Banana

2015/16 Annual Report

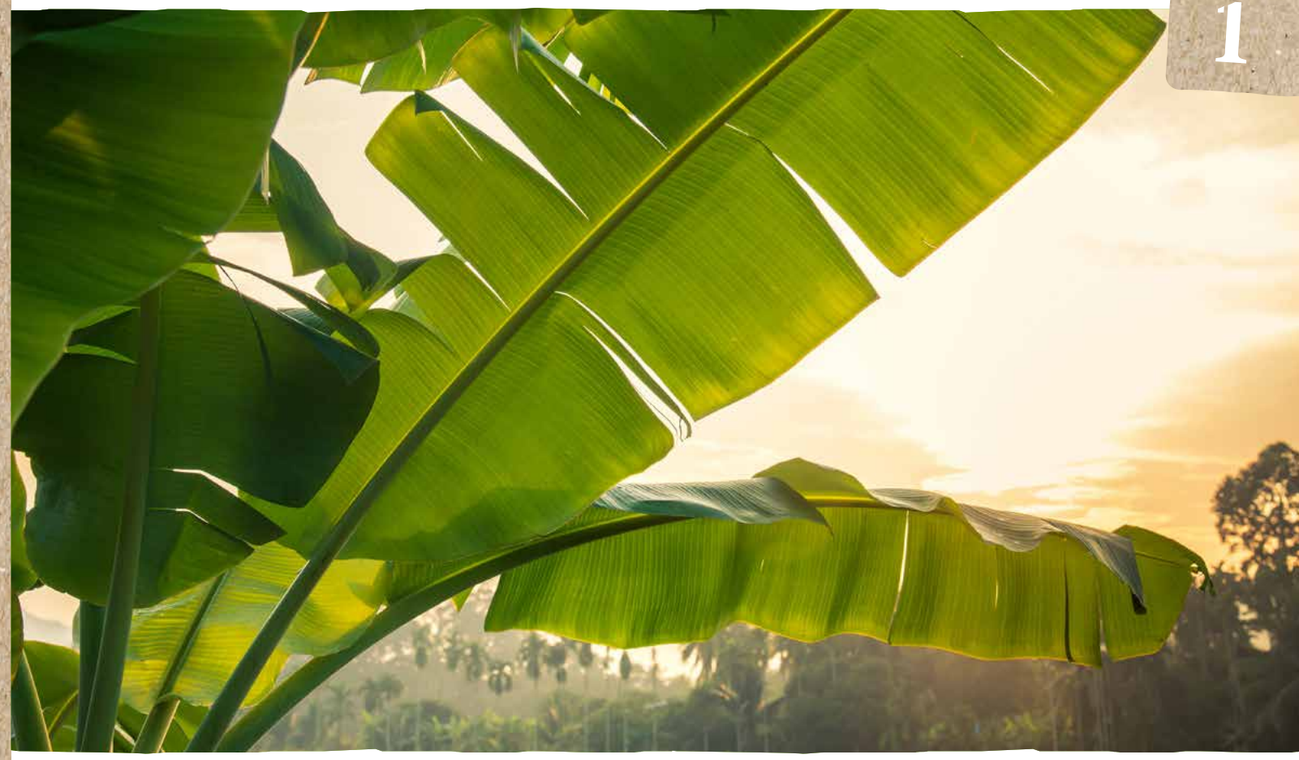
Horticulture Innovation Australia

Content

The projects in this report have been funded by Horticulture Innovation Australia Limited using sources including the banana levy, Australian Government contributions and, in some instances, co-contributions from a variety of sources.

Executive summary

During 2015/16 Horticulture Innovation Australia (Hort Innovation) was focused on investing banana levies and Australian Government contributions into R&D and marketing projects to improve growers' productivity and profitability and ensure the long-term sustainability of the industry.



More than $3.7 million was invested during 2015/16 in research projects covering a range of initiatives focused on areas of plant health and industry extension. A priority was improving the capacity for prevention, detection, identification and coordinated early response to disease incursions, with a particular focus on Panama Tropical Race 4, Yellow Sigatoka, crown end rot and banana bunchy top virus.

Communicating to industry stakeholders and ensuring effective engagement of growers and others in the supply chain was also a priority. This included the development or continuation of a range of key communications channels such as magazine, websites, e-bulletins, SMS notifications and video shared on social media. As well, study tours and other extension activities delivered the latest in industry news and R&D findings to growers in all major producing regions around the country.

A range of industry events, such as the 11th Banana Industry Congress, also ensured growers and industry stakeholders had access to R&D and marketing information.

In addition, the 2015/16 year saw the commencement of the three-year strategic marketing plan for the industry, with $4.8 million invested in the period with a clear focus on driving consumption of bananas among people aged 25 to 39 and families with children aged 12 or under. This was done through a creative campaign positioning bananas as 'Nature's non-stop energy snack', which included television advertising, the use of innovative advertising space such as gyms and offices, and targeted digital and social media campaigns. Additionally, a new device-responsive website promoting bananas was developed, Australian sportsman Billy Slater was retained as industry ambassador and a number of key industry and promotional events were leveraged.

Strategic Investment Advisory Panel

Hort Innovation has established Strategic Investment Advisory Panels (SIAPs) to provide advice to help ensure R&D and marketing investment decisions are balanced and prioritised by the current needs of each horticulture levy industry.

About industry SIAPs

The key function of Hort Innovation's levy-industry SIAPs is to provide transparent and robust advice on potential investment opportunities, helping to guide the way industry levies and Australian Government contributions are put to use. Each SIAP has clearly defined objectives associated with the provision of this strategic investment advice, and is guided by the priorities set out in the Strategic Investment Plan for each levy industry.

During the 2015/16 financial period, 18 SIAPs were formed, with others appointed in the 2016/17 period. The banana industry has two SIAPs: one focussed on marketing and one on R&D.

Each industry SIAP is made up of panellists from that industry – most of whom are levy-paying growers – with appointments made based on skills criteria and considering geographic and sectoral diversity.

Each SIAP also has a chair, as listed on the industry grower pages of Hort Innovation's website. The chair appointments selected by the Hort Innovation Board reflect a broad range of horticulture and agriculture experience, as well as solid foundations in former chairing roles.

Banana SIAP panellists – marketing

Name	Organisation	Location
Andrew Serra	Serra Farming	QLD
Chaise Pensini	Nutrano	NSW
Gary Fattore	Costa Group	NSW
Paul Inderbitzin	Kureen Farming	QLD
Peter Molenaar	P and A Molenaar	NSW
Daniel Mackay	Mackays Bananas	QLD

Banana SIAP panellists – R&D

Name	Organisation	Location
André Drenth	University of Queensland	QLD
Cameron Mackay	Mackays Bananas	QLD
David Tate	Dave's Bananas	NSW
Matt Abbott	Barama Investments	QLD
Stewart Lindsay	Queensland Department of Agriculture and Fisheries	QLD
Doug Phillips	Johnston River Produce	QLD
Stephen Spear	SN Spear	NSW
Mark Nucifora	Fiorito Bananas	QLD

SIAP meetings

Summary notes from each SIAP meeting will continue to be available on the banana grower page on Hort Innovation's website, at *www.horticulture.com.au/grower-focus/banana*. Below is a brief overview of the industry's meetings to date.

Marketing SIAP meetings

May 6, 2016

Held in the 2015/16 period in Brisbane, Queensland, this meeting focused on the induction of the marketing SIAP panellists, including governance, the Hort Innovation funding model, innovation process and operations, and the role of panel members.

There was a discussion of the marketing campaign for 2015/16, including delivery against KPIs, and data collected for the banana industry.

A presentation on the proposed campaign and budget for 2016/17 was followed by a robust discussion of sponsorship and industry event opportunities.

June 30, 2016

Held in the 2015/16 period via teleconference and webinar, this meeting included a presentation on the 2016/17 media plan, an update on PR activity and events, and discussion on parameters for sponsorship. The SIAP progressed talks on specific activities for engaging children and new families, and opportunities to align with public events.

November 1, 2016

Held in the 2016/17 period in Cairns, Queensland, this meeting included a facilitated workshop session on the development of the banana industry's Strategic Investment Plan (SIP), including the vision of success and further gaps on consumer insights to be addressed.

There was a 'deep dive' into digital media, data analysis and media results for the year to date, and the 'always on' social media campaign was worked through in detail. The panel also identified media scenarios that would be implemented, dependent on trigger points with the supply, for the first quarter of 2017.

November 7, 2016

Held in the 2016/17 period via teleconference, this meeting provided an additional update on the marketing plan for 2016/17 due to time constraints curtailing the previous meeting.

There was clarification of the media burst timing for 2017, and discussion on TV partnerships, opportunities for a retail partnership promotion for back to school, events such as the Summer Fruit Festival and Feast for the Senses, and support from ambassador Susie Burrell, Bounty Bags and the Dietitians Association of Australia.

R&D SIAP meetings

May 11, 2016

Held in the 2015/16 period in Cairns, Queensland, this meeting focused on providing an induction for the R&D SIAP members, including governance procedures, the role of the SIAP, the Hort Innovation funding model and the procurement and advisory process.

There were discussions of recent industry visits to The Philippines and Taiwan for Tropical Race 4, the banana bunchy top virus program, and the Rural R&D for Profit Program.

Priorities for future investment were discussed, particularly the continuation of the industry's Banana Plant Protection Program.

July 27, 2016

Held in the 2016/17 period via teleconference, this meeting was held as a follow-up to discuss proposals in four key areas: varieties, Quality Banana Approved Nurseries, diagnostics, and integrated pest and disease management.

There was robust discussion of the advantages and disadvantages of a program approach to these issues, versus individual projects.

The result was a determination that the approach is not mutually exclusive, with all Requests for Proposals to maintain strong linkages with grower input and outline how a collaborative approach and leadership position would be taken to meet industry needs.

October 31, 2016

Held in the 2016/17 period in Cairns, Queensland, this meeting included a workshop on the development of the industry's SIP, including the identification of a vision of success and key areas for investment.

The next iteration of the Banana Plant Protection Program was the focus of discussions on the R&D program, with exports, supply levels, grower adoption, varietal development, and best practice and innovation among the key points raised.

Retailers supported the strong 2015/16 campaign with point of sale displays to encourage purchase

Marketing report

Hort Innovation's 2015/16 marketing program for the banana industry focused on increasing consumption of bananas through innovative digital and traditional communications campaigns. The ultimate goal of activities was to drive consumption frequency, particularly around snacking, among people aged between 25 and 39, and with families with children aged 12 or under.

The 2015/16 period was the first year of the new three-year strategic marketing plan for the industry. Building on the 22-year-old Australian Bananas brand, a new advertising theme positioning bananas as 'Nature's non-stop energy snack' was developed, integrating the well-known previous advertising slogan while recognising the emerging need for 'purposeful energy'.

Advertising

The focus of 'Nature's non-stop energy snack' advertising activity was to build banana awareness across key times of the day. The strategy involved using media that moved with the consumer throughout the day, driving usage occasions. There were two bursts of media, one in September and one in March.

- **Television activity**. The biggest area of expenditure was in television media and ensured the target audience was reached quickly, efficiently and in large numbers. Advertisements were bought across the five mainland state capital cities and major regional TV markets in Australia. Combining both September and March activity, the advertisements reached 7,619,355 people aged between 25 and 54 at a rate of three or more times each.
- **Out of home advertising**. Advertising on transit (buses and trains), in shopping centres, in Fitness First gyms and on lift screens in offices drove awareness of the new campaign, reminding people to buy bananas and providing a 'path to purchase'. This phase of the campaign reached 10,977,333 people aged between 25 and 54 an average of five-and-a-half times during the two bursts.
- **Digital/mobile advertising**. Digital display advertising (eg. ads on websites on desktop computers) built awareness of the new campaign and provided top-of-mind triggers, while mobile phone advertising provided time-targeted content at key snacking opportunities including at the point of purchase. This activity achieved almost 55 million impressions, with the campaign achieving more than $119,000 worth of over-delivery of digital impressions at no extra charge.
- **Social media advertising**. Audience reach was extended throughout the year via Facebook and Instagram, and created frequent but targeted conversations to place Australian Bananas at the top of consumers' minds at key snacking times. Between July 2015 and March 2016 an average of 1,139,368 people saw paid Australian Bananas social media content each month. Organic social media reached an average of 186,784 people a month in that period and social engagements such as comments and shares reached 2,768,659.

Website

A new device-responsive version of the consumer website, *www.australianbananas.com.au*, was launched in March to serve as the digital hub for recipes and banana facts, as well as health and nutrition information. It also contains easily downloadable educational content for students and media.

Ten new recipes were developed focussing on classics such as banana bread, cupcakes, pancakes and the good, old-fashioned banana milkshake. The website ranks number one in Google for the search term 'bananas'.

Events

Australian Bananas supported 36 events throughout the 2015/16 year by suppling fresh bananas in exchange for sampling and promotions at events. These events promoted bananas' health benefits to the target market on a national stage.

Australian Bananas financially supported eight events in growing communities, including Feast of the Senses in Innisfail, Tully and District Show Society, Innisfail and District Show Society and Tweed Foodie Fest.

It also supported events including Atherton Bike Fest, Coconuts Outrigger Canoe Club and the Murwillumbah Show by supplying yellow banana merchandise including T-shirts, water bottles, caps, temporary tattoos, stubby coolers and pencil cases.

School activities

Australian Bananas supported a range of school-related events and activities in 2015/16, including the Melbourne Market Authority MarketFresh Schools Program, which educated more than 13,000 students on health and nutrition, with the students sampling fresh bananas.

Also supported was the School Breakfast Program and Food Sensations nutrition education and cooking program run by Foodbank WA, where almost 2000 children sampled bananas and received an Australian Bananas pencil case.

The *2016 Healthy Eating Guide* was also distributed to 5500 primary schools nationally in February. This eating guide is requested by schools and is usually kept in canteens, classrooms or halls for the year. Australian Bananas had an A4 ad in the guide and nutrition tips, supplied by dietitian Glenn Cardwell, focussed at primary school children.

Further, Australian Bananas' advertisement was featured in a Year 7 English workbook in a unit on 'visual persuasion' for students studying advertising. Released in June 2016, the book is available nationally.

Banana ambassador

Melbourne Storm rugby league player Billy Slater continued as ambassador for Australian Bananas during 2015/16, posting about bananas to his large social media following. He also engaged the wider public through media interviews secured to promote partnerships with Ride2Work, Gatorade Triathlon Series and Great Ocean Road Marathon.

Media engagement

An integrated campaign was developed with a focus on generating buzz around bananas for babies, toddlers and mums.

This involved creating four fun serving suggestions, working with dietitian Glenn Cardwell to develop a media release featuring his top tips around the health benefits of bananas for pregnant and new mums, babies and toddlers.

This resulted in 123 positive media and social hits, with some highlights including national print coverage in *New Idea*, *Mother & Baby* magazine and the *Daily Telegraph* newspaper's Kidspot.

Recipes also featured in online outlets such as Westfield e-newsletters, NineMSN Food, Lifestyle Food, Motherpedia and Aldi.

Meanwhile health tips were featured in online outlets including high profile nutritionist Dr Joanna McMillan's blog, Motherpedia and Exclusively Mum, and there were comprehensive sponsored-post articles with The Bub Hub, Mum's Lounge and Stay at Home Mum.

Families with children aged 12 or under were a key target of the marketing campaign

Improving the early response to disease incursions was an R&D priority

R&D project list 2015/16

R&D project list 2015/16

PROJECTS CONTRACTED

BA14012	Coordination of banana industry R&D (Panama TR4)
BA15002	Australian banana industry communications review
BA15003	Integrated management of Yellow Sigatoka
BA15004	Horticulture Nuffield Scholarships 2016/2017/2018
BA15005	The Australian banana industry communications program
BA15006	National banana bunchy top virus program – phase 3 – Qld
MT15032	Monitoring and evaluation framework for the industry Strategic Investment Plan
MT15024	Fruit tracking study

PROJECTS IN PROGRESS

BA10020	Banana Plant Protection Program
BA13002	Scoping herbicide impacts on banana product ion and soil health
BA13003	Communications project for the banana industry
BA13004	National banana development and extension project
BA13011	The cause and management of crown rot of banana
BA13023	Banana strategic industry development
BA14002	Horticulture Nuffield Scholarships 2014/2015
BA14011	National banana bunchy top virus program – phase 3
BA14013	Fusarium wilt Tropical Race 4 – biosecurity and sustainable solutions
MT12001	SPLAT Cue-Lure based management of Queensland fruit fly

FINAL REPORTS ISSUED

BA11027	Banana industry extension and R&D management
BA12006	Banana bunchy top virus – phase 2
BA12007	Integrated management of Yellow Sigatoka and other banana diseases in Far North Qld
BA13019	Project extension: carton management in the banana industry
BA15002	Australian banana industry communications review

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

BA13025	New South Wales banana industry development officer
BA13702	11th Banana Industry Congress, June 2015
BA14014	Fusarium wilt Tropical Race 4 research program
MT13061	Understanding the purchase behaviour of fresh produce consumers

During the 2015/16 financial year, all Australian levy paying horticulture industries also contributed to across-industry projects addressing issues that affect horticulture as a whole.

Levy funds were invested to build industry capacity, productivity and profitability

R&D report

Take a closer look at some of Hort Innovation's key projects for the banana industry below. To keep up to date with the latest information on new and ongoing R&D for the industry, visit *www.horticulture.com.au/grower-focus/banana* and keep an eye out for Hort Innovation's quarterly Hortlink publication, also available from the website.

Inspectors were employed as part of *Banana bunchy top virus – Phase 2* (BA12006)

Banana bunchy top virus – Phase 2 (BA12006)

Banana bunchy top virus (BBTV) is the most serious viral disease of bananas.

Badly affected plants will not produce fruit and, if left unchecked, a plantation will become completely infected through the movement of infected banana aphids, which carry the virus.

In Australia, the disease is confined to South East Queensland and Northern New South Wales, meaning that more than 95 per cent of the industry (Far North Queensland, the Bundaberg district, Southern New South Wales zone, Western Australia and Northern Territory) is free of the disease.

This project was conducted from July 1, 2012 to June 30, 2015, as the second phase in a 10-year plan aimed at eradicating BBTV from Australia. Its aim was to preserve area and subzone freedom, eradicate the disease from other subzones and contain and suppress the disease in remaining subzones.

While there is no resistance to BBTV in any commercially acceptable cultivars, the life cycle of the disease is well understood and early detection and removal in commercial plantations is an effective means of control. But because early detection is difficult, trained professional inspectors were deployed under this project to detect and destroy infected plants properly.

Project inspectors followed a planned surveillance strategy inspecting and categorising every plantation within the BBTV infection zone at a frequency determined by the level of infection within plantations.

During the life of the project, the data showed a trend towards plantations in New South Wales moving from the 'infected' categories to 'free' and 'provisionally free', however five plantations returned to the 'high infection' category.

The project also funded research to determine how long the virus can remain in the plant before symptoms develop (latency) and developed improved destruction methods for infected plants and the aphid vector during cooler slower growing conditions – this is subject to ongoing field investigations and glasshouse trials.

National banana bunchy top virus program – Phase 3 (BA14011) and National banana bunchy top virus program – Phase 3 – Qld (BA15006)

Continuing the National Banana Bunchy Top Virus Program after project BA12006, Phase 3 began in 2015 to protect uninfested areas, remove infestation from farms and protect them from reinfestation, and to reduce the disease range.

Work commenced through *National banana bunchy top virus program – Phase 3* (BA14011), but to deal with the different legislative and logistical environments in Queensland and New South Wales, the project was subsequently divided into *National Banana Bunchy Top Virus Program – Phase 3 – QLD* (BA15006) and *National Banana Bunchy Top Virus Program – Phase 3 – NSW* (BA15007). The latter was contracted in the 2016/17 financial period.

The essential strategy is a risk-based surveillance and plant rogueing program, along with awareness activities. This is being enhanced with a cloud-based Geographic Information System (GIS) that will simplify mapping, planning, recording and reporting. At the time of publication, a program review was being undertaken to evaluate the success of the program to date, its current effectiveness and future investment needs.

Control of fungal diseases was a focus of *Integrated management of Yellow Sigatoka & other banana diseases in Far North Qld* (BA12007)

Integrated management of Yellow Sigatoka & other banana diseases in Far North Qld (BA12007)

Yellow Sigatoka leaf spot and leaf speckle are endemic fungal diseases of bananas in all major production areas except Western Australia.

Maintaining effective control of these diseases is vital to reduce their impact on cost of production and because of their potential to mask outbreaks of the similar looking but far more destructive exotic disease Black Sigatoka.

Both Yellow Sigatoka and leaf speckle are prescribed diseases, meaning growers are required by state government regulations to keep leaf disease levels below five per cent. Plant health authorities in the respective states have a responsibility to ensure compliance with regulatory requirements but in recent years, their capacity to undertake the necessary surveillance to ensure compliance has significantly diminished.

The major aim of this project was to provide a Yellow Sigatoka liaison officer (YSLO) to assist growers in North Queensland achieve compliance on a voluntary basis.

A 98 per cent compliance with relevant legislation was achieved through a voluntary industry approach as a result the YSLO undertaking leaf inspections, educating growers about leaf diseases, and sharing information between growers, other stakeholders, government and university research staff.

The second aim of the project was to support growers in best-practice disease management by providing banana biosecurity extension advice on any other diseases.

The YSLO's role changed as a result of the Panama TR4 incursion detected in March 2015, requiring elevated farm biosecurity measures which were was supported by the YSLO.

Integrated management of Yellow Sigatoka (BA15003)

This project supports the work of the Yellow Sigatoka liaison officer of the Australian Banana Growers' Council. This officer's Queensland-based role includes educating growers on Yellow Sigatoka (leaf spot) symptoms and assisting growers to keep levels of disease on their plantations below prescribed levels.

The officer undertakes leaf spot inspections and alerts Biosecurity Queensland when any other suspected banana diseases are found. The officer also provides information to growers, researchers and supply-chain businesses to improve integrated Sigatoka control.

Banana Plant Protection Program (BA10020)

This project brings together a range of research activities and organisations in a program approach for a longer-term focus on banana plant health. There are a number of sub-projects, including:

- Resistant varieties and consumer choice, which has a focus on the evaluation of new pathogen-tested planting material for disease and pest resistance traits
- Safeguarding production and markets, which has the aim of improving capacity for prevention, detection, identification and effective, coordinated early responses to pest incursions. It also maintains and provides safe access to banana germplasm, and facilitates access to new varieties
- Sustainable production systems, which focuses on improving productivity through provision of cost-effective and sustainable management options for priority pests and diseases
- Building science and communication, which supports the development of networked industry-science capacity and strong communication.

SPLAT Cue-Lure based management of Queensland fruit fly (MT12001)

This project aimed to investigate the efficacy of a type of pheromone technology to assist in controlling Queensland fruit fly (Qfly) and to help protect domestic and international fruit markets.

Early results from this project found that the Specialised Pheromone Lure Application Technology (SPLAT) approach is as effective as current controls in managing Qfly and worth further investigation.

This form of control has appeal as it has a reduced-risk insecticide that poses an even lower risk to humans and the environment and does not require labour-intensive handling and placement.

Fusarium wilt Tropical Race 4 – biosecurity and sustainable solutions (BA14013)

This two-year project has a focus on biosecurity strategies around Fusarium wilt Tropical Race 4, a damaging disease of Cavendish bananas. It will provide new science, information and practices to help growers avoid the fungus, contain its spread if it does occur, and manage an outbreak safely.

Its five broad aims are to:

- Improve on-farm biosecurity practices to reduce movement of inoculum and to develop medium and long-term solutions for monitoring, identifying infection, interventions and further management
- Improve access to new disease-resistant/tolerant cultivars
- Develop resilient disease-management options to minimise plant stress
- Update banana biosecurity protocols
- Facilitate adoption of research findings.

Coordination of banana industry R&D (Panama TR4) (BA14012)

The objective of this project is to coordinate the industry's efforts, and build the knowledge and capacity, to manage and contain the Panama Tropical Race 4 (Panama TR4) fungal disease, first identified in Queensland in March 2015. The Australian Banana Growers' Council's Dr Rosie Godwin is employed under this project as the banana industry R&D manager, to ensure R&D on Panama TR4 has tangible on-farm outcomes for banana growers.

Scoping herbicide impacts on banana production and soil health (BA13002)

This project aims to understand how registered herbicides for the banana industry affect soil health, and how this relates to banana productivity. In the 2016/17 period so far, one of the tentative key findings has been that single applications of herbicides used at manufacturer recommended rates had only minimal impact on soil biology. Some herbicides did temporarily affect some soil functions (particularly those involving soil fungi) around 30 days after application, but these functions were restored by 60 days after application. Further soil analysis is required to confirm these observations.

Monitoring and evaluation framework for the industry Strategic Investment Plan (MT15032)

Among other things, this project helps support the monitoring and evaluation of individual industry Strategic Investment Plans (SIPs). SIPs are the roadmaps that help ensure levy investment decisions align with individual industry priorities. They are used to guide decision-making in levy spending, and represent a balanced view of stakeholders in each industry.

Horticulture Nuffield Scholarships 2014/2015 (BA14002) and Horticulture Nuffield Scholarships 2016/2017/2018 (BA15004)

Nuffield Scholarships provide an opportunity for scholars to travel overseas on a research scholarship relating to their industry/business. They involve a 16-week program consisting of both group and individual travel. The objective is to increase primary production knowledge, management skills and techniques generally. *Horticulture Nuffield Scholarships 2014/2015* (BA14002) supported one scholar in each of 2014 and 2015.

Horticulture Nuffield Scholarships (BA15004) provided funding to support a new Nuffield Scholar in the banana industry for 2016 and will fund two further scholarships in 2017 and 2018.

The cause and management of crown rot of banana (BA13011)

This project aims to develop a greater understanding of the factors contributing to crown end rot of banana, which has re-emerged as an important problem in the supply chain. It seeks to improve pre- and post-harvest disease control and will produce written guides and instructional videos on integrated crown rot disease management that will result in reduced losses due to this disease.

National banana development and extension project (BA13004)

This project is tasked with delivering the outcomes of industry-funded R&D projects back to the banana industry. Activities under the project include industry roadshows, field walks/workshops, grower training activities and other direct engagement with growers and supply chain members. Establishment and use of demonstration sites, production of written materials for industry publications and other resources, such as video content showing R&D outcomes, are also in development.

Banana strategic industry development (BA13023)

This project supports the employment of an industry strategy manager (ISM) to address critical issues for banana growers, with an evolved focus on biosecurity and environmental stewardship in the industry. The ISM develops and collaborates with relevant projects to benefit growers and the industry at large, collates and shares information with growers, and identifies and builds relationships with other stakeholders.

Banana industry extension and R&D management (BA11027)

Under this project, Dr Jay Anderson was appointed as the R&D manager for the banana industry in July 2012. The position had the three main roles of providing project coordination, assisting with project development, and providing technical advice. The R&D manager worked closely with the then Horticulture Australia Limited.

Projects that were progressed during the period of the project included *National banana development and extension project* (BA13004), *Banana production and marketing information system* (BA12016) and others.

The project *Capacity building in bananas* (BA12703) was also developed, resulting in two study tours for growers - one on biosecurity to China and The Philippines, and one on biosecurity and fruit quality to Central America. During the tours growers networked and took away learnings, which were shared with the industry through presentations at meetings and a written report.

In regards to technical advice, the R&D manager (a trained plant pathologist) provided information on pests and diseases to industry, reported on agrichemical issues, and provided technical and industry information to state-based biosecurity agencies for the review and development of regulations. The manager also contributed to the development of emergency plant pest (EPP) response plans. A significant portion of the manager's time was spent sourcing and providing technical advice on EPPs during the banana freckle incursions in the Northern Territory in 2013 and 2014, and the Panama Tropical Race 4 incursion in North Queensland in 2015.

Throughout the life of the project, the R&D manager provided information directly with growers, attending and presenting at grower meetings, presenting at roadshows facilitated by extension projects, and contributing written content to industry publications and for other communication channels. The R&D manager was also available for consultation in person and by phone.

Communications project for the banana industry (BA13003) and The Australian banana industry communications program (BA15005)

Communications project for the banana industry (BA13003) was, and new project *The Australian banana industry communication program* (BA15005) now is, responsible for keeping Australian banana growers and other industry stakeholders informed about key industry issues and the latest R&D updates. Among other aims, the ultimate goal of both projects has been, and will be, to assist growers in making production decisions, and to build industry capacity, productivity and profitability.

Communications project for the banana industry (BA13003), began in March 2014 and concluded at the end of June 2016. It included:

- Three editions of *Australian Bananas* magazine each year, with back-issues at *www.abgc.org.au/pub-type/magazine*
- The hard-copy *Australian Banana News* newsletter, during the first half of the project (the last edition was in August 2015, and back-issues are available at *www.abgc.org.au/pub-type/national-newsletter*)
- Industry e-bulletins, sent at least twice per month but delivered more frequently as needed, such as during the outbreak of Panama Tropical Race 4 (Panama TR4) during the project period. The e-bulletins continue to be available at *www.abgc.org.au/pub-type/growers-e-bulletin*
- Regular content updates to the *www.abgc.org.au* website
- SMS notifications (and some phone calls) to growers for urgent industry updates
- Media relations services, with the project averaging two media releases per month to journalists and editors
- Social media (Facebook), introduced in direct response to the need for updates post-Panama TR4 outbreak
- Grower-focused video content, available through the Australian Banana Growers' Council YouTube page, *www.youtube.com/channel/UCnK75qFFcevlurhPJWGcV8A*.

Minimum and optimum handling specifications were developed as part of ***Project extension: carton management in the banana industry*** **(BA13019)**

Hundreds of photos were posted on the ABGC website from the ***11th Banana Industry Congress June 2015*** **(BA13702)**

Project extension: carton management in the banana industry (BA13019)

This project was established to deliver the results of previous work into carton configurations to industry. The ultimate goals were to reduce fruit quality defects, help improve fruit presentation on retail shelves and maximise cost efficiencies through the banana supply chain – ultimately supporting an increase in banana sales.

The original project, *Scoping study to develop a standardised industry banana carton* (BA13015), sought to develop minimum and optimum specifications for cartons taking into consideration construction and form, secondary packaging and packing methodology.

The four main carton configurations currently used in the Australian market were assessed, namely the 13kg two-piece carton, 15kg two-piece carton, 13kg one-piece carton and 15kg one-piece carton, with the aim to identify the most cost effective configuration.

The project confirmed that the 15kg one-piece carton was the most cost effective means for transporting bananas whilst minimising fruit damage.

It is estimated that fruit waste at retail stores can be reduced from the current levels of five to eight per cent down to two to five per cent. If waste can be reduced by 2.5 per cent, then this presents industry with a potential annual saving of $22.79 million based upon FY2014-15 Nielsen data, and the opportunity for this volume of fruit to transfer into additional retail sales.

The outputs delivered by this project include minimum and optimum specifications for use by the whole banana industry in Australia, as well as best-practice guidelines for the key supply chain stages.

If these outputs are implemented, it could lead to an improvement in the quality of fruit in retail stores and an increase in consumer satisfaction, in turn increasing demand.

11th Banana Industry Congress, June 2015 (BA13702)

Hort Innovation was an official partner of the biennial Banana Industry Congress held at Melbourne's Crown Promenade from June 17 to 20, 2015.

A new format featured a more interactive program, a wholesale market tour and large retail tour, fewer speakers but more time for discussion, a partners' program, and was the first Congress to be held in a capital city.

The presence of wholesale and retail fresh food markets was a major reason why Melbourne was chosen as the Congress location.

The principle purpose of the Congress was to stimulate discussion and learning for delegates and it achieved these objectives.

A total of 458 delegates, sponsors and exhibitors attended the Congress, with the number of growers and total delegates both records in the recent history of the Banana Congress.

The theme for Congress was 'Change. Challenge. Opportunity.' to reflect that the critical factor in the banana industry's development is the ability of its people to assess and analyse the current and upcoming issues and events.

The theme was particularly relevant given the announcement on March 4, 2015 that Panama Tropical Race 4 (TR4) had been detected in the banana industry's major growing region of North Queensland. TR4 is the most significant emergency plant pest of bananas world-wide, and the industry in North Queensland is changing as a result of the TR4 incursion.

The Congress enhanced understanding of Panama TR4, with a specific workshop held on the disease led by two world-renowned TR4 scientists.

It also helped increased knowledge by growers and others in the supply chain of levy-funded R&D and marketing programs.

Full details of all completed research can be found in project final reports, which are available to order at *www.horticulture.com.au/about/resources-publications-final-reports* (final reports are free to Australian horticulture levy payers, registered Hort Innovation members and industry representative bodies).

Financial summary

Financial operating statement 2015/16

	MARKETING ($)	R&D ($)	TOTAL ($)
	2015/16 July – June	2015/16 July – June	2015/16 July – June
Opening balance	**1,540,509**	**1,237,476**	**2,777,986**
Levies from growers (net of collection costs)	4,516,076	2,121,071	6,637,147
Commonwealth funds	-	1,881,819	1,881,819
Other income	40,874	40,762	81,636
Total income	**4,556,951**	**4,043,651**	**8,600,602**
Project funding	4,802,952	3,296,024	8,098,976
Consultation with and advice from growers	16,762	34,629	51,391
Service delivery	626,563	432,985	1,059,548
Total matched expenditure	**5,446,277**	**3,763,638**	**9,209,915**
Levy contribution to across industry activity	-	84,109	84,109
Closing balance	**651,183**	**1,433,380**	**2,084,563**
Levy collection costs	35,358	16,639	51,998
Additional expenditure through VC	**-**	**384,029**	**384,029**

Minor use permits

Pesticides are a valuable tool for the banana industry. While the use of pesticides is being modified through the increasing uptake of integrated pest management, there is still a need for the strategic use of specific pesticides.

Pesticide companies submit use patterns for registration to the Australian Pesticides and Veterinary Medicines Authority (APVMA) APVMA and the banana industry is generally provided with significant registrations because of its major crop status. Minor use permits are required in the banana industry where the market size is considered too small and therefore not considered large enough to generate adequate commercial returns for the research and development investment by the pesticide companies.

Below is a list of all current minor use permits for the banana industry, as of November 28, 2016.

Permit ID	Permit description (pesticide/crop/pest)	Date issued	Expiry date	Permit holder
PER9409 v2*	Sulfur Dust / Banana Bunches / Mites	01-Oct-06	30-Sep-19	ABGC
PER14850 v3	Glyphosate, Imidacloprid & Paraffinic Oil / Bananas / Destruction of Banana plants and control of susceptible disease vectors	01-Oct-14	30-Sep-19	ABGC
PER13158 v8	Dimethoate / Specified Citrus, Tropical Fruit commodities and Hot chilli peppers (post-harvest) / Various Fruit Fly species	6-Oct-11	5-Oct-17	Growcom
PER14235	Rattoff Zinc Phosphine Bait Sachet / Banana Plantations / Roof or Black Rat and Mice	1-Jul-13	30-Jun-23	ABGC
PER14239	Amicide/ Cavendish Bananas/ Destruction of Banana Suckers	01-Jul-13	30-Jun-23	ABGC
PER14240 v2	Chlorpyrifos / Banana / Sugarcane bud moth, Banana scab moth, Banana rust thrips, mealy bugs and caterpillars	28-Jun-13	30-Sep-20	ABGC
PER81199	Mancozeb (Tatodust) / Banana Bunches / Banana Fruit Speckle Disease	27-Oct-15	31-Mar-21	ABGC
PER12450 v6*	Trichlorfon / Specified Fruit crops / Fruit fly	06-Oct-11	31-Jan-21	Growcom
PER14966	Ethephon / Bananas / Pseudostem injection for crop timing management	23-Dec-14	31-Mar-18	ABGC
PER14237 v2	Diesel Distillate / Bananas / Removal of unwanted suckers (NSW & QLD)	1-Dec-13	30-Sep-23	ABGC

* During the 2015/16 financial year, renewals for these flagged permits were prepared and submitted to the APVMA.

All efforts have been made to provide the most current, complete and accurate information on these permits, however it's recommended that you confirm all details on the APVMA website, portal.apvma.gov.au/permits. Details of the conditions of use associated with these permits can also be found on the APVMA site.

Minor use R&D projects active in the 2015/16 period

BA12015	Minor use permits for the banana industry

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