

A close-up photograph of raspberries and blackberries on a branch with green leaves. The raspberries are in various stages of ripeness, from green to yellow to red. The blackberries are dark and ripe. The background is a soft-focus green.

# Raspberry and Blackberry Fund

Annual Report 2018/19

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**The projects in this report have been funded by Hort Innovation using sources including the raspberry and blackberry levy, Australian Government contributions and, in some instances, co-contributions from a variety of sources.**



## Just some of the things your fund delivered in 2018/19:

- ✓ **The berry Harvest to Home dashboards** providing regular consumer behavioural data and insight reporting, at [www.harvesttohome.net.au](http://www.harvesttohome.net.au)
- ✓ Recommendations for reducing **red drupelet reversion** in blackberries (p7)
- ✓ The identification of options for **managing coir waste** from hydroponic berry production (p8)
- ✓ A host of **new and ongoing biosecurity work**, including projects related to spotted wing drosophila (from p11)
- ✓ An impactful, multi-pronged **domestic marketing campaign** (p17)
- ✓ New **final research reports and grower resources**, with 15+ now available from [www.horticulture.com.au/raspberry-and-blackberry](http://www.horticulture.com.au/raspberry-and-blackberry)



### 2018/19 SNAPSHOT

**\$391**  
**THOUSAND**  
INVESTED  
IN R&D

**\$124**  
**THOUSAND**  
INVESTED IN  
MARKETING

**20+**  
ACTIVE R&D  
INVESTMENTS



## Welcome

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Hort Innovation is the grower-owned, not-for-profit research and development corporation (RDC) for Australia's horticulture sector. It's our job to work with industry to invest the raspberry and blackberry R&D and marketing levies, as well as Australian Government contributions, into key initiatives for growers.

The 2018/19 financial year was another great year of growing better, together – with strong investments, closer connections and critical collaborations being forged.

There was close to \$391,000 invested into R&D through the Hort Innovation Raspberry and Blackberry Fund across the year, to support the industry in being as productive and profitable as possible. This included the establishment of 10 new investments, including work allowing the raspberry and blackberry industry to join forces with other horticulture industries for maximum efficiency and impact across shared issues and opportunities.

Meanwhile in marketing, the Hort Innovation Raspberry and Blackberry Fund saw some \$124,000 invested in 2018/19 into a range of activities to raise the profile and consumption of the Australian berries.

Read on to learn more about all of this work. And remember to take advantage of the Hort Innovation website at [www.horticulture.com.au/raspberry-and-blackberry](http://www.horticulture.com.au/raspberry-and-blackberry), where you can search and find information relating to investments, past and present, at any time. The new site and its Raspberry and Blackberry Fund section were launched in 2018/19.

Finally, during the year there were many opportunities for Hort Innovation to connect with you, the growers. A big thank you in particular to everyone who came to our early-2019 regional roadshows to feed into the development of the new Hort Innovation Strategy 2019-2023 (read more at [www.horticulture.com.au/strategy-2019-2023](http://www.horticulture.com.au/strategy-2019-2023)).

You can reach out to us at any time to learn more about our work, to submit ideas for investments, or to simply have a chat about your industry. You'll find details of specific staff at [www.horticulture.com.au/get-in-touch](http://www.horticulture.com.au/get-in-touch), or can otherwise email [communications@horticulture.com.au](mailto:communications@horticulture.com.au) or call our general line on 02 8295 2300.



## Additional value in the year

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During 2018/19, Hort Innovation was proud to deliver extra value to the raspberry and blackberry industry, outside of levy-funded initiatives within the Raspberry and Blackberry Fund. Here's a quick look at just some examples.

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### The new Hort Innovation website, with dedicated Raspberry and Blackberry Fund section

You can now visit [www.horticulture.com.au/raspberry-and-blackberry](http://www.horticulture.com.au/raspberry-and-blackberry) to quickly search and find investment information and updates, project resources, and growing tips and advice from Hort Innovation's R&D work. You can also download full final research reports direct from the site, access key contact information, share your ideas and feedback, and so much more.

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### The Australian Horticulture Statistics Handbook

Each year Hort Innovation delivers an *Australian Horticulture Statistics Handbook* packed with horticulture statistical information and analysis for use by specific industries and the wider sector. The handbook combines all available data on production, international trade, processing volumes and fresh market distribution for some 75 categories. The 2017/18 edition, released in early 2019, is available from [www.horticulture.com.au/horticulture-statistics-handbook](http://www.horticulture.com.au/horticulture-statistics-handbook).

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### Hort Frontiers projects

With seven investment areas, Hort Innovation's Hort Frontiers strategic partnership initiative is about collaborative, cross-industry work to address longer-term, complex issues and opportunities identified as critical for the future of Australian horticulture. While industry levies can be invested into Hort Frontiers projects upon the advice of the relevant Strategic Investment Advisory Panels, the bulk of funding comes from broad-reaching funding relationships that are secured by Hort Innovation, plus support from the Australian Government. Learn about all of the projects and what they're delivering for you at [www.horticulture.com.au/hort-frontiers](http://www.horticulture.com.au/hort-frontiers).

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### Grant funding

In 2018/19, Hort Innovation delivered \$6.7 million worth of investments involving grant funding across the horticulture sector. To do so, we applied for and secured a range of competitive grants on behalf of industry, including through the Australian Government's Rural R&D for Profit program, Improved Access to AgVet Chemicals initiative, and Agricultural Competitiveness White Paper. With projects across everything from biosecurity to pollination, there's plenty in there to directly and indirectly benefit the raspberry and blackberry industry.

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## Making investments in 2018/19

Hort Innovation is dedicated to making the right investments at the right time and in the right areas, in line with identified priorities for the industry.

### Where the funding comes from

The raspberry and blackberry industry's grower-raised statutory R&D and marketing levies are collected by the Australian Government and entrusted to Hort Innovation as the RDC for Australian horticulture. It's then our responsibility to work with the industry to invest these levies – together with Australian Government contributions in the case of R&D – into strategic initiatives for the benefit of growers.

Additional funding streams can also come into play, such as co-investment dollars from sources including project partners, and grant funding that Hort Innovation secures on behalf of industry.

### How decisions are made

Investment decisions in the Hort Innovation Raspberry and Blackberry Fund are guided by the industry's Strategic Investment Plan (SIP). This document was developed through close consultation with growers and other industry stakeholders, and outlines specific investment priorities, strategies and themes. An at-a-glance version can be found at [www.bit.ly/rubus-plan](http://www.bit.ly/rubus-plan), or find the full version at [www.horticulture.com.au/raspberry-and-blackberry](http://www.horticulture.com.au/raspberry-and-blackberry).

The SIP is currently used like a 'roadmap' by the raspberry and blackberry Strategic Investment Advisory Panel (SIAP) – a panel made up of growers and other industry representatives that's tasked with providing advice to Hort Innovation on potential levy investments.

### Turning ideas into investments

Great investments start with great ideas, and Hort Innovation encourages all growers and other industry participants to share their thoughts and suggestions for the work they want to see. Ideas can be submitted any time via Hort Innovation's investment idea form at [www.bit.ly/concept-form](http://www.bit.ly/concept-form).

Ideas that are selected for investment are worked into project proposals by Hort Innovation. These are then made public for potential delivery partners to submit responses. Current opportunities are always listed at [www.horticulture.com.au/delivery-partners](http://www.horticulture.com.au/delivery-partners).

Responses are assessed, often with the assistance of industry, and the best delivery partner for the work is chosen. A contract is then issued and the work begins.

### Keeping track of investments

All investments in the Hort Innovation Raspberry and Blackberry Fund are detailed on the 'Your investments' page at [www.horticulture.com.au/raspberry-and-blackberry](http://www.horticulture.com.au/raspberry-and-blackberry).

We also send news and alerts to Hort Innovation members and contacts – if you haven't already, you can sign up for free at [www.horticulture.com.au/sign-up](http://www.horticulture.com.au/sign-up).



### New investment analysis

You can now clearly see how investments in the Hort Innovation Raspberry and Blackberry Fund align to the industry's SIP, with new and interactive investment analysis information available from [www.bit.ly/raspberry-and-blackberry-investment](http://www.bit.ly/raspberry-and-blackberry-investment). The analysis currently shows the allocation of funding against each of the raspberry and blackberry SIP outcomes from the start of the SIP (2016/17) to the end of 2018/19, and gives an indication of the projects that are aligned to each outcome.

## R&D project list 2018/19

NEW INVESTMENTS IN 2018/19		ONGOING INVESTMENTS IN 2018/19	
RB18000	Raspberry and blackberry consumer insights research*	RB16000	Rubus industry minor use program
MT17006	Xylella coordinator	RB17000	Integrated pest management of redberry mite, <i>Acalitus essigi</i> , on blackberries
MT17006	Improving preparedness of the Australian horticultural sector to the threat potentially posed by <i>Xylella fastidiosa</i> (a severe biosecurity risk)	AM17001	Developing a national systems approach for meeting bio-security requirements to access key Asian markets
MT18004	Review of the biosecurity plan for the berry sector	MT16005	Enhanced National Bee Pest Surveillance Program
MT18005	Improving plant industry access to new genetics through faster and more accurate diagnostics using next generation sequencing	MT17005	Improving the biosecurity preparedness of Australian horticulture for the exotic spotted wing drosophila ( <i>Drosophila suzukii</i> )
MT18010	Developing IPM-compatible controls for spotted winged drosophila ( <i>Drosophila suzukii</i> )	MT17015	Consumer behavioural and retail data for fresh produce
MT18010	Exploring IPM-compatible methods for spotted winged drosophila in berry crops	ST16008	AgVet collaborative forum
MT18011	Ex-post impact assessment^	ST17000	Generation of data for pesticide applications in horticulture crops 2018
MT18018	Generation of data for pesticide permit applications in horticulture crops 2019/20		
ST18001	Generation of data for pesticide applications in horticulture crops	INVESTMENTS COMPLETED IN 2018/19	
		RB14003	Building resilience to drupelet disorder in rubus
		MT17001	Berry export strategy
		MT17016	Coir waste management for hydroponic berries

\* This investment both began and ended in 2018/19

^ This multi-industry project was a key monitoring and evaluation investment during 2018/19 – we encourage you to find the full details at [www.horticulture.com.au/mt18011](http://www.horticulture.com.au/mt18011)

During the 2018/19 financial year, all levy paying horticulture industries also contributed to a small selection of across-industry projects addressing issues that affect horticulture as a whole. Details of all investments that Hort Innovation manages can be found at [www.horticulture.com.au](http://www.horticulture.com.au).



**But wait, there's more. To see what Hort Innovation delivered across the entire horticulture sector in 2018/19, download the full Hort Innovation Annual Report 2018/19 from [www.horticulture.com.au/annual-report-portal](http://www.horticulture.com.au/annual-report-portal).**

## R&D report

Take a closer look at some of the key investments in the Hort Innovation Raspberry and Blackberry Fund during 2018/19. Any resources from these and other levy-funded projects – such as fact sheets, guides and more – are published on your grower page at [www.horticulture.com.au/raspberry-and-blackberry](http://www.horticulture.com.au/raspberry-and-blackberry) as they become available.

### *Building resilience to drupelet disorder in rubus (RB14003)*

NOW COMPLETE

**Key research provider:** Tasmanian Institute of Agriculture

This project investigated the causes, mechanisms and potential management strategies for red drupelet reversion in blackberries. Red drupelet reversion is a disorder of blackberries where drupelets that are black revert to red, usually after the fruit has been harvested and placed into cool storage. This reduces both the visual and physical quality of the fruit.

The investment ran from 2015 to 2019 and involved laboratory trials that investigated the underlying physical and chemical changes associated with the disorder, and then field trials that assessed the effects of nitrogen application rate, harvest technique, environmental conditions at harvest, and postharvest storage conditions on the incidence and severity of the reversion.

From the laboratory trials, the project found that colour change is caused by a decreased concentration of anthocyanin (the compound that pigments food with

red/purple/blue colouring), reduced cellular integrity, reduced drupelet firmness and lower pH levels. The researchers found that susceptibility to the reversion disorder is influenced by genetics, with evidence that cultivar firmness, cell wall formation and susceptibility to postharvest weight loss can influence incidence and severity of reversion.

The field trials then confirmed that stresses, such as warm temperatures during harvest, are linked to high rates of red drupelet reversion, being related to an increase in the mechanical injuries incurred during harvest and handling. The project team also found that an increase in drupelet reversion can also be caused by excessively high nitrogen application rates and rapid temperature changes in postharvest storage.

The project made the following recommendations for growers:

- » Reduce double and rough handling of fruit while harvesting. If practical, fruit should be harvested directly into punnets and care should be taken during transport to minimise damage from vibrations.
- » Limit handling of blackberries at higher temperatures, as temperatures exceeding 23°C during handling and transport will significantly increase the incidence and severity of red drupelet disorder. If practical, fruit should be harvested during the early morning or evening, and harvest avoided completely on extremely warm days if possible.
- » Reducing mechanical injury to fruit through punnet design and postharvest technologies should be a priority. Unnecessary fruit-on-fruit contact could be reduced by using punnets that only contain one layer or fruit.
- » Once cooled, fruit should remain cool to reduce susceptibility.

For the industry as a whole, the researchers suggested that development of varieties with low susceptibility to red drupelet disorder should be pursued as skin firmness, texture and water loss are correlated with susceptibility to the disorder.

Full details can be found in the project's final research report, which can be downloaded from [www.bit.ly/rb14003](http://www.bit.ly/rb14003).





## Coir waste management for hydroponic berries (MT17016)

NOW COMPLETE

**Key research provider:** RMCG

Management of spent coir has become a challenge for many producers, including raspberry and blackberry growers. This project investigated opportunities for its beneficial reuse. The team researched the use of coir, options for spent coir, and consulted with experts in the area both here and overseas to make recommendations on the best way to deal with it.

Key findings included:

- » Composting on farm is an option for those who can use or sell the compost. Co-composting with materials with high nitrogen content such as manure may be required to make sure composting is effective.
- » Reuse on farms without composting as a soil amendment is suitable.
- » Berry producers can link up with organic recyclers in their region to dispose of spent coir, which is often the most cost-effective solution. The map at [www.bit.ly/organic-recycling-options](http://www.bit.ly/organic-recycling-options) can help growers in finding local connections.
- » Other opportunities can include landscape companies, chicken producers and orchardists, although profiling of the used coir might be necessary to demonstrate suitability for some options.

- » Growers can work with others in protected fruit, vegetables and flowers, which are industries with similar waste problems.

The project team recommended that a voluntary stewardship program could be established involving the entire supply chain, including growers, coir importers, industry groups and the Australian Organic Recycling Organisation.

Full details can be found in the project's final research report, which can be downloaded from [www.bit.ly/mt17016](http://www.bit.ly/mt17016).

## Berry export strategy (MT17001)

NOW COMPLETE

**Key research provider:** Auspex Strategic Advisory

Funded by both the raspberry and blackberry and strawberry industries, this project identified, sized and prioritised opportunities for the industries in international markets, through the development of an export strategy.

The *Berry Export Strategy 2028* was released in July 2018, providing the industries with a strategic assessment of future opportunities for export market development over a 10-year horizon. A strategy overview is available to download from Hort Innovation at [www.bit.ly/berry-export](http://www.bit.ly/berry-export).

## Review of the biosecurity plan for the berry sector (MT18004)

NEW IN 2018/19

**Key research provider:** Plant Health Australia

This five-year investment is tasked with reviewing existing biosecurity priorities, plans and needs for the rubus and strawberry industries, and will ultimately deliver a cohesive biosecurity plan for the Australian berry sector. Like the existing individual industry plans, the berry sector plan will be a top-level document that identifies high-priority endemic and exotic pests, diseases and weeds, along with the risk mitigation activities required to reduce their biosecurity threat, plus surveillance and diagnostic activities. It will provide a strategic framework for industry and government to work together to improve preparedness for and response to these potential threats.

The current raspberry and blackberry biosecurity plan is available from Plant Health Australia at [www.planthealthaustralia.com.au/industries/berries](http://www.planthealthaustralia.com.au/industries/berries).

## Raspberry and blackberry consumer insights research (RB18000)

NEW IN 2018/19 & NOW COMPLETE

**Key research provider:** Fiftyfive5

In 2019, this investment delivered insights about raspberry and blackberry consumers to inform growers and other participants in the berry value chain about consumer perceptions and expectations when it comes to berries, as well as their triggers and barriers to purchasing. The research identified four key opportunities for the berry industry to pursue:

- » **To build value.** Price was identified as a significant barrier to purchase among non-buyers and a barrier to frequency of purchase among current buyers.
- » **To differentiate from other berries.** The research found that raspberries and blackberries are easily substitutable when not available or too expensive.
- » **To leverage occasions beyond snacking.** The research suggested consumers don't see raspberries and blackberries as being as versatile as other berries, however 50 per cent of consumers used them for something beyond snacking on the last occasion they had them.
- » **To drive freshness.** Perceived inconsistent quality and freshness of raspberries and blackberries was seen to reduce the intention to purchase, particularly if the price is high.

These insights will feed into future Hort Innovation Raspberry and Blackberry Fund marketing activities. Full details can be found in the project team's final presentation, 'Driving growth for Australian Raspberries & Blackberries', available from [www.bit.ly/rb18000](http://www.bit.ly/rb18000).

## Consumer behavioural and retail data for fresh produce (MT17015)

**Key research provider:** Nielsen

This multi-industry investment is tasked with providing regular consumer behaviour data and insight reporting to a range of industries, through the Harvest to Home platform ([www.harvesttohome.net.au](http://www.harvesttohome.net.au)).

The platform has established a dedicated dashboard each for raspberries and blackberries, which will make data and reporting easily accessible for industry participants. The information is intended to assist growers and supply chain partners in decision-making for their businesses and, for the wider industry, the data and insights are available to support strategic activities, as well as Hort Innovation Raspberry and Blackberry Fund marketing plans.

## Integrated pest management of redberry mite, *Acalitus essigi*, on blackberries (RB17000)

**Key research provider:** University of Tasmania

This ongoing investment is tasked with developing integrated pest management tools and strategies for the rubus industry, with a focus on tackling redberry mite (*Acalitus essigi*) in blackberries. The mite's feeding leads to damaged fruit with incomplete, delayed and/or uneven ripening, with affected drupelets being hard and coloured bright red or green.

## Rubus industry minor use program (RB16000)

**Key research provider:** Hort Innovation

Through this project, levy funds and Australian Government contributions are used to submit renewals and applications for minor use permits for the raspberry and blackberry industry as required. These submissions are prepared and submitted to the Australian Pesticides and Veterinary Medicines Authority (APVMA).

For more on minor use permits, including a list of permits, see p14.

All current minor use permits for the industry are searchable at [portal.apvma.gov.au/permits](http://portal.apvma.gov.au/permits). Permit updates are also circulated in Hort Innovation's *Growing Innovation* e-newsletter, which you can sign up for at [www.horticulture.com.au/sign-up](http://www.horticulture.com.au/sign-up).



## Data generation investments (MT18018, ST17000 and ST18001)

NEW IN 2018/19 (MT18018 & ST18001)

**Key research provider:** Peracto

The generation of pesticide residue, efficacy and crop safety data is required to support label registration and minor use permit applications made to the APVMA which, when approved, provide access to safe and effective chemicals for the management of pests, weeds and diseases.

In 2019, Hort Innovation secured more than \$900,000 in assistance grants under the Australian Government's Access to Industry Uses of Agricultural and Veterinary (AgVet) Chemicals program. Under **Generation of data for pesticide applications in horticulture crops (ST18001)**, this funding is being used, along with levy contributions, to generate the data required for a range of product registrations across a variety of horticulture crops.

For the raspberry and blackberry industry, the project is producing data to support a BASF afidopyropen (Versys) label registration for the control of aphids and apple dimpling bug.

Meanwhile, using grant funding from an earlier round of the AgVet program, the work of **Generation of data for pesticide applications in horticulture crops 2018 (ST17000)** will support a Bayer DC-163 label registration application for the control of cluster caterpillar, heliothis, leafroller moths, light brown apple moth, loopers, monolepta beetle and red-shouldered leaf beetle in both raspberries and blackberries.

Separate to the grant funding, ST17000 will also support a Bayer label registration application for Infinito (propamcarb + fluopicolide) for the control of downy mildew in raspberries and blackberries, plus a new permit application for the use of flonicamid in the berries, for the control of green vegetable bug, green stink bug, harlequin bug, Ruthergien bug, mirids, apple dimpling bug, jassids, leafhoppers and aphids.

Finally, the multi-industry project **Generation of data for pesticide permit applications in horticulture crops 2019/20 (MT18018)** is working to generate the data needed to support a range of existing minor use permits across horticulture, including for the raspberry and blackberry industry.

## Improving plant industry access to new genetics through faster and more accurate diagnostics using next generation sequencing (MT18005)

NEW IN 2018/19

**Key research provider:** Queensland University of Technology

New in 2018/19, this investment is tasked with supporting the adoption of 'next generation sequencing' in the screening of imported horticultural plant material in post-entry quarantine facilities. The technology has the potential to allow plants to move through the quarantine process much more quickly – allowing industry speedier access to new genetic stocks.

Currently, new plant material entering Australia can spend up to three years in post-entry quarantine facilities undergoing pathogen testing. Next generation sequencing offers a fast, reliable and cost-effective method to identify all known plant pathogens in a single test.

Previous research has demonstrated the approach's success and efficiency in testing for viruses and viroids in imported plants, with next generation sequencing subsequently being adopted in the testing of imported ornamental grasses. This investment will provide the evidence and protocols needed for the technology to be adopted for further plant commodities, including horticulture crops.

## Developing a national systems approach for meeting biosecurity requirements to access key Asian markets (AM17001)

HORT FRONTIERS

**Key research provider:** Queensland Eco-sciences Precinct

Most horticultural trade relies on demonstrating that the commodity either comes from an area that is free of pests and diseases (area freedom), or involves the application of an agreed, stringent end-point treatment. This project is a collaboration between industry, researchers and regulators to help Australian horticulture enterprises realise market opportunities in Australia and Asia by developing a quantitative 'systems approach' that will be acceptable to regulators. It will also be providing the supporting information necessary to help industries evaluate and adopt systems approaches.

Systems approaches integrate those pre- and post-harvest practices used in production, harvest, packing and distribution of a commodity which cumulatively meet requirements for quarantine security. The systems approach used in each region will set safeguards and mitigation measures which individually and cumulatively provide a reduction in plant pest risk.

## Xylella coordinator (MT17006)

NEW IN 2018/19

**Key research provider:** Wine Australia

*Xylella fastidiosa* is an exotic and potentially devastating bacteria that impedes the movement of rising sap in plants. While it hasn't yet appeared in Australia it has proven catastrophic overseas and, were it to enter the country, it could threaten more than 350 commercial, ornamental and native plant species.

This multi-industry and multi-sector investment supports the role and activities of a national coordinator as part of a three-year program to improve Australia's readiness for any potential incursion of the disease. This is a joint initiative between Hort Innovation and Wine Australia, through the Plant Biosecurity Research Initiative (PBRI). The PBRI is a collaboration between Australia's seven plant-focused Rural RDCs, Plant Health Australia, the Department of Agriculture and other contributors, to coordinate plant biosecurity RD&E funding and efforts. You can learn more at [www.pbri.com.au](http://www.pbri.com.au).

## Improving preparedness of the Australian horticultural sector to the threat potentially posed by *Xylella fastidiosa* (a severe biosecurity risk) (MT17006)

NEW IN 2018/19

**Key research provider:** The Victorian Department of Jobs, Precincts and Regions

Adding to the PBRI's *Xylella* work as described in the previous project description, this multi-industry investment will review and allow Australia to adopt world's best practice methods for detecting and identifying strains of the *Xylella fastidiosa* bacteria, should it come to our shores. As well as developing state-of-the-art diagnostic tools, technologies and protocols to screen plant material entering the country and to support active surveillance programs, it will provide associated training to technical staff in diagnostic laboratories.

The project's work will ultimately allow for quick and effective detection of what is considered to be the number one plant biosecurity threat to Australia and New Zealand, to facilitate a swift and sure response.

## Improving the biosecurity preparedness of Australian horticulture for the exotic spotted wing drosophila (*Drosophila suzukii*) (MT17005)

**Key research provider:** Plant Health Australia

This multi-industry investment is tasked with improving industry awareness of the risks posed by spotted wing drosophila, which attacks a range of soft-skinned fruit, and also with increasing the capacity to detect and respond to any incursions of the pest.

Activities include building knowledge and capacity around appropriate surveillance and management tools and strategies within the growing industries, government and among other relevant stakeholders. Looking at options for meeting domestic and international quarantine requirements are also among the project's activities.





### **Developing IPM-compatible controls for spotted wing drosophila (MT18010)**

NEW IN 2018/19

**Key research provider:** IPM Technologies

Beginning in April 2019, this investment is developing and evaluating control measures against spotted wing drosophila, which are compatible with integrated crop management (IPM) approaches used in berry crops.

Though not currently in Australia, spotted wing drosophila poses a biosecurity risk for several of the nation's horticulture industries, including berries. Control measures overseas include regular use of insecticides that aren't IPM compatible. With IPM well-adopted in Australian berry crop production, the use of such insecticides here could lead to severe flares of other issues, such as western flower thrips and two-spotted mite.

With this in mind, this project is preparing and testing IPM-compatible control measures against spotted wing drosophila overseas, so that sustainable long-term management in Australia will be possible should the pest arrive on our shores.

There is also a sister project to this investment, *Exploring IPM-compatible methods for spotted wing drosophila in berry crops (MT18010)*, which is being delivered by cesar. This component of the work involves desktop research that will put an Australian focus on existing spotted wing

drosophila research; review of trial site results; and work to extend research findings. Communicating information on spotted wing drosophila and likely control measures (IPM-safe and otherwise) to berry growers and advisors will be key to the program.

Overall, the work is related to the major spotted wing drosophila initiative facilitated through project MT17005, described on p11.

### **Enhanced National Bee Pest Surveillance Program (MT16005)**

HORT FRONTIERS

**Key research provider:** Plant Health Australia

This investment is delivering a nationally coordinated bee-pest surveillance program to help safeguard honey-bee and pollinator-dependent industries in Australia. It builds upon the previous *National Bee Pest Surveillance Program (MT12011)*, and includes upgrading sentinel hive arrays, strengthening relationships with surveillance operators, the introduction of new elements such as Asian hornet screening and more. The surveillance is designed to enable the early detection of high-priority pest incursions that can impact on honey bees, providing the best opportunity for successful pest eradication.

The raspberry and blackberry industry is one of several contributors to the work, and the program is part of the Hort Frontiers Pollination Fund.



# **Keep up to date!**

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**To keep up to date with the latest information on new, ongoing and recently completed R&D investments throughout the year – and to search and find resources and reports from these investments – visit [www.horticulture.com.au/raspberry-and-blackberry](http://www.horticulture.com.au/raspberry-and-blackberry)**

## Minor use permits

The Hort Innovation Raspberry and Blackberry Fund supports the submission of applications for new and renewed minor use permits for the industry, as well as data generation activities to support chemical permits and registrations, and strategic agrichemical reviews.

Together these efforts provide industry access to safe, relevant and effective chemicals for the management of pests, weeds and diseases.

For full details on these activities and links to relevant information, visit [www.bit.ly/minor-use-rubus](http://www.bit.ly/minor-use-rubus).

### Permits in 2018/19

During the 2018/19 financial year, a successful new permit application for PER87245 and successful renewals for PER12927 (issued as PER87408), PER14443 and PER82986 were prepared by Hort Innovation and submitted to the APVMA facilitated through the *Raspberry and blackberry industry minor use program* (RB16000). Emergency use permits PER87141, PER87439, PER87441 and PER87464 were also obtained.

Meanwhile, successful renewed permits PER14423, PER13289, PER14424 and PER14425 were issued during 2018/19, with the applications submitted through the industry minor use program in the previous financial year.

Details for these and all other permits can be found in the following table.

### Current permits

Below is a list of minor use permits for the raspberry and blackberry industry, current as of 20 September 2019.

PERMIT ID	DESCRIPTION	STATE	DATE ISSUED	EXPIRY DATE	PERMIT HOLDER
PER12486 Version 5	Trichlorfon / Specified berry fruit / Fruit fly	ACT, NSW, NT, QLD, SA, WA	06-Oct-11	31-May-21	Australian Blueberry Growers' Association (ABGA) C/Hort Innovation
PER82024	Metham / Blueberries and rubus / Weed seeds and soilborne pathogens	All	01-Feb-16	31-Mar-21	ABGA C/Hort Innovation
PER87408	Success Neo (spinetoram) / Strawberries, rubus, rubus hybrids and blueberries / Fruit fly (suppression only)	All, excluding VIC	15-Apr-19	30-Apr-24	Hort Innovation
PER13150 Version 2	NoGall ( <i>Agrobacterium radiobacter</i> ) / Rubus root systems / Crown gall	NSW, TAS	23-Mar-12	31-Oct-22	Raspberry and Blackberries Australia (RABA)
PER13289 Version 4	Indoxacarb (Avatar) / Blueberries and rubus spp. / Light brown apple moth and elephant weevil borer (field and protected grown crops)	All	31-Oct-12	31-Aug-23	RABA C/Hort Innovation
PER13956 Version 3	Abamectin / Raspberries, blackberries and black currants / Two-spotted mite	All, excluding VIC	31-May-13	31-May-23	RABA C/Hort Innovation
PER13957 Version 2	Petroleum oil (incl. paraffinic and mineral oil) / Rubus and ribes / Two-spotted mite and scale insects	All, excluding VIC	01-Apr-13	31-Mar-23	RABA C/Hort Innovation

Continued >>

PERMIT ID	DESCRIPTION	STATE	DATE ISSUED	EXPIRY DATE	PERMIT HOLDER
PER13958 Version 4	Pyrimethanil, captan, metalaxyl, metalaxyl-m, mancozeb, triadimenol, phosphorous acid / Rubus, ribes and blueberries / Various fungal blights	All, excluding VIC	01-Apr-13	31-Mar-23	RABA
PER14449 Version 2	Chlorothalonil / Rubus / Grey mould, rust, downy mildew, Septoria leaf spot	All, excluding VIC	01-Oct-14	31-May-22	RABA
PER14233 Version 3	Carfentrazone-ethyl (Spotlight and Hammer Herbicide) / Rubus spp., ribes spp / Sucker control	All, excluding VIC	29-Aug-13	30-Nov-24	Hort Innovation
PER14234 Version 2	Eco-Oil Botanical Oil Concentrate (emulsifiable botanical oil) / Blueberries, rubus spp., ribes spp / Two-spotted mite	All, excluding VIC	10-Sep-13	31-Aug-23	RABA C/Hort Innovation
PER82986 Version 2	Boscalid + pyraclostrobin (Pristine Fungicide) / Rubus and rubus hybrids, blueberries (field and protected grown) / Various fungal diseases	All	25-Aug-17	31-Aug-24	Hort Innovation
PER84973 Version 2	Metalaxyl-M + Mancozeb (Ridimol Gold MZ) / Rubus and rubus hybrids / Downy mildew	All, excluding VIC	16-Feb-18	31-Mar-23	RABA C/Hort Innovation
PER14424 Version 2	Fenhexamid (Teldor) / Rubus and rubus hybrids (field and protected grown crops) / Grey mould	All, excluding VIC	28-Jan-14	30-Sep-23	RABA
PER14425 Version 2	Bifenazate (Acramite) / Specified rubus and rubus hybrids / Two-spotted mite and European red spider mite	All, excluding VIC	28-Feb-14	30-Sep-23	RABA
PER14422 Version 2	Cyprodinil + fludioxonil (Switch) / Dewberries (including boysenberries and loganberry), blackberries, raspberries, cloudberries and youngberries / Grey mould	All, excluding VIC	28-Feb-14	31-Dec-23	RABA C/Hort Innovation
PER14443 Version 2	Copper – cupric hydroxide / Rubus spp. including raspberries and blackberries / Rust and leaf spot	All, excluding VIC	28-Feb-14	31-Jan-24	Hort Innovation
PER84972	Bifenthrin / Rubus spp., ribes spp. (not including currants) and blueberries / Monolepta beetle, plague thrips and elephant weevil	All, excluding VIC	12-Feb-18	28-Feb-23	RABA
PER14423 Version 3	Abamectin / Blackberries, blueberries and raspberries / Queensland fruit fly	All	23-May-14	31-Mar-24	RABA C/Hort Innovation
PER13859	Dimethoate / Orchard clean-up – fruit fly host crops following harvest / Fruit fly	All, excluding VIC	09-Feb-15	31-Jul-24	Growcom C/Hort Innovation
PER80070	Pyrethrin (Pyganic Organic Insecticide) / Rubus, ribes and blueberries / Monolepta beetle, green vegetable bug and green stink bug	All	18-Aug-15	30-Jun-20	ABGA C/NSW Department of Primary Industries
PER12750 Version 2	Glufosinate and glyphosate / Blackcurrants / Various weeds	TAS	07-Jul-11	30-Jun-21	ABGA

Continued &gt;&gt;



PERMIT ID	DESCRIPTION	STATE	DATE ISSUED	EXPIRY DATE	PERMIT HOLDER
PER87141	Sulfoxaflor (Transform insecticide) / Blackberries, raspberries and blueberries / Cottonseed bug	NSW, QLD	18-Oct-18	31-Oct-20	Hort Innovation
PER87441	Sulfoxaflor (Transform insecticide) / Blackberries / Green peach aphid	TAS	04-Dec-18	31-Dec-21	Hort Innovation
PER87439	Pirimicarb / Blackberries / Green peach aphid	TAS	04-Dec-18	31-Dec-21	Hort Innovation
PER87464	Colecalciferol (Selontra Soft Bait Rodenticide) / Rubus, rubus hybrids and blueberries / Rats and mice	All	17-Dec-18	31-Dec-20	Hort Innovation
PER86213	Ethephon / Blueberries, rubus and ribe spp. / Promoting uniform maturity	NSW	05-Dec-18	31-Dec-21	ABGA C/Wollongbar
PER87245	Sulphur (Sulfur 800 WG fungicide and miticide) / Blackberries / Broad mite, two-spotted mite, bean spider mite and red berry mite	All	25-Mar-19	31-Mar-24	Hort Innovation

All efforts have been made to provide the most current, complete and accurate information on these permits, however you should always confirm all details on the APVMA website at [portal.apvma.gov.au/permits](http://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 permit updates are circulated in Hort Innovation's e-newsletter, *Growing Innovation*. Don't yet receive it? Sign up for free at [www.horticulture.com.au/sign-up](http://www.horticulture.com.au/sign-up).**

## Marketing report

Hort Innovation is responsible for investing the raspberries and blackberries marketing levy into a range of activities to drive awareness and use of raspberries and blackberries under the Hort Innovation Raspberry and Blackberry Fund. Read on for a snapshot of activities and results from 2018/19.

Increasing the domestic per capita consumption of raspberries and blackberries by 40 per cent by 2021, supported by positive consumer perceptions of product value, is a key industry priority identified in the raspberry and blackberry industry's Strategic Investment Plan.

The 2018/19 marketing plan supported this priority by working to increase penetration through creating a value proposition for raspberries and blackberries where the key message was turning simple into super with fresh Aussie raspberries and blackberries. Here the key message was about turning the simple into super with fresh Aussie raspberries and blackberries.

Key activities were targeted at main grocery buyers 25 to 54 years of age and young 'transitionals', 25 to 35 years of age. There was a focus on driving awareness of seasonality, educating consumers about the super health benefits, inspiring everyday usage occasions and building consumer confidence through product education.

## Content creation

Food stylist and recipe developer Megann Evans was engaged to produce recipes for use across the Australian raspberries and blackberries owned and earned platforms. Megann created 11 different recipes and corresponding stop-motion and cinemagraph images. Megann also shared these images on her own channels to her engaged audience of followers.

In addition, clinical nutritionist Nadia Felsch was engaged to review the existing health messages for raspberries and blackberries, to translate these messages for a consumer audience and to develop compelling health content to leverage via PR and social media. Nadia delivered key health messages via a media event (read on for more on this) and also shared health messages and a simple berry yoghurt recipe creation on her social media channels.

Through both ambassadors posting berries content on their channels, there were some 60,000 opportunities for people to see raspberry and blackberry content and messaging.



## Public relations (PR)

The PR strategy for raspberries and blackberries was to extend the reach of paid advertising and promotions to earned coverage across traditional media, social media, and blogs. It sought to inspire the use of raspberries and blackberries for different occasions, and to educate consumers about the health benefits of berries.

In February 2019 a major media event was held at Sydney's Hatted Restaurant Banksii, where Head Chef Hamish Ingham drove home the 'from simple to super' messaging. Sixteen media and influencers enjoyed a three-course berry inspired meal by Hamish; were given media kits which included a berry fact sheet, berry recipe card, grazing platter and berry pairing tips; and were invited to make their own grazing board on the day to share on social media and take home. Nutritionist Nadia Felsch attended the event to share the health messaging of berries, while influencer Megann Evans demonstrated how to create the 'berry best' grazing board. Content from the day, including Hamish's recipes, appeared across owned and earned channels for Australian raspberries and blackberries.

These activities generated coverage with a reach of 7.4 million, exceeding the KPI of four million, with 59 pieces of coverage secured across media, including top tier outlets and social. Highlights included features within *Woman's Day*, *BW Magazine*, *that's life!* and *Body & Soul*.

## Social media

Social media activity is a cost-efficient way to reach consumers, and to 'keep a finger on the pulse' in terms of how people are using raspberries and blackberries, answer any questions they have, and to give people an opportunity to simply share their love of fresh berries.



The role of social media in the marketing program is to help remind shoppers and consumers of the benefits of fresh raspberries and blackberries through compelling content.

The 2018/19 social strategy focused on leveraging Facebook to keep Australian raspberries and blackberries top of mind.

And with one in three Australians using Instagram on a daily basis, 2019 saw the launch of the [@freshaussieberries](#) Instagram channel.

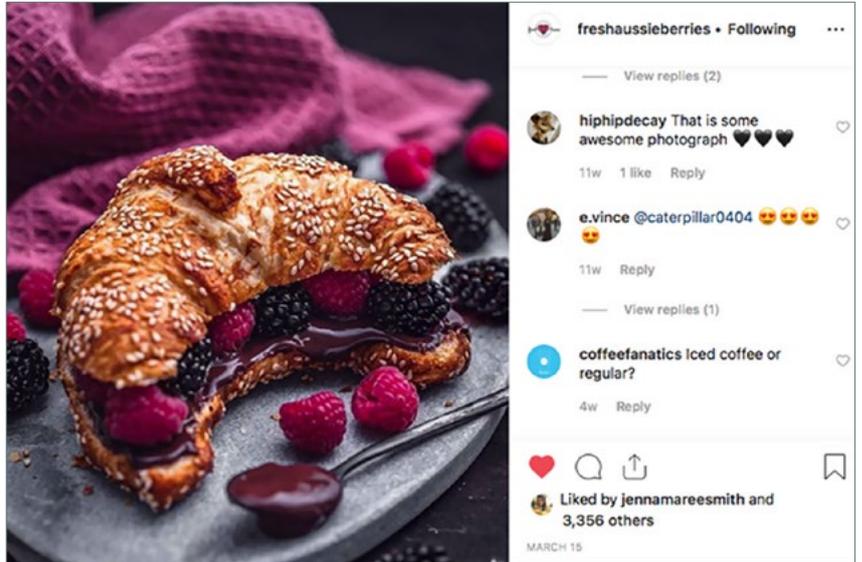
On Facebook, the audience responded best to grower tips including storage info, beautiful berry imagery with nutritional information and indulgent

but well-known dessert recipes such as pavlovas, cheesecakes and layered cakes. Over the course of the campaign, the Facebook page achieved 1.1 million opportunities for people to see the content (doubling the KPI of 500,000) and an average engagement rate of 11 per cent (exceeding the KPI of six per cent).

The @freshaussieberries Instagram page was used to promote messaging around taste, storage, selection, nutrition and availability. Recipes such as baked goods, as well as grazing platters, performed well and the use of 'Instagram Stories' and cinemagraphs were effective at driving reach across the platform. The page achieved 589,000 opportunities for people to see berry content (exceeding the KPI of 250,000) and delivered over 60,000 engagements (likes and comments).

### Influencers

Word of mouth remains the most trusted source for purchase influence, so influencers on social media are an important part of a marketing campaign. Throughout the 2018/19 marketing campaign there was a partnership with TRIBE, an influencer platform, to connect with micro-influencers. This was an effective way to create campaign content, drive audience reach for berries, and grow the new Instagram account in a short amount of time. TRIBE influencers were asked to share their best fresh berries dish taking something simple to super. In total, 13 creator posts provided over 674,000 opportunities for people to see the content and achieved over 24,900 engagements (likes and comments).



## In-store sampling

The objective of in-store sampling was to demonstrate the ways in which fresh raspberries and blackberries can be incorporated into snacking and different meal occasions to increase purchase frequency, and to drive visibility and conversion at point of purchase.

Across 60 Coles and 60 Woolworths stores in February and March, customers sampled raspberries filled with yoghurt, and yoghurt topped with blackberries and coconut. Product brochures were handed out with each sample to reinforce both recipe inspiration and health information. More than 16,600 samples were consumed and over 22,000 shoppers were exposed to the product, helping to drive a seven per cent uplift in units sold within Woolworths stores where sampling occurred (based on Quantum data). Further sampling of fresh raspberries was also conducted across four Costco stores. Across all stores there was a 100 per cent sales uplift (measured on the same day the week prior to the demo) and consumers provided positive feedback including “Love the taste, great

value for money”, “Great for a healthy snack”, and “Good price, love the flavour, they look amazing”.

Consumer surveys were conducted in a handful of Coles and Woolworths stores where sampling occurred to help understand the consumers’ perceptions of the sample, and whether it had a positive influence on intent to purchase.

A total of 500 shoppers participated, and overall respondents had a positive reaction to the products. Some 79 per cent indicated they were likely to buy the product after trying a sample and over 95 per cent of respondents rated the quality ‘very good’ or ‘good’. Positive consumer feedback included that the sampled products were “A great way for kids to eat berries” and after trying blackberries “I normally buy raspberries but will now get one of each.” Indicated areas for improvement included larger punnet sizes, affordability and shelf life. Comments included “I love these but I prefer them when they are below \$4” and “They do not keep very long, that’s why I prefer to buy them frozen”.



## Financial statement

### Financial operating statement 2018/19

	R&D (\$)	MARKETING (\$)	TOTAL (\$)
	2018/19 July – June	2018/19 July – June	2018/19 July – June
<b>OPENING BALANCE</b>	<b>1,433,117</b>	<b>196,665</b>	<b>1,629,782</b>
Levies from growers (net of collection costs)	769,335	153,863	923,198
Australian Government money	250,259	–	250,259
Other income*	36,094	4,619	40,713
<b>TOTAL INCOME</b>	<b>1,055,688</b>	<b>158,482</b>	<b>1,214,170</b>
Project funding	390,881	124,315	515,196
Consultation with and advice from growers	11,021	4,248	15,269
Service delivery – base	17,457	5,425	22,882
Service delivery – shared	30,675	8,990	39,664
Service delivery – fund specific	50,485	12,015	62,500
<b>TOTAL EXPENDITURE</b>	<b>500,518</b>	<b>154,993</b>	<b>655,511</b>
Levy contribution to across-industry activity	11,424	–	11,424
<b>CLOSING BALANCE</b>	<b>1,976,862</b>	<b>200,154</b>	<b>2,177,016</b>
Levy collection costs	11,057	2,215	13,272

\* Interest, royalties



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