories/status.	Ongoing.	**Achieved**
	Adjust inspection schedules according to verified data.	Ongoing.	**Achieved**
	Provide monthly updates or hold monthly meetings with inspection staff to identify issues, plan visits to SEQ (monthly for BT plantations), and adjust inspection schedules, chemical and equipment requirements and decide on work program to catch up and maintain inspections as per infection schedule.	Monthly.	**Achieved**
	Update and ensure an accurate database of contact details is kept for all commercial growers in the operational zones. Ensure contact information is incorporated into the ABGC AgKonect databases.	Ongoing.	**Achieved**
	Meet and engage with a Project Reference Group to present findings and seek guidance for continual improvement.	2 per year.	**Unable to be achieved – otherwise addressed.** The Project Leader is collaborating with Hort Innovation staff to develop a new PRG model that will best serve this project and other banana investments. In the interim: Project review has been ongoing through project management team meetings, ABGC Board review (4 per year); and a face-to-face project review between the project management team and Dr John

YEAR 1 - Criteria/ Theme	Action	When / how often	Progress
			Thomas and Dr Kathy Crew on 2/2/23.
	Training of new inspection staff and other personnel where required.	As required.	**Not required.**
Internal industry body communications and information sharing	Cooperate with ABGC Communications team to engage growers and the public to look for symptoms, use of photos via mobile phone, reporting via Facebook and Hotline for immediate diagnosis or response. Share regular updates, videos, experiences.	Ongoing.	**Achieved.** **Four Bunchy Top FB posts shared by the ABGC** FB page. **The Bunchy Top hotline** number continues to be monitored by ABGC staff.
	Meet regularly with ABGC staff, Project Leader, communications, finance, and research manager as required to ensure the project operates effectively and within budget - monthly if possible.	Monthly.	**Achieved**
	Draft Board reports on Project progress.	For each Board meeting.	**Achieved** **Four Board Papers** on project progress for each Board meeting provided.

Annual Work Plan Year 2 (1 July 2023 to 30 June 2024).

The Annual Work Plan for Year 2 is provided below. The work plan is modelled on the plan for Year 1. The work plan has considered unchanged scientific advice for disease inspection and control activities. However, for Year 2 and grower group engagement (e.g., BGA's or more local grower groups) the project will provide a greater focus on on-farm local grower workshops.

YEAR 2 - Criteria/ Theme	Action	When / how often	Progress
Continued monitoring for, and control and containment of, serious endemic banana pests and diseases.	In Southeast Queensland and Northern NSW visit commercial banana plantations within the Bunchy Top control zones in accordance with the Inspection Schedule# and inspect banana plants for the presence of Bunchy Top. Flag infested plants for destruction. Make a record of inspections and findings.	Each property visited at least once per year or more frequently in accordance with the Inspection Schedule#.	**Achieved** **NSW - 432 inspections were undertaken. 2000** infected plants were identified. **SEQ – 57 inspections were undertaken. 215** infected plants were identified.
	In Southeast Queensland and Northern NSW ensure Bunchy Top infested plants are destroyed either by the inspection team or the grower in accordance with the Grower Involvement Policy. Make a record of inspections and findings.	After detection of each infected plant based on inspection findings.	**Achieved** **NSW - Total infected plants destroyed was 2000. 44%** of infected plants were **destroyed by growers.** **SEQ - Total infected plants destroyed was 215. 57%** of infected plants identified were **destroyed by growers**.

YEAR 2 - Criteria/ Theme	Action	When / how often	Progress
	Inspect all properties in Northern Queensland for the presence and infestation status of banana leaf spot (leaf speckle/ yellow sigatoka). Provide advice to each grower on inspection findings. Provide advice to the grower on control actions to be taken. Make a record of inspections, findings and advice provided.	Each property to be visited twice a year (There are approximately 260 properties in NQ).	**Achieved** Round 4 property inspections commenced on 27 July 2023 and were completed 31 December 2023. Round 5 inspections were completed 12 July 2024.
	Conduct incidental surveillance in Northern Queensland, concurrent with leaf spot inspection, for unusual plant symptoms such as TR4 and any diseases exotic to the area (e.g., black sigatoka, bunchy top virus or banana freckle). Take action (reporting or sampling for analysis) if serious pests are suspected to be present.	As required during each visit on detection of suspicious symptoms.	**Achieved** **26 voucher** specimens were collected Testing verified the presence of yellow sigatoka with no additional exotic pests identified.
Build capacity and capability within the banana industry through participation, training and involvement of growers in surveillance and control activities.	In Southeast Queensland and Northern NSW increase involvement of growers particularly in familiarisation with symptoms of Bunchy Top and the destruction of bunchy top affected plants. Category D&E growers (and those that do not respond and those with obvious infections) will be targeted as a priority. For each farm visited a record of the a) presence of the owner/grower; b) involvement in bunchy top detection; and c) level of participation in the destruction of infested plants.	During each farm visit in accordance with the Grower Involvement Policy.	**Achieved** **NSW – 262 of 432 on-farm grower visits** with grower in attendance recorded. 61**%** of total visits had the grower in attendance. **44% of infected plants identified were destroyed by the grower**. **SEQ – 28 of 57 on-farm** grower visits with grower in attendance recorded. **49%** of total visits had the grower in attendance. **57% of infected plants were destroyed by the grower**.
	In Northern Queensland visit each property and assess measures taken by a grower to adopt on-farm biosecurity disease control measures. Provide advice on implementation where required and record results.	During each visit.	**Achieved** Round 4 property assessments commenced on 27 July 2023 and were completed 31 December 2023. Round 5 was completed on 12 July 2024.
Drive ongoing government and research and development support in banana industry, and government pest and disease containment and control measures as	Cooperate with Prof John Thomas and Dr Kathy Crew's team to conduct field research, conducted under project BA19002. Facilitate field trials with growers and provide relevant inspection data.	Ongoing as requested.	**Achieved** Detection data provided for NSW and SEQ trial provided monthly during trial period. Data provided for Bunchy Top modelling provided as requested. Additional data provided in relation to property 73031 in NSW. Data provided in

YEAR 2 - Criteria/ Theme	Action	When / how often	Progress
part of a shared biosecurity approach.			relation to assistance required for other trials in SEQ. Assistance provided to project BA21002 on 15/5/24 with educating the DAFF plant pathologists on bananas and banana diseases, in support of growing imported plants at the DAFF facility in Mickleham, Vic for pest and disease screening.
	Work with biosecurity authorities to effectively manage endemic banana pest detections and control initiatives. Maintain support and focus on Industry driven initiatives including Codes of Practice backed up by regulatory instruments. Provide relevant detection data. Report cases of non-compliance where identified.	Ongoing as required.	**Achieved** 1 report received for assistance from NSW DPI and addressed. 2 requests for assistance sent to NSW DPI. 2 requests for assistance sent to BQ in QLD. One addressed from BQ.
Use communications networks to educate growers and the community to better detect, control, manage and contain these pests and diseases on their own properties.	Magazine articles produced for distribution through the Australian Bananas magazine.	1 per year.	**Achieved** **3 articles published**. • Article published in Issue 70 April 2024 of the Australian Bananas magazine. • Article published in Issue 69 December 2023 of the Australian Bananas magazine. • Article published in Issue 68 August 2023 of the Australian Bananas magazine.
	Articles and videos developed and posted on social media platforms including Facebook and Instagram through the project's page. Videos hosted on the ABGC YouTube channel.	12 social media posts per year. 2 videos produced and posted.	**Achieved** **12 social media posts** published.
			Achieved **4 videos produced and posted**.
	Up to date project information and resources are made available and up to date for publishing on State Government biosecurity-related websites.	Ongoing and as required.	**Achieved** Nothing in addition to report as required. NSW and QLD government continue to support the project with existing webpages and supporting information.
	Up to date project information and resources are made available on the project's dedicated ABGC webpage.	Ongoing and as required.	**Achieved** Up to date project information and resources are available on the dedicated ABGC webpage.

YEAR 2 - Criteria/ Theme	Action	When / how often	Progress
Engage directly with banana industry grower groups, government or research bodies, and the community to provide presentations/ workshops/ training to facilitate better detection, control, management and containment of relevant banana pests and diseases on their own properties.	Grower group (e.g., BGA's or more local grower groups) presentations/ workshops, with a greater focus on on-farm local grower workshops.	3 per year.	**Achieved** **Five events delivered.** • 28 May 2024. Tropical Fruit World (NSW) involvement in presentation on Bunchy Top delivered to growers in association with NSW DPI. • 5 April 2024. Murwillumbah (NSW) grower workshop encompassing training in Bunchy Top, transporting plant materials, banana varieties, tissue culture, and NSW DPI project updates. • 15 March 2024. Bunchy Top stall. Mullumbimby Farmers Market (NSW) at the Mullum Showgrounds. • 25 October 2023. On-farm biosecurity workshop conducted at Coorabell in Northern NSW • 7 September 2023. Attendance at and out of session discussion with growers at the National Banana Development and Extension Program Mini roadshow – Murwillumbah (NSW).
	Community events, e.g., local garden clubs, gardening expos	2 per year.	**Achieved** **Five events delivered**. • 2 November 2023. Education and awareness activities Brisbane Organic Growers Group. • 22 July 2023. North Coast ABC radio segment. • 27 July 2023. Lennox Head community garden club (NSW). • 16 August 2023. Byron Community Gardens (NSW). • 4 September 2023. Nambour Garden Club (Qld). See Appendix 4

YEAR 2 - Criteria/ Theme	Action	When / how often	Progress
	Government bodies (e.g., local biosecurity inspectors or industry development staff) training events	2 per year.	**Achieved** **Five events.** • 28 May 2024. Tropical Fruit World (NSW) presentation on Bunchy Top delivered to growers in association with NSW DPI. • 5 April 2024. Murwillumbah (NSW) grower workshop encompassing training in Bunchy Top, transporting plant materials, banana varieties, tissue culture, and NSW DPI project updates. • 15 March 2024. Mullumbimby Farmers Market (NSW) at the Mullum Showgrounds. Bunchy Top stall in hosted conjunction with NSW DPI. • 25 October 2023. Joint event held with NSW DPI industry development. On-farm biosecurity workshop conducted at Coorabell in Northern NSW. • 7 September 2023. Promotion of the QDAF/ NSW DPI facilitated Hort Innovation funded Mini roadshow- Murwillumbah). Distribution of flyers to growers at farm visits and event discussion (an additional 7 growers attended as a result).
Maximise operational efficiency and preparedness	Check and update data including number of plantations, area, surveillance data, and infection categories/status.	Ongoing.	**Achieved**
	Adjust inspection schedules according to verified data.	Ongoing.	**Achieved**
	Provide monthly updates or hold monthly meetings with inspection staff to identify problem issues, plan visits to SEQ (monthly for BT plantations), adjust inspection schedules, chemical and equipment requirements, decide on work program to catch up and maintain inspections as per infection schedule.	Monthly.	**Achieved**

YEAR 2 - Criteria/ Theme	Action	When / how often	Progress
	Update and ensure an accurate database of contact details is kept for all commercial growers in the operational zones. Ensure contact information is incorporated into the ABGC AgKonect databases.	Ongoing.	**Achieved**
	Meet and engage with the Project Reference Group to present findings and seek guidance for continual improvement.	2 per year.	**Achieved** • New Reference Group established. 8 February 2024 meeting conducted. • ABGC Board report provided for February 2024 for consideration and guidance. • ABGC Board report provided for August 2023 for consideration and guidance.
	Training of new inspection staff and other personnel where required.	As required.	**Not required** With the resignation of two NSW project staff, plans are in place one Inspector with a new trainee to work under the supervision of the existing team. There is no intention to fill a Project Officer role at this stage.
Internal industry body communications and information sharing	Cooperate with ABGC Communications team to engage growers and the public to look for symptoms, use of photos via mobile phone, reporting via Facebook and Hotline for immediate diagnosis or response. Share regular updates, videos, experiences.	Ongoing.	**Achieved** **Four Bunchy Top videos shared by the ABGC FB page**. **The Bunchy Top hotline** number continues to be monitored by ABGC staff.
	Meet regularly with ABGC staff, Project Leader, communications, finance, and research manager as required to ensure the project operates effectively and within budget - monthly if possible.	Monthly.	**Achieved** Management weekly, team monthly.
	Draft Board reports on Project progress.	For each Board meeting.	**Achieved** • **May 2024** Board Paper prepared on project process. • **February 2024** Board Paper prepared on project process. • **November 2023** Board Paper prepared on project progress. • **August 2023** Board Paper prepared in July 2023 on project progress.

Annual Work Plan Year 3 (1 July 2024 to March 2025)

The Annual Work Plan for Year 3 is provided below. The work plan is modelled on the plan for Year 2. The work plan has considered unchanged scientific advice for disease inspection and control activities.

Criteria/ Theme	Action	When / how often	Progress
Continued monitoring for, and control and containment of, serious endemic banana pests and diseases.	In Southeast Queensland and Northern NSW visit commercial banana plantations within the Bunchy Top control zones in accordance with the Inspection Schedule# and inspect banana plants for the presence of Bunchy Top. Flag infested plants for destruction. Make a record of inspections and findings.	Each property visited at least once per year or more frequently in accordance with the Inspection Schedule#.	**Achieved** **NSW - 277 inspections were undertaken. 733** infected plants were identified. **SEQ – 29 inspections were undertaken. 110** infected plants were identified.
	In Southeast Queensland and Northern NSW ensure Bunchy Top infested plants are destroyed either by the inspection team or the grower in accordance with the Grower Involvement Policy. Make a record of inspections and findings.	After detection of each infected plant based on inspection findings.	**Achieved** **NSW – 733 infected plants** were destroyed. **SEQ – 110 infected plants** were destroyed.
	Inspect all properties in Northern Queensland for the presence and infestation status of banana leaf spot (leaf speckle/ yellow sigatoka). Provide advice to each grower on inspection findings. Provide advice to the grower on control actions to be taken. Make a record of inspections, findings and advice provided.	Each property to be visited twice a year (There are approximately 260 properties in NQ).	**Achieved** • Round 5 was completed on 12 July 2024. • Round 6 was completed during early March 2025.
	Conduct incidental surveillance in Northern Queensland, concurrent with leaf spot inspection, for unusual plant symptoms such as TR4 and any exotic diseases to the area (e.g. black sigatoka, bunchy top virus or banana freckle). Take action (reporting or sampling for analysis) if serious pests are suspected to be present.	As required during each visit on detection of suspicious symptoms.	**Achieved.** • At total of 8 voucher specimens were collected during year 3 of operations to 28 February 2025. • All specimens were confirmed to have yellow sigatoka.
Build capacity and capability within the banana industry through participation, training and involvement of growers in surveillance and control activities.	In Southeast Queensland and Northern NSW increase involvement of growers particularly in familiarisation with symptoms of Bunchy Top and the destruction of bunchy top affected plants. Category D&E growers (and those that do not respond and those with obvious infections) will be targeted as a priority. For each farm visited a record of the a) presence of the owner/grower; b) involvement in bunchy top detection; and	During each farm visit in accordance with the Grower Involvement Policy.	**Achieved** **NSW – 180 of 277 on-farm grower visits** with grower in attendance recorded. **65%** of total visits had the grower in attendance. **SEQ – 20 of 29 on-farm** grower visits with grower in attendance recorded. **68%** of total visits had the grower in attendance.

Criteria/ Theme	Action	When / how often	Progress
	c) level of participation in the destruction of infested plants.		
	In Northern Queensland visit each property and assess measures taken by a grower to adopt on-farm biosecurity disease control measures. Provide advice on implementation where required and record results.	During each visit.	**Achieved** • Round 5 was completed on 12 July 2024. • Round 6 was completed during early March 2025.
Drive ongoing government and research and development support in banana industry, and government pest and disease containment and control measures as part of a shared biosecurity approach.	Cooperate with Assoc Prof John Thomas and Dr Kathy Crew's team to conduct field research. Facilitate field trials with growers and provide relevant inspection data.	Ongoing as requested.	**Achieved.** • The project continues to consult with and provide data for modelling purposes. • Assistance was provided to the research team in early February 2025, to support development of a new diagnostic assay for banana bunchy top virus (Bunchy Top).
	Work with biosecurity authorities to effectively manage endemic banana pest detections and control initiatives. Maintain support and focus on Industry driven initiatives including Codes of Practice backed up by regulatory instruments. Provide relevant detection data. Report cases of non-compliance where identified.	Ongoing as required.	**Achieved.** • During this reporting period, the Project has provided NSW DPI with technical experts to support compliance activities. • Advice and support has been provided to Biosecurity Queensland to support compliance activities to ensure residential growers meet legislative requirements in Southeast Queensland.
Use communications networks to educate growers and the community to better detect, control, manage and contain these pests and diseases on their own properties.	Magazine articles produced for distribution through the Australian Bananas magazine.	2 per year.	**Achieved.** • **Issue 73, April 2025. 2 DRAFT articles produced for publication –** One article for publication drafted to highlight the Bunchy Top vigilance message to growers in Punjabi – *'ABGC Bunchy Top Surveillance and education project expands its communication messaging'* and a second article to be

Criteria/ Theme	Action	When / how often	Progress
			published produced by QDPI acknowledging project support – *'Improving QBAN testing'*. • **Issue 72, December 2024** – The December issue of Australian Bananas was published and features 2 articles including an update highlighting the risk of Bunchy Top in warmer months and an additional article focusing on project stakeholder engagement activities. Head to pages 24 and 25 to check it out https://abgc.org.au/wp-content/uploads/2024/12/Issue-72-DECEMBER-2024-WEB.pdf
	Articles and videos developed and posted on social media platforms including Facebook and Instagram through the project's page. Videos hosted on the ABGC YouTube channel.	10 social media posts. 2 videos produced and posted.	**Achieved.** • 10 social media posts published. • 2 videos produced and posted on the ABGC YouTube page.
	Up to date project information and resources are made available and up to date for publishing on State Government biosecurity-related websites.	Ongoing and as required.	**Achieved.** Up to date information remains current and available on State Government biosecurity related websites.
	Up to date project information and resources are made available on the project's dedicated ABGC webpage.	Ongoing and as required.	**Achieved.** Up to date information remains current and available on the ABGC webpage.
Engage directly with banana industry grower groups, government or research bodies, and the community to provide presentations/ workshops/ training to facilitate better detection, control, management and containment of	Grower group (e.g. BGA's or more local grower groups) presentations/ workshops, with a greater focus on on-farm local grower workshops.	1 per year.	**Achieved.** • **12 October 2024**. Bunchy Top Inspectors Wayne Shoobridge and Sam Stringer attended the Mullumbimby Plant Fair at the Mullumbimby Community Gardens where they manned a Bunchy Top information stall. The day was a great

Criteria/ Theme	Action	When / how often	Progress
relevant banana pests and diseases on their own properties.			success, with Sam and Wayne speaking to approximately 50 attendees (commercial and residential growers) about Bunchy Top disease and banana regulations in Northern New South Wales. Sam and Wayne were also able to identify numerous Bunchy Top infected plants at the Mullum community Gardens on the day and were able to show attendees live samples of Bunchy Top which proved to be very useful when explaining details of symptoms and spread of the disease. • **1 October 2024**. The (Northern NSW) project team attended the Coffs Harbour Industry group meeting. Around 30 Banana growers were present at the event. Project team members were available to discuss Bunchy Top risks, identification and control.
	Community events, e.g. local garden clubs, gardening expos	2 per year.	**Achieved.** • **12 October 2024**. Bunchy Top Inspectors Wayne Shoobridge and Sam Stringer attended the Mullumbimby Plant Fair at the Mullumbimby Community Gardens where they manned a Bunchy Top information stall. The day was a great success, with Sam and Wayne speaking to approximately 50 attendees (commercial and residential growers) about Bunchy Top disease and banana regulations in Northern New South Wales • **24 July 2024**. Bunchy Top Inspector Sam Stringer attended the Alexandra Hills

Criteria/ Theme	Action	When / how often	Progress
			Community Garden, where she was invited to speak to the members about Banana Bunchy Top Virus (Bunchy Top), other banana pests and diseases and how to grow healthy bananas.
	Government bodies (e.g. local biosecurity inspectors or industry development staff) training events	2 per year.	**Achieved.** No additional training required during this reporting period. SEQ and NSW staff have supported government inspectors as technical experts in relation to compliance matters.
Maximise operational efficiency and preparedness	Check and update data including number of plantations, area, surveillance data, and infection categories/status.	Ongoing.	**Achieved.** Ongoing and up to date.
	Adjust inspection schedules according to verified data.	Ongoing.	**Achieved.** Ongoing and up to date.
	Provide monthly updates or hold monthly meetings with inspection staff to identify problem issues, plan visits to SEQ (monthly for BT plantations), adjust inspection schedules, chemical and equipment requirements, decide on work program to catch up and maintain inspections as per infection schedule.	Monthly.	**Achieved.** Ongoing and up to date. Updates provided at least monthly by email or over the phone.
	Update and ensure an accurate database of contact details is kept for all commercial growers in the operational zones. Ensure contact information is incorporated into the ABGC AgKonect databases.	Ongoing.	**Achieved.** Ongoing and up to date.
	Meet and engage with Project Reference Group to present findings and seek guidance for continual improvement.	2 per year.	**Achieved.** • **23 October 2024**. Future project discussions based on the current project commenced with Hort Innovation representatives and stakeholders at the ABGC office in Rocklea to consider the merits of, and development of, a follow-on project.

Criteria/ Theme	Action	When / how often	Progress
			• **December 2024**. A concept brief was submitted to the R&D SIAP based on current project delivery, out of session, outlining a future project model considering the risks, opportunities and implications of not addressing these ongoing risks to the industry. • **27 January 2025**. An RFP was developed by Hort Innovation and sent to ABGC based on stakeholder discussions. A response was provided to Hort Innovation in advance of the deadline. • **17 February 2025.** ABGC representatives met with Hort Innovation to discuss and seek clarification on a small number of matters related to the response – with Hort Innovation confirming the strength of the ABGC response and committing to have a future contract in place prior the current project's end date.
	Training of new inspection staff and other personnel where required.	As required.	**Achieved.** Not required.
Internal industry body communications and information sharing	Cooperate with ABGC Communications team to engage growers and the public to look for symptoms, use of photos via mobile phone, reporting via Facebook and Hotline for immediate diagnosis or response. Share regular updates, videos, experiences.	Ongoing.	**Achieved.** • 4 Banana Magazine articles promoted by ABGC Communications. • 3 FB posts directly supporting project initiatives. • Maintenance of Bunchy Top hotline.
	Meet regularly with ABGC staff, Project Leader, communications, finance, and research manager as required to ensure the project operates effectively and within budget - monthly if possible.	Monthly.	**Achieved** • Management weekly, team monthly.

Criteria/ Theme	Action	When / how often	Progress
			• Monthly ABGC CEO report provided.
	Draft Board reports on Project progress.	For each Board meeting.	**Achieved** • Board reports provided 15 July 2024, November 2024 and February 2025.

Appendix 2 – Report on Bunchy Top project component deliverables

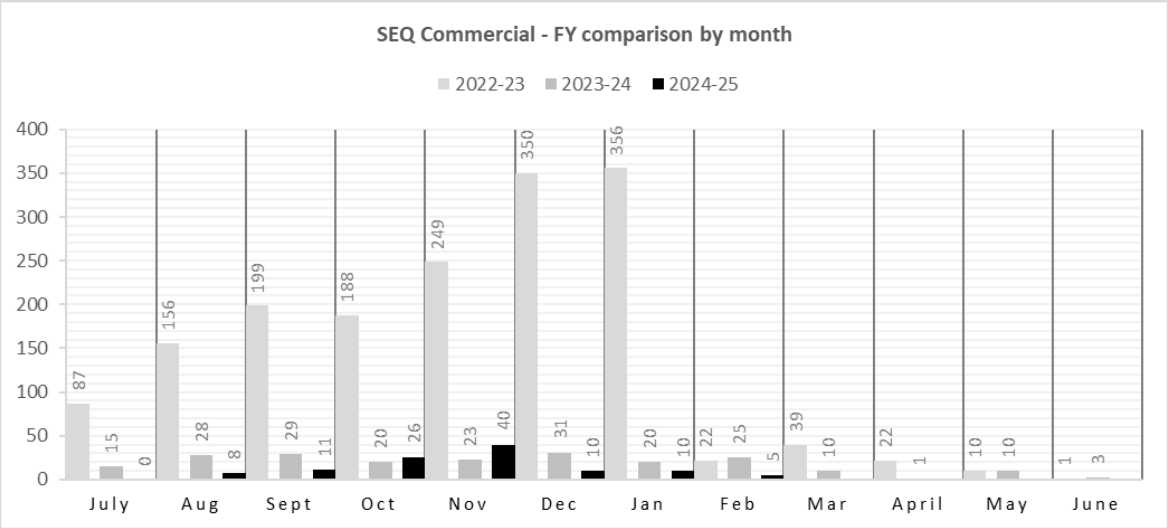
Bunchy Top status in NSW (BA21003 compared to previous project)

- Bunchy Top remains contained within NSW biosecurity zone.
- A summary account of activities, deliverables and outcomes is provided for each year of this project is included as Appendix 1 to this report.
- Data is provided based on the following number of inspections completed during the project. Year 1 – 572 grower visits, Year 2 – 432 grower visits, Year 3 – 277 grower visits (1 Jul 2024 - 28 Feb 2025). NOTE – number of grower visits are based on infestation levels detected on each property in accordance with the inspection schedule.
- Inspections conducted during the final year of the project (1 Jul 2024 – 28 Feb 2025) resulted in the detection and destruction of 773 infected banana plants. Annual totals for NSW for comparison are shown in the Table below, including previous FY totals extending back to the commencement of the previous BA18000 project.

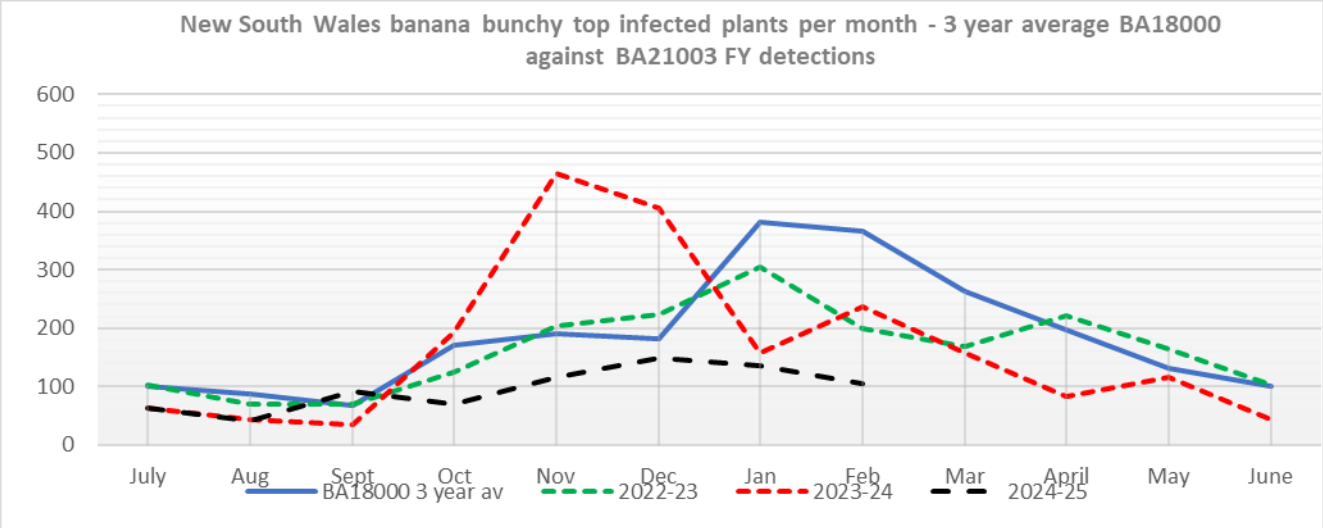
Month	BA18000 monthly average	BA21003 monthly average	BA18000 2019-20	BA18000 2020-21	BA18000 2021-22	BA21003 2022-23	BA21003 2023-24	BA21003 2024-25 compared to BA18000 average.
July	101	77	113	100	91	104	63	64
Aug	88	52	123	69	71	71	44	42
Sept	68	66	82	83	39	71	35	91
Oct	172	129	157	169	190	125	192	70
Nov	191	261	182	240	152	204	465	115
Dec	183	260	114	216	218	223	406	150
Jan	382	199	365	277	503	304	158	136
Feb	365	218	484	188	424	199	237	105
Mar	262	163	293	150	343	168	157	
April	197	153	237	129	225	221	84	
May	131	140	93	122	177	164	116	
June	100	74	84	58	157	104	43	

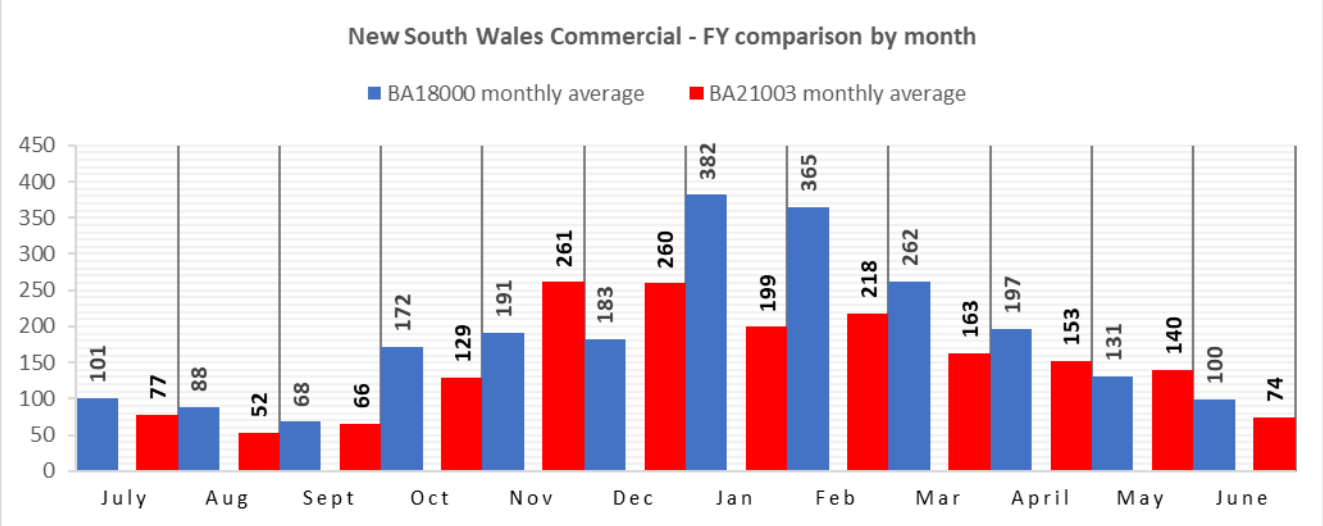
	BA18000			BA21003		
	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Annual Total	2327	1801	2590	1958	2000	773
at 28 February	1620	1342	1688	1301	1600	773

- The Tables provided above demonstrate a significant reduction in Bunchy Top incidence within NSW, noting that when infected plants are detected they are either immediately destroyed by the project, destroyed soon after by the grower, or otherwise dealt with by NSW DPI through compliance measures.
- However, it is important to note that 43.5% of all infections in the NSW control zone occurred on one property (73031) during Year 2 of the project (i.e. 870 of the 2000 infected plants detected). This property could not be inspected since August and September 2023 as the owner reported health problems resulting in the property being too weedy to inspect. NSW DPI was contacted to address compliance issues and subsequently NSW DPI has taken responsibility to address compliance matters related to weed presence and destruction of infected plants. Since then, project staff have assisted NSW DPI as technical experts to further their enquiries. No obvious spread to other properties from infection on this property has been identified.
- The following figure provides incidence data throughout the current project (BA21003) during each year of operation.



- The following figures provide a visual overview of annual NSW monthly detection numbers from 2019/20 (including the prior BA18000 project) to present **and demonstrate continual improvement in outcomes through delivery of the project**.





- Over the life of this project (Bunchy Top component 1 Jul 2022 -28 Feb 2025), of the 110 growers visited in NSW- 34 (or 31%) were found free of Bunchy Top over the entire period, 12 (or 11%) had only ever had 1 infected plant detected, 25 had more than 1 and less than 10 infected plants detected (23%), 19 growers had more than 10 but less than 50 infected plants detected (17%), and 19 growers had had more than 50 infected plants detected (17%).

- A total of 180 visits were conducted with the grower present during the final year of the project (representing 65% attendance of growers present for training). For Year 1 and 2 of the project, grower attendance at farm visits for training sat at approximately 61%.
- A total of 26 residential inspections were conducted during the final year of the project resulting in 66 infected banana plants/clumps being destroyed. NOTE - A total of 22 residential inspections were conducted during Year 2 of the project (2023-2024) resulting in 47 infected banana plant clumps being detected and destroyed and at the end of Year 1 of the project (2022-23) a total of 68 residential inspections were conducted resulting in 90 infected banana plant clumps being detected and destroyed.
- Support from government agencies continues to grow. The NSW government continues to proactively take steps to support and consult with industry and play their part in accordance with a shared responsibility model in all Bunchy Top matters including with any compliance issues raised. Additional details are provided in the Wider Engagement section and other sections of this report.

Bunchy Top status in SE QLD (BA21003 compared to previous project)

- Bunchy Top remains contained within SEQ biosecurity zone.
- A summary account of activities, deliverables and outcomes is provided for each year of this project is included as Appendix 1 to this report.
- 29 inspection visits were conducted across 9 properties during the final year of the project (1 July 2024 to 28 February 2025). 57 inspection visits were conducted across 15 properties during Year 2 of the project and Year 1 saw 71 inspection visits undertaken across properties managed by 20 growers.
- Inspections conducted during the final year of the project (1 Jul 24 – 28 Feb 2025) resulted in the detection and destruction of 110 infected banana plants. Annual totals for SEQ for comparison are shown in the Table below, including previous FY totals extending back to the commencement of the previous BA18000 project.

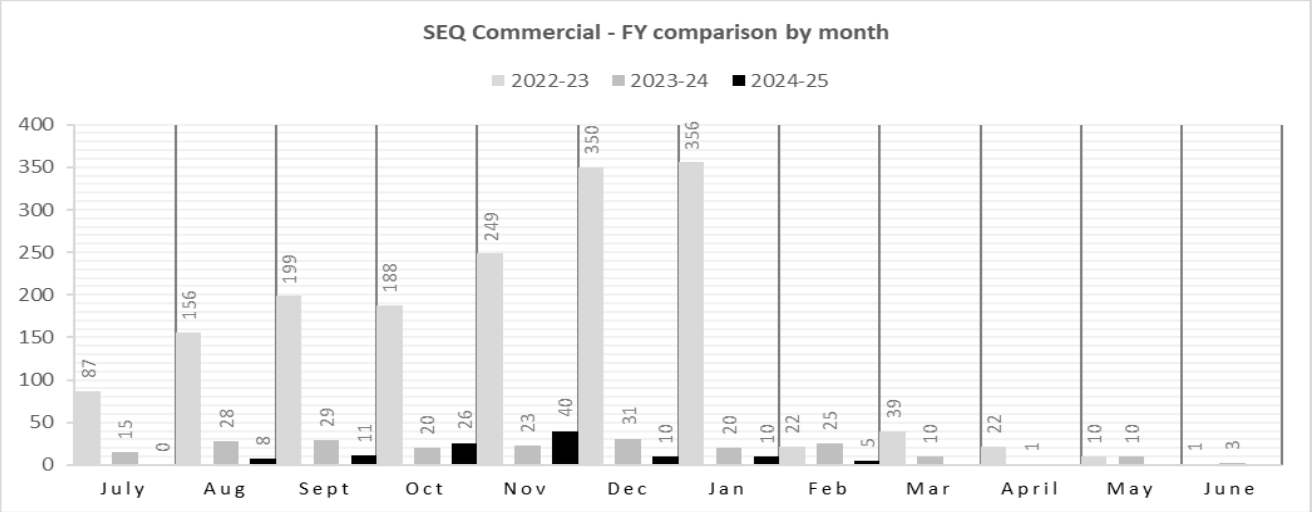
Month	BA18000 monthly average	BA21003 monthly average	BA18000 2019-20	BA18000 2020-21	BA18000 2021-22	BA21003 2022-23	BA21003 2023-24	BA21003 2024-25
July	10	34	0	7	22	87	15	0
Aug	4	64	0	12	0	156	28	8
Sept	28	80	22	42	21	199	29	11
Oct	39	78	53	0	63	188	20	26
Nov	99	104	53	30	213	249	23	40
Dec	103	130	34	36	239	350	31	10
Jan	112	129	21	0	314	356	20	10
Feb	94	24	32	39	211	22	25	5
Mar	5	25	14	0	0	39	10	
April	96	12	21	16	252	22	1	
May	49	10	12	24	111	10	10	
June	12	2	5	31	1	1	3	

	BA18000			BA21003		
	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Annual Total	267	237	1447	1679	215	110
at 28 February	215	166	1083	1607	191	110

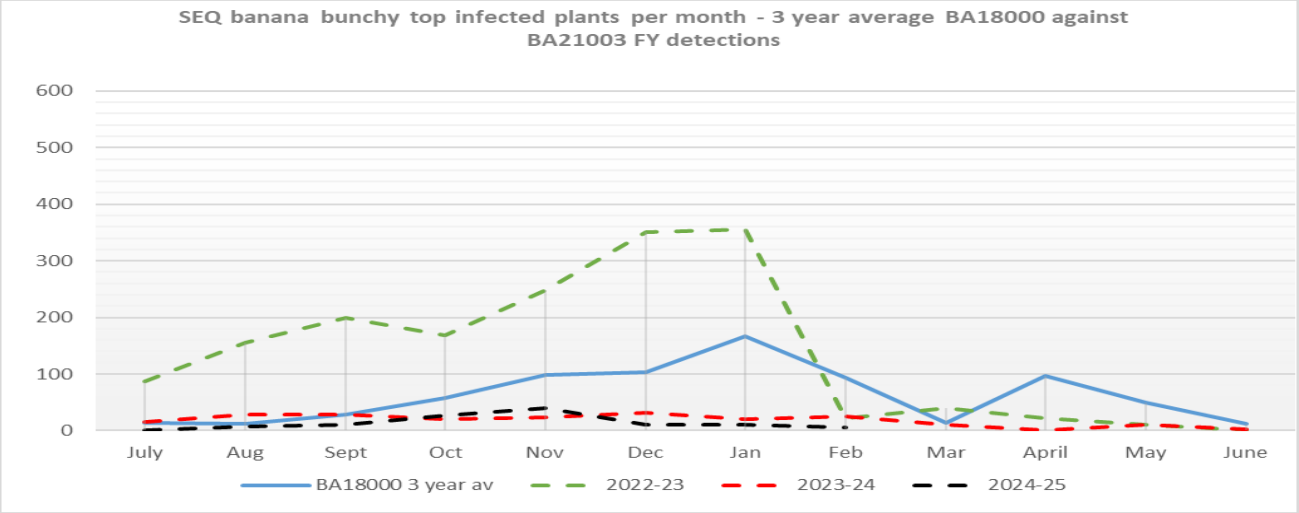
- The Tables provided above demonstrate a significant reduction in Bunchy Top incidence within SEQ in its final year, noting that during Year 2 of the project, 57% of all infection in the SEQ biosecurity zone has occurred on one property, KUL0173031, (i.e. 122 of the 215 infected plants detected). The vast majority of plants present on the property were destroyed by the property owner and new plantings have taken place. The grower is required to destroy infested plants at their own expense – this has resulted in significant chemical and labour

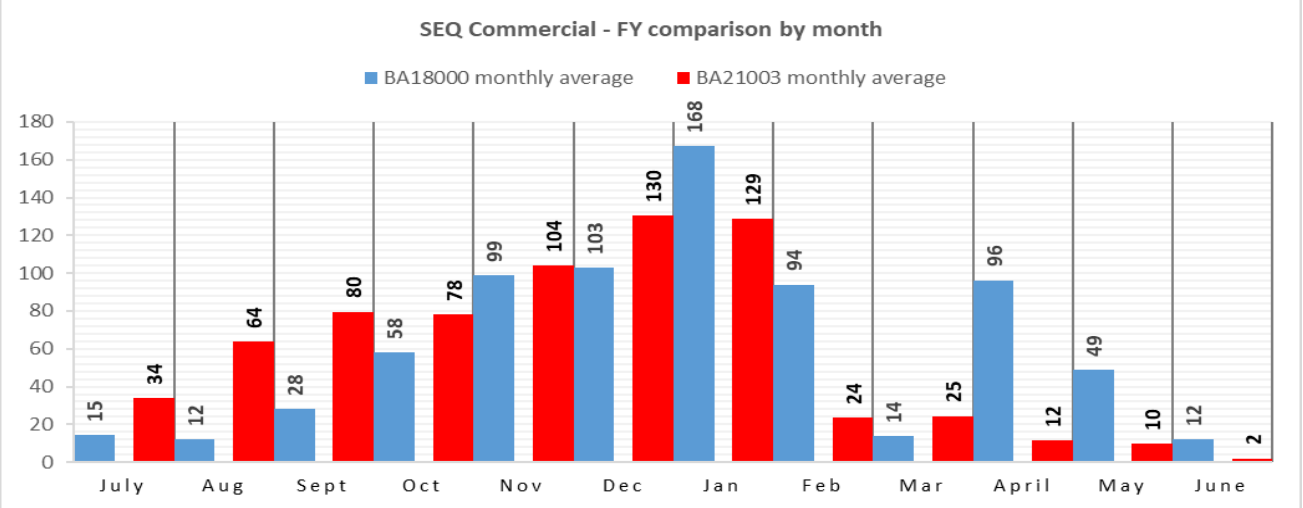
cost savings for the project. No obvious spread to other properties from infection on this property have been identified.

- The following figure provides incidence data throughout the current project (BA21003) during each year of operation.



- The following figures provide a visual overview of annual SEQ monthly detection numbers from 2019/20 (including the prior BA18000 project) to present **and demonstrate continual improvement in outcomes through delivery of the project**.





- Over the life of this project (Bunchy Top component 1 Jul 2022 - 28 Feb 2025), of the 20 properties visited - 14 properties (or 70%) were found free of Bunchy Top, 1 property was found to have 5 infected plants in total over the period, 2 properties were only found to have 1 infected plant over the period, and the remaining 3 properties had over 100 infected plants each.
- For the final Year of the project (31 Jul 2024- 28 Feb 2025), a grower was present at 68% of inspections undertaken. For Year 2 of the project grower attendance at farm visits for training sat at approximately 49% providing the opportunity to undertake 28 grower training events. During Year 1 of the project (2022-2023) 61% of total visits had the grower in attendance.
- During the final year of the project a total of 458 infected plants were detected across 18 residential properties (400 infected clumps were detected on one property and destroyed during one visit). There were 32 residential inspections conducted during Year 2 (2023-2024) resulting in the detection and destruction of 99 infected plants. At the end of Year 1 of the project (2022-23) a total of 25 residential inspections were conducted resulting in 61 infected banana plant clumps being detected and destroyed.
- Support from government agencies continues with Biosecurity Queensland in SE QLD attending Bunchy Top training, and responding to reports from the Bunchy Top team when required.

Appendix 3 - Report on Leaf Spot and Biosecurity Preparedness project component

Management of banana pests and diseases in North Queensland

- **Leaf spot assessments and control**

- The NQ banana industry continues to achieve close to 100% compliance with relevant voluntary leaf spot standards to leaf spot control and other foliar disease surveillance and management. This high level of compliance may be directly attributable to the work of the Biosecurity Liaison Officer.

- The outcomes of Round 1 inspections are addressed in the Project BA17005 project report.

- For Round 2 (that started at the commencement of BA21003), 447 visits were conducted between 1 June 22 and 13 January 2023 resulting in all inspections ultimately compliance with industry standards.
- For Round 3, 398 visits were conducted between 10 Jan -27 Jul 2023. Of these visits, 101 were either follow-up, additional inspections or compliance follow-ups. Forty-two first time advisory warnings about exceeding leaf spot thresholds were given, with five secondary advisory warnings required as follow-up, and one advisory warning given after a third follow-up visit requiring a compliance visit.
- For Round 4, between 1 Jul -31 Dec 2023, 348 leaf spot inspections were conducted across NQ. These inspections covered all areas in NQ except Lakeland and Mareeba. Of these inspections, 45 were follow-up inspections and 76 were additional inspections.
- Round 5 of inspections/assessments commenced in January 2024 and were completed on 12 July 2024

  The NQ banana industry continued to achieve close to 100% compliance with relevant voluntary leaf spot standards to leaf spot control and other foliar disease surveillance and management. A total of 364 leaf spot assessments were conducted during Round 5 of inspections. Of these, 343 were inspections conducted on commercial properties. 306 growers were found to be compliant on the first inspection. 47 growers received a first warning that they were not compliant. Of these, six growers required a second visit and reminder that they were not compliant, and five growers required a third visit and reminder that they were not compliant.
- Round 6 of inspections/assessments commenced after 13 July 2024 and were completed in March 2025. 376 inspections were conducted. Of these, 121 were additional or follow-up inspections.

Voucher specimens collected

- During Year 1, six voucher specimens were collected (from March 2022). No exotic pests were detected. The Biosecurity Liaison Officer will continue to work with QDAF scientists in relation to sampling for exotic pests.
- The total number of voucher specimens collected during Year 2 is 26. All 26 specimens were confirmed to have yellow sigatoka. Four Cordona leaf spot was also confirmed in that 26. One of the specimens had yellow sigatoka and banana leaf speckle.
- At total of eight voucher specimens were collected during Year 3 of the project to 28 February 2025. All specimens were confirmed to have yellow sigatoka.

On-farm biosecurity preparedness assessments

- The NQ Industry continues to be challenged with the presence of Panama TR4 infection in this area. To protect against these risks, on-farm biosecurity pest prevention practices are of critical importance.
- The project Biosecurity Liaison Officer has ensured that biosecurity measures have been improved or maintained throughout the life of the project.
- Visits to farms to assess and educate about on-farm biosecurity preparedness occur twice annually. The Biosecurity Liaison Officer continues to support maintenance and continual improvement in preparedness activities. Data is provided in relation to visits and outcomes in the following tables.

NOTE- Between survey rounds farm numbers can vary, with new farms developing, and other farms dropping out of production. Some remote auditing was conducted post 31 December 2023 as a result of impacts of cyclone Jasper. Some remote auditing was conducted post 31 December 2024 as a result of impacts of cyclone Alfred.

Decrease since previous round | Maintain (within 1% ha) or improve since previous round

INNISFAIL AND DISTRICTS	**ROUND**						
BIOSECURITY MEASURE	**BA17005 At end of prior project**	**BA21003 - R1 1 Dec 21 – 22 Jun 22**	**BA21003 - R2 23 Jun 22 – 13 Jan 23**	**BA21003 – R3 10 Jan 23 – 27 July 23**	**BA21003 – R4 28 July 23 – 31 Dec 2023**	**BA21003 – R5 1 Jan 24 to 12 July 2024**	**BA21003 – R6 12 July 24 – March 2025**
	Gr no. / %Gr / % total ha	**Gr no. / %Gr/ %ha**	**Gr no. / %Gr / % ha**	**Gr no. / %Gr / % ha**	**Gr no. / %Gr / % ha**	**Gr no. / %Gr / % ha**	**Gr no. / %Gr / % ha**
Fence	48 /27%/ 36%ha	44 / 25%/ 31%ha	43 / 24% / 32% ha	46 / 27% / 35% ha	41 / 24% / 30% ha	37 / 22% / 29%	**36 / 22% / 29%**
Biosecurity signage	155 / 88%/ 92%ha	157 / 90%/ 99%ha	156 / 89% / 96% ha	143 / 85% / 95% ha	146 / 87% / 97% ha	138 / 83% / 95%	**145 / 87% / 96%**
Carpark	56 / 31%/ 64%ha	53 / 30%/ 60%ha	58 / 33% / 64%	61 / 36% / 68% ha	65 / 39% / 70%	63 / 38% / 68%	**58 / 35% / 65%**
Footbath / boot exchange	50 / 28%/ 57%ha	54 / 31%/ 58%ha	51 / 29% / 57% ha	51 / 30% / 59% ha	49 / 29% / 56%	47 / 28% / 55%	**44 / 27% /**
Vehicle decon	58 / 33%/ 58%ha	60 / 34%/ 58%ha	60 / 34% / 59% ha	55 / 33% / 57%	56 / 33% / 59%	53 / 32% / 58%	**52 / 31% / 66%**
Total Farm No. & Total ha	177 / 5504 ha	**175 / 5474 ha**	**176 / 5708 ha**	**168 / 5482 ha**	**168 / 5604 ha**	**167 / 5770 ha**	**166 / 5685 ha**
Comment	Maintain generally. Minor changes primarily related to growers dropping in and out of production.						
GREATER TULLY	**ROUND**						
BIOSECURITY MEASURE	**BA17005 At end of prior project**	**BA21003 - R1 1 Dec 21 – 22 Jun 22**	**BA21003 - R2 23 Jun 22 – 13 Jan 23**	**BA21003 – R3 10 Jan 23 – 27 July 23**	**BA21003 – R4 28 July 23 – 31 Dec 2023**	**BA21003 – R5 1 Jan 24 to 12 July 2024**	**BA21003 – R6 12 July 24 – March 2025**
	Gr no. / %Gr. / % total ha	**Gr no. / %Gr/ %ha**	**Gr no. / %Gr / % ha**	**Gr no. / %Gr / % ha**	**Gr no. / %Gr / % ha**	**Gr no. / %Gr / % ha**	**Gr no. / %Gr / % ha**
Fence	23 / 44%/ 75%ha	23 / 46%/ 74%ha	21 / 43% / 71% ha	21 / 45% / 73% ha	21 / 48% / 73% ha	17 / 38% / 62%	**17 / 42% / 66%**
Biosecurity signage	47 / 90%/ 99%ha	45 / 90%/ 99%ha	43 / 88% / 99% ha	39 / 83% / 97% ha	37 / 84% / 97.2%	30 / 67% / 98%	**35 / 87%/ 97%**
Carpark	30 / 58%/ 87%ha	30 / 60%/ 87%ha	31 / 63% / 87% ha	33 / 70% / 91% ha	30 / 68% / 87.9%	23/ 51% / 87%	**24 / 60% / 88%**
Footbath / boot exchange	31 / 60%/ 90%ha	30 / 60% / 89%ha	29 / 59% / 88% ha	30 / 64% / 90% ha	30 / 68% / 82%	23 / 51% / 82%	**22 / 66% / 84%**
Vehicle decon	31 / 60%/ 84%ha	31 / 62%/ 84%ha	30 / 61% / 82% ha	30 / 64% / 83% ha	30 / 68% / 88%	24 / 53% / 82%	**24 / 60% / 89%**
Total Farm No. & Total ha	**52 / 3338 ha**	**50 / 3254 ha**	**49 / 3116 ha**	**47 / 2882 ha**	**44 / 2810 ha**	**45 / 2699 ha**	**40 / 1864 ha**
Comment	Improve generally. Minor changes primarily related to growers dropping in and out of production.						

FAR NORTH	ROUND						
BIOSECURITY MEASURE	**BA17005 At end of prior project**	**BA21003 - R1 1 Dec 21 – 22 Jun 22**	**BA21003 - R2 23 Jun 22 – 13 Jan 23**	**BA21003 – R3 10 Jan 23 – 27 July 23**	**BA21003 – R4 28 July 23 – 31 Dec 2023**	**BA21003 – R5 1 Jan 24 to 12 July 2024**	**BA21003 – R6 12 July 24 – March 2025**
	Gr no. / %Gr / % total ha	**Gr no. / %Gr/ %ha**	**Gr no. / %Gr / % ha**	**Gr no. / %Gr / % ha**	**Gr no. / %Gr / % ha**	**Gr no. / %Gr / % ha**	**Gr no. / %Gr / % ha**
Fence	8 / 66%/ 99%ha	8 / 73%/ 99.7%ha	9 / 75% / 99.8% ha	8 / 67% / 99.4%	8 / 67% / 99.6%	8 / 67% / 99%	**8 / 67% / 99%**
Biosecurity signage	9 / 75%/ 99%ha	10 / 91%/99.8%ha	10 / 83% / 99.8% ha	10 / 83% / 99.7%	10 / 83% / 99.7%	9 / 75% / 99.7%	**10 / 83% / 99.7%**
Carpark	7 / 58%/ 98%ha	7 / 64%/ 98%ha	7 / 58% / 96% ha	7 / 58% / 98%	7 / 58% / 98.3%	8 / 67% / 98%	**8 / 67% / 98%**
Footbath / boot exchange	6 / 50%/ 96%ha	6 / 56%/ 96%ha	6 / 50% / 96% ha	6 / 50% / 96.1%	6 / 50% / 96%	5 / 42% / 95%	**5 / 42% / 95%**
Vehicle decon	7 / 58%/ 97%ha	7 / 64%/ 97%ha	7 / 58% / 97% ha	7 / 58% / 97.2%	7 / 58.3% / 99.6%	7 / 58.3% / 99.6%	**5 / 42% / 72%**
Total Farm No. & Total ha	**12 / 692 ha**	**11 / 711 ha**	**12 / 718 ha**	**12 / 726 ha**	**12 / 725 ha**	**12 / 750 ha**	**12 / 750 ka**
Comment	Improve generally.						

TABLELANDS	ROUND						
BIOSECURITY MEASURE	**BA17005 At end of prior project**	**BA21003 - R1 1 Dec 21 – 22 Jun 22**	**BA21003 - R2 23 Jun 22 – 13 Jan 23**	**BA21003 – R3 10 Jan 23 – 27 July 23**	**BA21003 – R4 28 July 23 – 31 Dec 2023**	**BA21003 – R5 1 Jan 24 to 12 July 2024**	**BA21003 – R6 12 July 24 – March 2025**
	Gr no. / %Gr. / % total ha	**Gr no. / %Gr/ % ha**	**Gr no. / %Gr / % ha**	**Gr no. / %Gr / % ha**	**Gr no. / %Gr / % ha**	**Gr no. / %Gr / % ha**	**Gr no. / %Gr / % ha**
Fence	24 / 77%/ 85%ha	23 / 79%/ 87%ha	23 / 77% / 83%	21 / 72% / 78%	22 / 73% / 83%	14 / 48% / 65%	15 / 54% / 66%
Biosecurity signage	29 / 94%/ 98%ha	27 / 93%/ 98%ha	28 / 93% / 98%	28 / 96% / 99%	29 / 97% / 99%	29 / 100% / 100%	28 / 100% / 100%
Carpark	25 / 81%/ 92%ha	24 / 83%/ 91%ha	26 / 87% / 92%	26 / 90% / 94%	26 / 87% / 91%	26 / 90% / 94%	25 / 89% / 93%
Footbath / boot exchange	23 / 74%/ 88%ha	22 / 76%/ 87%ha	22 / 73% / 71%	23 / 79% / 88%	24 / 80% / 89%	23 / 79% / 88%	23 / 82% / 89%
Vehicle decon	26 / 84%/ 94%ha	26 / 90%/ 96%ha	27 / 90% / 96%	26 / 90% / 95%	27 / 90% / 95%	27 / 93% / 96%	25 / 89% / 95%
Total Farm No. & Total ha	**31 / 2174 ha**	**29 / 2064 ha**	**30 / 2085 ha**	**29 / 2083 ha**	**30 / 2095 ha**	**29 / 2014 ha**	**28 / 1990 ha**
Comment	Improve generally. **Some properties unable to visit as a result of Cyclone Jasper. For these, results provided over the phone by those that could be contacted.**						

Appendix 4 – Project Stakeholder Engagement Report

YouTube engagement

Videos are produced by the project and published on the Australian Banana Growers' Council YouTube page (https://www.youtube.com/@australianbananagrowerscou1130) – *1.24K people subscribe to this page*. Videos are available to the public but are also used for general engagement and training events and distributed widely.

Year 3 video engagement (1 Jul 2024 – 28 February 2025) – 2 Videos Produced

- **Project Video – Bunchy Top in backyard bananas with Don Knopke**.
  Link - https://www.youtube.com/watch?v=RwwarbMdo08. ***142 views*** *published March 21 2025*. The Australian Banana Growers' Council speaks with a resident in Southeast Queensland that is committed to Bunchy Top control on his property and in his local area.
- **Project Video – Introduction to Banana Bunchy Top Disease in Punjabi**.
  Link - https://www.youtube.com/watch?v=qyG2fJF7Hlg ***67 views*** *published March 14 2025*. ABGC's Bunchy Top inspector, Amardeep Singh, shares some key information about Bunchy Top in Punjabi.

Year 2 video engagement (1 Jul 2023 – 30 Jun 2024) – 3 Videos Produced

- **Project Video – ABGC Bunchy Top Disease Training | Coorabell**
  Link - https://www.youtube.com/watch?v=8Zru_oGXYZQ&t=2s. ***188 views*** *published December 15 2023*. The Australian Banana Growers' Council was pleased to deliver an on-farm workshop at Coorabell in Northern NSW on 25 October this year to assist growers in the early detection and eradication of Banana Bunchy Top Virus infection on their farms. NSW DPI also added to the event with a workshop on new banana varieties!
- **Project Video – Bunchy Top Tips: Destroying every stem in a clump.**
  Link - https://youtu.be/UELgZoqRC_k?si=nY7dP2bwnnts7Pnw. ***172 views*** *published August 9, 2023***.** Head out into the field with the Bunchy Top team's Sam Stringer to find out why it is important to destroy every stem in a banana clump that has Bunchy Top infection.
- **Project Video – Bunchy Top Tips: Tidy vs Untidy**
  Link - https://www.youtube.com/watch?v=XjhQw5QeHjY&t=5s. ***188 views*** *published July 14, 2023*. Head out into the field with the Bunchy Top team's Sam Stringer to find out about the ideal conditions for detecting Bunchy Top. Learn about how cultural practices can reduce the risk of Bunchy Top infection.

Year 1 video engagement (2022 – 2023) – 4 Videos Produced

- **Project Video – Bunchy Top Tips: The Scientific Research**
  Link - https://youtu.be/jItrWbP0iqU. ***428 views*** *published May 5, 2023*. Dr Kathy Crew is working alongside Associate Professor John Thomas to better understand how banana bunchy top virus causes disease symptoms and how it can be better managed to minimise the impact for industry.
- **Project Video - Bunchy Top Tips: Backyard pests and diseases**
  Link - https://www.youtube.com/watch?v=Ea2ZxUabYMc. ***159 views*** *published May 5, 2023.* Sam from the Australian Banana Growers' Council Bunchy Top team explains some of the things backyard banana growers should be aware of.
- **Project Video - Bunchy Top Tips: Late-Stage Infection - Bunchy Top Symptoms in the Bell**
  Link - https://www.youtube.com/watch?v=YzPjCH1_FA4&t=20s. ***496 views*** *published April 28, 2023.* Sam from the Australian Banana Growers' Council's Bunchy Top Team takes you into the field to view late-stage symptoms in the bell.
- **Project Video - Bunchy Top Tips: Tips and tools for detecting new infections**
  Link -https://www.youtube.com/watch?v=DLd_cVgxSCA. ***270 views*** *published Feb 8, 2023***.** Banana Bunchy Top inspectors (Australian Banana Growers' Council) share some information about one of their key tools for getting the job done.

Legacy video engagement (BA18000 videos in use)

- **Project Video - Detecting Banana Bunchy Top Virus symptoms in commercial plantations**
  Link - https://youtu.be/e6RgB_HUmHU. ***4912 views*** *published May 20, 2021*. This video shows you how to detect Banana Bunchy Top Virus symptoms in commercial banana farms.

- **Project Video - Bunchy Top Disease in Backyard Banana Plants**
  Link - https://youtu.be/nS-GwTVM_RE. ***8543 views*** *published Aug 26, 2021.* Backyard banana growers in Southeast Queensland and Northern New South Wales have an important role to play in the identification and control of Bunchy Top. This video provides information about the disease, symptoms and how to detect them and, of course, appropriate destruction methods. This project aims to stop the spread of a devastating banana disease & we need your help!
- **Project Video - Bunchy Top - an industry perspective**
  Link- https://www.youtube.com/watch?v=m5A-9V-thyY. ***880 views*** *published on 1 July 2022.* This video provided a view on Bunchy Top from an industry perspective.

ABGC Website

The Australian Banana Growers' Council continues to act as a conduit to disseminate information about Bunchy Top, Project status and Project resources through two dedicated pages on its website (https://abgc.org.au/banana-bunchy-top/ and https://abgc.org.au/biosecurity/) and through direct engagement with stakeholders.

- **January / February 2024**. Project and project staff highlighted on the ABGC page as part of an 'ABGC at Work' feature. Link - https://abgc.org.au/abgc-at-work/
- **22 February 2023**. A review of the dedicated Bunchy Top ABGC webpage was conducted, with updates provided to the ABGC Communications Officer.
- **June 2023**. An additional review was conducted by the ABGC Communications Officer with a change in ABGC's web template. Additional changes were made to the Bunchy Top website to incorporate further information and promote access to new videos developed by the project.

ABGC Bananas Magazine

The ABGC Australian Bananas magazine is distributed to approximately 1000 readers.

Year 3 engagement (1 Jul 2024 – 22 Mar 2025) – 4 Articles

- **Issue 73, April 2025. 2 DRAFT articles produced for publication –** One article for publication drafted to highlight the Bunchy Top vigilance message to growers in Punjabi – *'ABGC Bunchy Top Surveillance and education project expands its communication messaging'* and a second article to be published produced by QDPI acknowledging project support – *'Improving QBAN testing'.*
- **Issue 72, December 2024** – two articles. The December issue of Australian Bananas was published and features 2 articles including an update highlighting the risk of Bunchy Top in warmer months and an additional article focusing on project stakeholder engagement activities. Head to pages 24 and 25 to check it out https://abgc.org.au/wp-content/uploads/2024/12/Issue-72-DECEMBER-2024-WEB.pdf

Year 2 engagement (1 Jul 2023 – 30 Jun 2024) – 3 Articles

- **Issue 70, April 2024** - The April issue of Australian Bananas was published and features an update on the Project extending its reach to commercial and residential banana growers supporting banana disease control. Head to pages 18 and 19 to check it out https://abgc.org.au/wp-content/uploads/2024/04/Issue-70-APRIL-2024-WEB.pdf
- **Issue 69, December 2023** - The December issue of Australian Bananas was published and features an update on the Project extending its reach to commercial and residential banana growers supporting banana disease control. Head to page 36 to check it out https://abgc.org.au/wp-content/uploads/2023/12/Issue-69-DECEMBER-2023-WEB.pdf.
- **Issue 68, August 2023** - The August issue of Australian Bananas was published and features an update on some of the latest community and industry engagement activities delivered by the project supporting banana disease control. Head to page 7 to check it out https://abgc.org.au/wp-content/uploads/2023/08/Issue-68-AUGUST-2023-.pdf.

Year 1 engagement (2022-23) – 3 Articles

- **Issue 67, April 2023** - The April issue of Australian Bananas was published and features an update on the status of on-farm biosecurity in the North and reports on the outcomes of on-farm biosecurity assessments undertaken by the project's Biosecurity Liaison Officer. Head to page 30 to check it out https://abgc.org.au/wp-content/themes/abgc/assets/lib/magazine/magazine.html?file=https://abgc.org.au/wp-content/uploads/2023/04/Issue-67-APRIL-2023-WEB-1.pdf#magazineMode=true
- **Issue 66, December 2022** - The December issue of Australian Bananas was published and features how the Bunchy Top pest and disease project protects the banana industry. The article focused on the collaboration between the ABGC Bunchy Top team and the DPI banana Industry Development Officer through the education and training session

which was provided at the Coffs Harbour BGA meeting. Details of the extension work can be seem on page 28 via the link https://abgc.org.au/wp-content/themes/abgc/assets/lib/magazine/magazine.html?file=https://abgc.org.au/wp-content/uploads/2022/12/Issue-66-DECEMBER-2022-WEBSITE.pdf#magazineMode=true .

- **Issue 65, August 2022** - The August issue of Australian Bananas was published and features an update on the close of the final phase 4 of the Bunchy Top Project and introduced the new 2.5-year project that will manage Bunchy Top and other diseases. Head to page 22 to check it out https://abgc.org.au/wp-content/themes/abgc/assets/lib/magazine/magazine.html?file=https://abgc.org.au/wp-content/uploads/2022/08/Issue-65-AUGUST-2022-WEB.pdf#magazineMode=true.

Wider Grower Education, Training and Engagement Events

Year 3 engagement (1 Jul 2024 – 28 Feb 2025) – 2 Events

- **12 October 2024**. Bunchy Top Inspectors Wayne Shoobridge and Sam Stringer attended the Mullumbimby Plant Fair at the Mullumbimby Community Gardens where they manned a Bunchy Top information stall. The day was a great success, with Sam and Wayne speaking to approximately 50 attendees (commercial and residential growers) about Bunchy Top disease and banana regulations in Northern New South Wales. Sam and Wayne were also able to identify numerous Bunchy Top infected plants at the Mullum community Gardens on the day and were able to show attendees live samples of Bunchy Top which proved to be very useful when explaining details of symptoms and spread of the disease.
- **1 October 2024**. The (Northern NSW) project team attended the Coffs Harbour Banana Industry group meeting. Around 30 Banana growers were present at the event. Project team members were available to discuss Bunchy Top risks, identification and control.

Year 2 engagement (1 Jul 2023 – 30 Jun 2024) – 2 Events

- **25 October 2023. On-farm workshops** were planned for Year 2 of the project where commercial growers can participate and be informed in key elements of Bunchy Top prevention, detection and control. The first of these workshops was delivered on 25 October 2023 at **Coorabell in Northern NSW**.
- **7 September 2023**. The (Northern NSW) project team attended and had out of session discussion with growers at the **National Banana Development and Extension Program Mini roadshow** – **Murwillumbah** (NSW).

Year 1 engagement (2022-23) – 3 Events

- **17 – 19 May 2023**. The project Policy Officer (Northern NSW) and Biosecurity Liaison Officer (Nth Qld) attended the **2023 Australian Banana Congress** and provided advice and offered resource materials to growers at the Multi-pest surveillance and grower education to manage banana pests and diseases Project (BA21003) booth.
- **2 November 2022**. Education and training on Bunchy Top symptom identification and treatment was provided to growers in the Coffs Harbour Coast region. This extension work took place at the **Coffs Harbour & District Banana Growers Association**. This was delivered via collaboration between the ABGC Bunchy Top team and the DPI banana Industry Development Officer.
- **1 November 2022**. The NSW Sub Tropical Horticulture Development Officer made Bunchy Top related resources available to growers at the **Nambucca BGA meeting**.

Wider Community Engagement Events

Year 3 engagement (1 Jul 2024 – 28 Feb 2025) – 2 Events

- **12 October 2024**. Bunchy Top Inspectors Wayne Shoobridge and Sam Stringer attended the Mullumbimby Plant Fair at the Mullumbimby Community Gardens where they manned a Bunchy Top information stall. The day was a great success, with Sam and Wayne speaking to approximately 50 attendees (commercial and residential growers) about Bunchy Top disease and banana regulations in Northern New South Wales. Sam and Wayne were also able to identify numerous Bunchy Top infected plants at the Mullum community Gardens on the day and were able to show attendees live samples of Bunchy Top which proved to be very useful when explaining details of symptoms and spread of the disease.

- **24 July 2024**. Bunchy Top Inspector Sam Stringer attended the Alexandra Hills Community Garden, where she was invited to speak to the members about Banana Bunchy Top Virus (Bunchy Top), other banana pests and diseases and how to grow healthy bananas.

Year 2 engagement (1 Jul 2023 – 30 Jun 2024) – 6 Events

- **8 February 2024**. Education and awareness activities directed at the community were further enhanced through a presentation provided by Samantha Stringer in Southeast Queensland to the **Redlands Organic Growers Group** on 8 February 2024. There were approximately 60 attendees at the meeting. Community presentations are focussed on resources developed by the Project to inform residential banana growers on resources provided through the Project on self-detection and control.
- **2 November 2023**. Education and awareness activities directed at the community were further enhanced through a presentation provided by Samantha Stringer in Southeast Queensland to the **Brisbane Organic Growers Group** on 2 November 2023. There were approximately 30 attendees at the meeting. Community presentations are focussed on resources developed by the Project to inform residential banana growers on resources provided through the Project on self-detection and control.
- **4 September 2023**. Bunchy Top presentation at the **Nambour Garden Club**. The Project Officer (SEQ) spoke for approximately 30 minutes and members asked lots of great questions afterwards. There were exactly 70 members attending. Distributed a significant number of project brochures and posters and magnifying glasses.
- **16 August 2023**. Based on a report of Bunchy Top infected plants at the Mullumbimby Community Gardens, the Project Team Leader NSW took the opportunity to liaise with and provide an on-site presentation to a permaculture lecturer at **Byron Community College** and her students about Bunchy Top, and destruction methods. Approximately 12 students attended this presentation.
- **27 July 2023**. A presentation was delivered by the NSW project officer on Bunchy Top at the **Lennox Head community garden club**. The presentation focussed on Bunchy Top identification and control, banana plant hygiene practices. 33 people were in attendance.
- **22 July 2023**. NSW, awareness of Bunchy Top was highlighted by the Project Officer during a **North Coast ABC radio** segment as a lead up to a presentation on Bunchy Top to the Lennox Head community garden club.

Year 1 engagement (2022-23) – 2 Events

- **7 July 2023**. A presentation was delivered by the project SEQ officer on Bunchy Top at the **Queensland Garden Expo**. The expo is a significant event for all horticulturalists in Queensland and is attended by thousands of people over the expo period. ***Note*** *– although delivered in early July 2023, significant planning and preparation was conducted in advance in June 2023, including promotional materials provided to the organiser, so is listed as a Year 1 deliverable.*
- **9 June 2023**. A presentation was delivered on Bunchy Top at the **Buderim Garden Club** meeting. There were 70 plus attendees and the project team member (SEQ) spoke to approximately 20 attendees at the afternoon tea/question time about bananas and Bunchy Top.

Facebook

The Banana Bunchy Top Project aims to stop the spread of one of the world's most devastating banana diseases – and we need your help. https://www.facebook.com/BananaBunchyTopProject. *223 people like this. 250 people follow this*.

Year 3 Facebook engagement (30 Jun 2024 – 25 Mar 2025) – 10 posts

- **23 March 2025**. Have you ever wondered how the Banana Bunchy Top Project continues to provide support to commercial and residential growers to assist in pest and disease control? This project has been funded by Hort Innovation, using the banana research and development levy and contributions from the Australian Government. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.
- **23 March 2025**. Did you know that the Banana Bunchy Top project also provides a service to address and control leaf

spot diseases of banana and support on-farm biosecurity preparedness in North Queensland? For further information check out the information and resources provided on the Australian Banana Growers' Council webpage!

- **23 March 2025**. Just a quick thank-you for the support provided by all of our Banana Bunchy Top Project subscribers. For useful Tips and information on Banana Bunchy Top, don't' forget we have lots on useful information available on the **Australian Banana Growers**' Council YouTube page!
- **21 March 2025**. Meet Don, a passionate backyard banana grower from the Sunshine Coast as he shares his firsthand experience with Banana Bunchy Top Disease. Over the years, Don has learned the importance of recognizing the early signs and acting fast to protect his plants—and he wants to help other growers do the same!
- **20 March 2025**. Whether you grow in the current Bunchy Top zone stretching from Northern NSW to Southeast Queensland, or you're based on NSW's Mid North Coast, in Far North Queensland, the Northern Territory or Western Australia, it's crucial you know the signs and symptoms of Bunchy Top. Early detection is key, and any spread of this disease could be devastating.
- **18 March 2025**. Shared from ABGC FB page. INFO SESSIONS FOR NSW GROWERS. Banana growers impacted by ex-TC Alfred are invited to attend free info sessions at the Murwillumbah RSL and Park Beach Bowls Club. Please contact Steve Norman on 0432 680 532 to RSVP (for catering purposes.). Lunch will be provided and bring your laptop/phone along if you'd like help reporting your damage.
- **12 March 2025**. Shared from the ABGC FB page. Information provided from the project. Banana growers in the Tweed and Byron regions have been the hardest hit by TC Alfred. Flooding and power outages continue to impact Northern NSW, and assessments are underway to get a full picture of the damage. Previous grower, and **Banana Bunchy Top Project** surveillance inspector Wayne Shoobridge lives in Murwillumbah, and is still without power. "I have managed to visit some plantations, and there appears to be varying levels of damage, some with up to 70%. The flooding is restricting growers from visiting their plantations to assess the full extent of the damage," Wayne said. Our thoughts are with affected growers' and their communities in SEQ and Northern NSW during the clean-up and recovery period. For financial and mental health support reach out to, **Rural Financial Counselling Service NSW - Northern Region**. **NSW Reconstruction Authority Local Land Services NSW** **Primary Industries and Regional Development**
- **10 March 2025**. Hi all. We are looking for a new inspector in the Northern NSW area!
- **25 February 2025**. The Bunchy Top curse has struck again!!!! Today Sam the local Bunchy Top Inspector called in to my place at Coolum Beach at my request to have a look at my banana plants. She identified 4 plants that definitely have bunchy top, one at my neighbour's place and another one down the road that she spotted while driving past!! So, if you live in the bunchy top exclusion zones in Southern Queensland and Northern New South Wales, please be vigilant, and if you suspect a problem don't hesitate to give the bunchy top hotline a call!!! Better to be safe than sorry! The photo of the Red Dacca in the foreground is typical of bunchy top. In the other photo, the stem in the centre has leaves that are vertical and narrower, another sign of bunchy top in more mature plants!! I have lost over 30 plants to this disease in the last 7 years, so it must be rampant in the Coolum community!!
- **11 October 2024**. Are you in Northern NSW and looking for something to do tomorrow morning (Saturday 12th October)? Come along to the Mullum Plant Fair. There's so many great talks, workshops and activities for the whole family. And your favourite Bunchy Top Inspectors, Wayne and Sam will be there to chat about all things Bunchy Top and backyard bananas. Hope to see you there

Year 2 Facebook engagement (1 Jul 2023 – 30 Jun 2024) – 12 posts

- **27 May 2024** - Banana bunchy top disease has had quite an impact within Australia since it was first detected - not only economically, but culturally. In a newly published research article, 'The untold history of banana bunchy top disease', its author Andrew D. W. Geering documents its history.
- **24 April 2024**. (Shared from Biosecurity Queensland page). Which one of these banana leaves has bunchy top disease? If you said the second one, you're correct! If you look very closely at banana leaves with bright sunshine behind them, infected leaves will have a 'dot and dash' pattern running across the 'veins' from the mid-rib. If you suspect banana bunchy top disease and you live outside the southern banana biosecurity zone let us know!
- **2 April 2024**. Workshop reminder. Come for dinner, stay for the wealth of info! ABGC's Bunchy Top team will be joined by Steve Norman (NSW DPI) to provide an update on a range of topics. It all kicks off this Friday (5 April) at

4pm. If you're a grower in Northern NSW, we hope to see you there.

- **18 March 2024**. Northern NSW growers: join the Bunchy Top team for a workshop on 5 April in Murwillumbah. Reach out to Carena for more info or to RSVP. Hope to see you there! Banana Bunchy Top Project
- **22 February 2024**. The key to controlling Bunchy Top is EARLY DETECTION and EARLY DESTRUCTION. Check out these Bunchy Top infected plants at an Upper Caboolture backyard. The infection started at one end of the row of bananas and slowly worked its way from plant to plant until half of the row of plants were infected. If this infection was picked up early, most of these plants could have been saved. Unfortunately, these plants won't ever recover, so they will have to be destroyed. This owner wished she would've known about Bunchy Top disease and its symptoms earlier, as she loves her banana plants and didn't realise what was happening to them. For tips on how to detect Bunchy Top disease in your banana plants, check out our YouTube channel - Australian Banana Growers' Council.
- **11 February 2024**. Did you know? The Bunchy Top Team is part of a larger project administered by the Australian Banana Growers' Council (ABGC) and funded by Hort Innovation. The project also provides support and advice to banana growers in North Queensland on leaf spot control and on-farm biosecurity. Our staff profiles have been included on the ABGC website.
- **8 December 2023**. The Australian Banana Growers' Council was pleased to deliver an on-farm workshop at Coorabell in Northern NSW on 25 October this year to assist growers in the early detection and eradication of Banana Bunchy Top Virus infection on their farms. Aside from tips and techniques provided to growers on how to spot and destroy Bunchy Top, NSW DPI also added to the event with a workshop on new banana varieties! Another workshop will be provided in 2024 for interested growers.
- **20 October 2023**. Northern NSW grower? Come along for a free Bunchy Top training session next Wednesday (lunch and drinks provided)!
- **29 September 2023**. Growers in Northern NSW - you're invited to join us for a FREE Bunchy Top training session next month. Kicking off at 12pm (with lunch and drinks), the event will cover identification, tools, control and also feature some plant variety training. Please get in touch for more details!
- **10 August 2023**. One of the most crucial elements in controlling the spread of Banana Bunchy Top disease is correct and adequate destruction of infected plants. If infected clumps are not destroyed properly, those remaining stems and suckers can sit there as an ongoing source of infection, potentially spreading Bunchy Top to other banana plants on your property and those on neighbouring properties. Always ensure you destroy the whole clump, even if some of the stems aren't showing symptoms. These stems will already be infected and will start showing symptoms down the track. Check out our new video about destroying every stem in a clump. https://www.youtube.com/watch?v=UELgZoqRC_k
- **14 July 2023**. It's a common misconception that banana plants will look after themselves. But, in fact, banana plants need regular maintenance if you want to grow healthy bananas and control pests and diseases, like Bunchy Top. **Check out our latest video**, where we demonstrate the benefits of keeping your banana plants tidy. https://www.youtube.com/watch?v=XjhQw5QeHjY
- **6 July 2023**. Looking for something to do this weekend? Come to the **QLD Garden Expo on the Sunshine Coast**. There's so much garden goodness to explore, including display gardens, nurseries, live demos, speakers and workshops. And if you want to learn more about Bunchy Top disease and growing healthy bananas, join Sam at 3pm on Friday and Sunday afternoons. See you there 😊. https://qldgardenexpo.com.au/

Year 1 Facebook engagement (2022 – 2023) – 21 posts

- **31 May 2023**. The Banana Bunchy Top National Project isn't just about inspecting for Bunchy Top disease. There's a lot of research and development happening behind the scenes that assists the project and industry in best practice and management. We recently had a chat to Dr Kathy Crew from Queensland Agriculture to find out more about her team's research in the Hort Innovation funded project BA19002 "Understanding the role of latency in Banana Bunchy Top Virus symptom expression". Dr Crew and her team are working to better understand when plants infected with Banana Bunchy Top Virus become infectious relative to when they develop symptoms, which will improve banana bunchy top disease management to minimise the impact for industry. Check out the video below to find out more about this scientific research and the benefits to industry. Link - https://youtu.be/jItrWbP0iqU

- **20 May 2023**. Recent Hort Innovation media release on the project. https://www.horticulture.com.au/.../Banana-army.../...
- **18 May 2023**. Carl and Carena in action at Congress!
- **18 May 2023**. Day one of Banana Congress 2023 was a huge success! If you're at the Banana Congress this week, make sure you pop in and say hi to Carena and Carl at the Banana Bunchy Top Project stand.
- **16 May 2023**. If you're thinking about growing bananas, there's a few things you should consider before you go out and buy your plants. Banana plants are susceptible to a variety of serious pests and diseases, including Bunchy Top disease. In Australia, Bunchy Top is prevalent in Southeast Queensland and Northern New South Wales. If you live in these areas, your banana plants will be at risk of contracting Bunchy Top, regardless of whether they are new small plantings or large established clumps. No matter where you are growing your banana plants, it's always a great idea to familiarise yourself with the symptoms of Bunchy Top, so you can detect it in its early stages and reduce the spread to other banana plants and farms in your area.
- **5 May 2023**. Banana Bunchy Top disease symptoms are typically observed in the newest emerging leaves of a banana plant. These symptoms generally include dot-dash lines and hooks in the leaf, stripes up the mid-rib, pale leaf margins and shortening and narrowing of each new leaf that emerges. But, if a plant contracts Bunchy Top in the late stages of its growth, i.e., close to throwing a bunch, the typical symptoms may not be visible. This is why it's always a good idea to look at the banana bunch. Most Bunchy Top infected plants become stunted and won't throw a bunch, but if they do manage to throw a bunch, the bunch will usually be small and deformed. And if the bunch still has the banana flower (bell) attached, the tips of each bract will usually have some dot dash lines, similar to those observed in leaves with symptoms. So, when checking your banana plants for Bunchy Top, make sure you always have a look at any emerged bunches, as well as the new leaves. Check out our new video that looks at a deformed bunch and bell symptoms in a late-stage infection. https://www.youtube.com/watch?v=YzPjCH1_FA4&t=20s
- **30 March 2023**. This is a great video that explains the reproduction of aphids. No wonder they can build up numbers and infect whole plantations quickly!
- **27 March 2023**. A Bunchy top video from 10 years ago. 110 years now since the first detection.
- **13 March 2023** (Share from Biosecurity Qld FB page). Did you know we have banana biosecurity zones within Queensland to prevent the movement of bananas and related materials? These restrictions are in place to help protect our banana industry from serious pests and diseases. There are biosecurity zones in the north and south of Queensland, which restrict the movement of banana plants into and out of the zones.
- **27 February 2023** (Share from Biosecurity Qld FB page). Can I take my plants with me when I move? Biosecurity restrictions play a vital role in protecting Queensland's agricultural sector, environment and community from serious pests and diseases. There are restrictions in place for moving plant material and soil within Queensland and interstate as these can contain hidden plant pests and diseases. By law, you must comply with these biosecurity restrictions.
- **20 February 2023** (Share from Biosecurity Qld FB page). Where can I buy or sell backyard banana plants? Moving backyard banana plants is a biosecurity risk, as this can spread serious banana diseases like Panama disease or banana bunchy top virus. With 94% of Australia's bananas grown right here in Queensland, further spread of these diseases would be detrimental for our industry. We all have a general biosecurity obligation to take practical measures to minimise biosecurity risks. Learn more about banana diseases at https://fal.cn/3vZgB .6 likes
- **8 February 2023**-Banana Bunchy Top initially shows infection in the newest leaves. Our inspectors give their tips on the best way to look for symptoms on suspect plants in new leaves that may be out of reach and the tools they use to have a closer look. https://www.youtube.com/watch?v=DLd_cVgxSCA
- **8 February 2023**-Bunchy Top hotline.
- **16 November 2022-**Another day at the office 😉 ….how about that view though 🙌.
- **23 October 2022-**The Australian Banana Growers' Councils Banana Bunchy Top Project includes education and training on symptoms of Bunchy Top as part of its arsenal to expand grower's knowledge. New NSW DPI Sub Tropical Horticulture Development Officer Steven Norman recently had the opportunity to brush up on his Bunchy Top knowledge and identification skills at a visit to a Northern NSW banana farm. Although Steven is a fresh face in the banana industry, he brings many skills that will assist growers in understanding challenges, as well as research and

development. Steven got to see first-hand what is involved in a Bunchy Top inspection, from educating growers to detecting and destroying Bunchy Top. Steven looks forward to collaborating with the Bunchy Top Project in the near future to help create grower awareness around pests and diseases like Bunchy Top.

- **12 September 2022-** Facebook Cover update, Bunchy Top hotline.
- **30 August 2022-**BANANA PLANTS LOVE SPRING! As we move into spring and the weather warms up, you'll see your banana plants start to take off with vigorous new growth. It's an exciting time of year! But as Spring brings new growth and vitality to the plants we love and adore; it also brings about an increase in ideal conditions for pests and diseases. For those of us in the sub tropics, this means an INCREASE OF BANANA APHIDS AND Bunchy Top. In winter in the sub tropics, we generally see less aphid activity and a slow down of growth in banana plants. Therefore, we tend to see less instances of new Bunchy Top infections. But as we move into warmer, more humid conditions, aphid populations can explode, and Bunchy Top can quickly spread. This is an ideal time of year to get into a routine of regularly inspecting your own banana plants. Detecting an early Bunchy Top infection now can save you from having a much bigger issue in the summer months. Whether you're a backyard or commercial grower, conducting weekly or fortnightly checks on your banana plants is vital when it comes to keeping on top of Bunchy Top. 🌱.
- **23 August 2022**-We believe in the importance of staying up to date with the research of Banana Bunchy Top Virus (Bunchy Top) to ensure we are doing the best job of keeping the banana industry as disease free as possible. The first ground-breaking research done on Bunchy Top back in the early 1900's by Dr Magee is still relevant, and the strategies he devised for inspecting, destroying, and moving plant material are still in use to this day. We know that aphids can spread Bunchy Top after feeding on infected plant material (with visible symptoms). Over the years though, field observations and the occurrence of Bunchy Top 'hotspot' zones have led us to believe that there is more than meets the eye when it comes to the spread of Bunchy Top. A new research project has commenced on the Sunshine Coast looking at the occurrence of Bunchy Top in symptomless leaves on newly infected plants, headed by Dr John Thomas (UQ) and Dr Kathy Crew (DAF). Recent findings from a similar study being done in Northern New South Wales suggest that Bunchy Top infected plants CAN be infectious before they start showing symptoms. These findings tell us that it is even more important to detect and destroy Bunchy Top infected plants as early as possible to minimise the spread. So, whether you are a commercial farmer or a backyard grower, familiarising yourself with Bunchy Top symptoms is a vital step to keeping on top of Bunchy Top.
- **5 August 2022-**This photo may look like every other banana sucker you would see popping up in someone's backyard bananas. But this banana sucker is infected with Banana Bunchy Top Virus. If one stem in a clump of bananas has Bunchy Top, the whole clump will in fact be infected. Bunchy Top travels through the root system and into each stem, including the suckers. Even if there are no noticeable symptoms in the remaining stems and suckers, they will likely start showing symptoms down the track. Banana plants infected with Bunchy Top will never recover, and if left untreated can be a source of infection that can spread through local communities and nearby commercial farms. If you live in an area that has Bunchy Top (SE QLD and NNSW), please don't give away suckers or move them onto other properties. Even if they look fine, you may be unknowingly spreading Bunchy Top and other banana disease.
- **4 August 2022-**Just a reminder it's a bad idea to share banana plants and in some cases it may be illegal.
- **4 July 2022-**A new video for our followers. Have you ever wondered what it is like to live day to day with the challenge of Bunchy Top? This video tells that story from a grower and Inspector perspective.
  https://www.youtube.com/watch?v=m5A-9V-thyY