



Lychee Fund

Annual Report 2018/19

Content

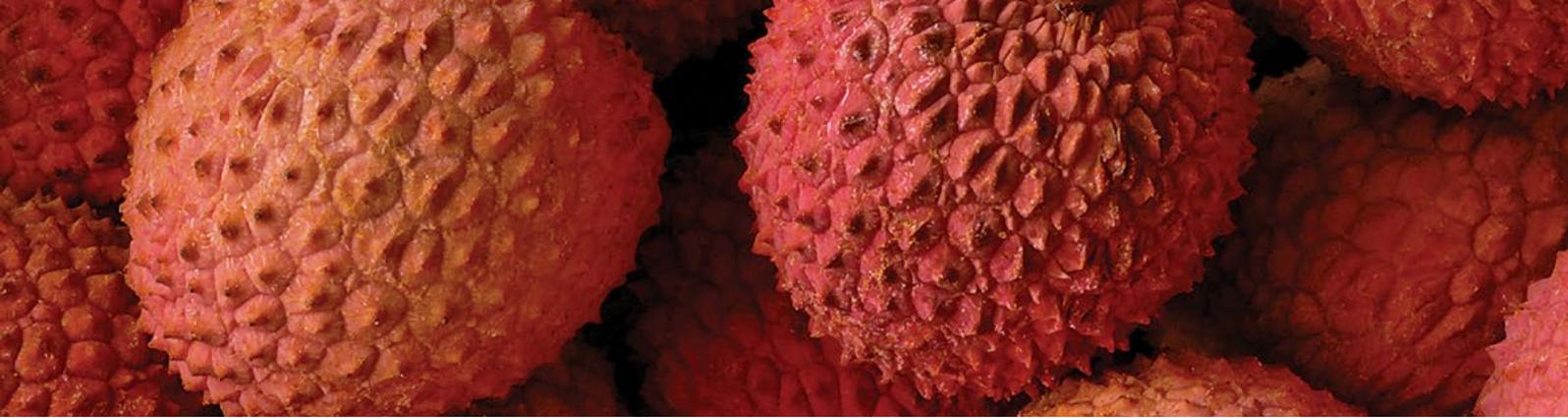


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The projects in this report have been funded by Hort Innovation using sources including the lychee levy, Australian Government contributions and, in some instances, co-contributions from a variety of sources.



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

- ✓ **The industry communications program**, delivering the *Living Lychee* journal and industry website, www.australianlychee.com.au
- ✓ **The lychee Harvest to Home dashboard** providing regular consumer behavioural data and insight reporting, at www.harvesttohome.net.au
- ✓ Work to help growers remove **mite and other insect pests**, in particular to support lychee exports (p7)
- ✓ A multi-pronged **domestic marketing campaign** (p12)
- ✓ **New final research reports and grower resources**, with a number now available from www.horticulture.com.au/lychee

2018/19 SNAPSHOT

\$157
THOUSAND
INVESTED
IN R&D

\$24
THOUSAND
INVESTED IN
MARKETING

10+
ACTIVE R&D
INVESTMENTS

Welcome

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 lychee 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 continuing to be forged.

There was more than \$157,000 invested into R&D through the Hort Innovation Lychee Fund across the year, to support the industry in being as productive and profitable as possible, with new and ongoing projects addressing important issues and opportunities.

Meanwhile in marketing, the Hort Innovation Lychee Fund saw some \$24,000 invested in 2018/19 into a range of activities to raise the profile and consumption of Australian lychees.

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/lychee, where you can search and find information relating to investments, past and present, at any time. The new site and its Lychee 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).

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, or can otherwise email communications@horticulture.com.au or call our general line on 02 8295 2300.



Additional value in the year

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



The new Hort Innovation website, with dedicated Lychee Fund section

You can now visit www.horticulture.com.au/lychee to quickly search and find lychee 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.



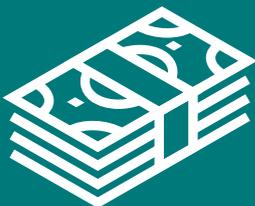
The Australian Horticulture Statistics Handbook

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.



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.



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 lychee industry.

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 lychee 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 Lychee 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/lychee-plan, or find the full version at www.horticulture.com.au/lychee.

The SIP is currently used like a 'roadmap' by the lychee 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.

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.

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 Lychee Fund are detailed on the 'Your investments' page at www.horticulture.com.au/lychee. 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.

Importantly, the industry's levy-funded communications program is tasked with providing growers with regular information on levy-related activity. See p8 for more.



New investment analysis

You can now clearly see how investments in the Hort Innovation Lychee Fund align to the industry's SIP, with new and interactive investment analysis information available from www.bit.ly/lychee-investment. The analysis currently shows the allocation of funding against each of the lychee 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

LY18000	Mite and insect disinfestation of lychee fruit using high pressure water sprays
MT18011	Ex-post impact assessment*
ST18001	Generation of data for pesticide applications in horticulture crops

* 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

ONGOING INVESTMENTS IN 2018/19

LY16000	Lychee industry minor use program
LY16005	Australian lychee industry communications program
MT17015	Consumer behavioural and retail data for fresh produce
ST16006	Generation of residue, efficacy and crop safety data for pesticide applications in horticulture crops
ST16008	AgVet collaborative forum
ST17000	Generation of data for pesticide applications in horticulture crops 2018

INVESTMENTS COMPLETED IN 2018/19

LY16002	Treatment for mites on lychee fruit prior to irradiation for improved market access
LY17001	Lychee knowledge transfer at the 2018 China litchi conference

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.



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.



R&D report

Take a closer look at some of the key investments in the Hort Innovation Lychee 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/lychee as they become available.

Mite and insect disinfestation of lychee fruit using high pressure water sprays (LY18000)

NEW IN 2018/19

Key research provider: The Queensland Department of Agriculture and Fisheries

Earlier levy-funded project *Treatment for mites on lychee fruit after irradiation for improved market access* (LY16002) – described below – looked at using oil treatments, and water sprays in combination with oil treatments, for removing mite and other insect pests on lychee fruit. This is of particular importance for quarantine export markets (and especially those where irradiation protocols are used), where fruit needs to be free of surface pests including mites.

This new work is looking at optimising the efficacy of high-pressure water application to remove surface pests prior to packing, irradiation and export. This approach has the potential to allow higher throughput on the packing line.

Treatment for mites on lychee fruit prior to irradiation for improved market access (LY16002)

NOW COMPLETE

Key research provider: The Queensland Department of Agriculture and Fisheries

This project ran from 2016 to 2018 to help address a potential barrier to the export of Australian lychees: the presence of common pest the lychee erinose mite (*Aceria litchii*).

The researchers investigated simple postharvest treatments to reliably remove the mite from fruit destined for markets including the US and New Zealand. While lychees heading to these export destinations are subject to an irradiation protocol to eradicate target quarantine pests, the non-target erinose mite is able to withstand current irradiation rates – and higher rates could damage the fruit.

In looking at additional treatments to tackle mites, the project team evaluated postharvest dipping and flood spraying with

paraffinic oil, and the potential for oil in combination with physical pre- and post-treatment cleaning using high-pressure/high-volume water sprays.

The effect of the oil treatment in combination with irradiation on fruit quality was also evaluated.

The researchers found that paraffinic oil at three per cent concentration applied as a 30 second dip or flood spray reduced mites and other surface insects on fruit. Though oil alone didn't completely eliminate the pests, the addition of pressure washing before, and two minutes after, the oil application further reduced their incidence.

The project did find that oil dips could exacerbate surface fungi (rots) from about 10 days after treatment, predominately around the stalk end of fruit, but this problem wasn't found with the flood spraying approach. Re-skinned lychee varieties proved particularly suited to the oil treatment, with colour enhancement recorded and the fruit storing well for up to two weeks at 5°C.

Further, the oil treatment was assessed in combination with irradiation, with no adverse interaction between the two seen – and during the project, a commercial shipment of lychees treated using oil and irradiation successfully entered the US.

As part of their work, the project team established a prototype roller conveyer incorporating an in-line water spray, oil flood spray and post-oil water spray, which significantly reduced the count of live mites. However, the two-minute time lag required for the oil to be efficacious prior to the final water spray to remove dead or dying pests did impact on packing rates.

Following this work, Hort Innovation Lychee Fund project *Mite and insect disinfestation of lychee fruit using high pressure water sprays* (LY18000) was established to look at optimising the efficacy of high-pressure water application.

Also of note, in the first year of LY16002 the project team considered the use of fumigation with ethyl formate and carbon dioxide as an alternative treatment for mites. As fruit experienced severe browning at the fumigation rates required to kill mites and other insect pests, the project moved its focus on to the oil and water method.

Full details can be found in the project's final research report, which can be downloaded from www.bit.ly/ly16002.

Lychee knowledge transfer at the 2018 China litchi conference (LY17001)

NOW COMPLETE

Key research provider: Australian Lychee Growers Association

This investment supported attendance of Australian lychee industry representatives at the 2018 China International Litchi Business Conference held in Guangzhou, and its surrounding activities. This was an opportunity to maintain an open dialogue, joint communication and ties with China, to keep trade and market access discussions progressing.

At the main conference, litchi cultivars were displayed and available for tasting, while a field visit to orchards, and demonstrations around machinery, postharvest treatments and processing was also held. Meanwhile, an international roundtable discussion took place with a focus on collaboration on research, trade and market access – including the possibility and channels for Australian lychee export to China. Chinese government officials and China-based marketing scholars were a part of these discussions.

Full details can be found in the project's final research report, which can be downloaded from www.bit.ly/ly17001.

Australian lychee industry communications program (LY16005)

Key research provider: Fruit Tree Media

This project ensures Australian lychee growers remain up to date with the latest R&D, marketing and other relevant information and issues related to the industry.

Project activities continue to include the production of journal *Living Lychee* and its distribution to the Australian Lychee Growers Association mailing list, plus the updating and maintenance of the industry website with practical content, news and other key information for growers. PDFs of previous and current *Living Lychee* editions continue to be available for download on the industry website, www.australianlychee.com.au.

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).

The platform has a dedicated dashboard for lychees, making 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 Lychee Fund marketing plans.



Lychee industry minor use program (LY16000)

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 lychee 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 p10.

All current minor use permits for the industry are searchable at 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.



Various data generation investments (ST18001, ST17000 and ST16006)

NEW IN 2018/19 (ST18001)

Key research providers: Peracto, Eurofins

The generation of pesticide residue, efficacy and crop safety data is required to support label registration and minor use permit applications made to 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 lychee industry, the project is producing the data required to support a BASF afidopyropen (Versys) label registration for the control of aphids. Specific aphids targeted by the product include potato, rose and other aphid species.

Meanwhile, data generation for other applications relevant to the lychee industry is supported by the projects **Generation of data for pesticide applications in horticulture crops 2018 (ST17000)** and **Generation of residue, efficacy and crop safety data for pesticide applications in horticulture crops 2017 (ST16006)**, both of which involve funding from earlier rounds of the AgVet program.



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/lychee.

Minor use permits

The Hort Innovation Lychee 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-lychee.

Permits in 2018/19

During the 2018/19 financial year, successful renewal applications for PER1358 (issued as PER87164), PER81753 and PER80539 (issued as PER87717) were prepared by Hort Innovation and submitted to the APVMA, facilitated through the *Lychee industry minor use program* (LY16000).

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 lychee industry, current as of 19 September 2019.

PERMIT ID	DESCRIPTION	DATE ISSUED	EXPIRY DATE	PERMIT HOLDER
PER12450 Version 6	Trichlorfon / Specified fruit crops / Fruit fly	06-Oct-11	31-Jan-21	Growcom C/Hort Innovation
PER80374 Version 2	Beta-cyfluthrin (Bulldock) / Custard apple, lychee, mango, persimmon / Various insect pests	01-Oct-15	31-Aug-22	Australian Lychee Growers Association (ALGA)
PER80367	Pyraclostrobin (Cabrio) / Lychee / Anthracnose or pepper spot	12-May-15	31-Oct-25	ALGA
PER87164 Version 2	Dimethoate / Specified citrus and tropical and sub-tropical inedible peel fruit commodities – post-harvest dip or flood spray / Various fruit fly species	01-Mar-19	31-Mar-24	Hort Innovation
PER13659 Version 2	Mancozeb / Lychee / Pepper spot	01-Oct-12	30-Sep-22	ALGA C/Hort Innovation
PER13660 Version 2	Copper hydroxide and cuprous oxide / Lychee / Lychee pepper spot	14-Aug-12	30-Jun-22	ALGA C/Hort Innovation
PER14099 Version 2	Methidathion / Lychee / Mealybug, nutborer, planthopper, scale / Leafhoppers and fruit spotting bug	01-Jul-13	30-Jun-23	ALGA C/ Hort Innovation
PER14508 Version 2	Sulphur (Granusulf 800WG) / Lychee / Erinose mite and white louse scale	21-Mar-14	30-Nov-21	ALGA C/Hort Innovation
PER14507 Version 2	Petroleum oil / Lychee / Green shield scale, soft green scale and soft scales	21-Mar-14	30-Nov-21	ALGA C/Hort Innovation

Continued >>



PERMIT ID	DESCRIPTION	DATE ISSUED	EXPIRY DATE	PERMIT HOLDER
PER14743 Version 2	Trichlorfon / Custard apple, lychee, mango and persimmon / Flatid planthopper, flower eating caterpillar, looper and yellow peach moth; Suppression only: fruit spotting bug, banana spotting bug, green vegetable bug and lychee stink bug	01-June-14	30-Jun-20	Growcom
PER13859	Dimethoate / Orchard clean-up – fruit fly host crops following harvest / Fruit fly	09-Feb-15	31-Jul-24	Growcom
PER80369	Prochloraz (Octave) / Lychee / Anthracnose or pepper spot	17-Mar-15	31-Oct-25	ALGA
PER80366	Buprofezin (Applaud) / Lychee / Scale insects, mealybug and flatid planthoppers	12-May-15	31-Mar-20	ALGA
PER87717 (replaces PER80539)	Abamectin / Lychee / Two-spotted mite and litchi erinose mite	09-May-19	30-Nov-20	Hort Innovation
PER82879	Cyprodinil + fludioxonil (Switch fungicide) / Lychee / Lychee pepper spot, anthracnose	03-Nov-16	30-Nov-19	ALGA
PER85397	Sulfoxaflor (Transform) / Lychee, mango, papaya, and passionfruit (field grown) / Fruit spotting bug and banana spotting bug	17-Apr-18	30-Apr-23	Hort Innovation
PER81753 Version 2	Ethephon (Ethrel) / Lychee / Seasonal vegetative flushes	05-Apr-16	31-Jan-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. 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.

Marketing report

Hort Innovation is responsible for investing the lychee marketing levy into a range of activities to drive awareness and consumption of the fruit, under the Hort Innovation Lychee Fund. Read on for a snapshot of activities and results from 2018/19.

Public relations (PR)

Outreach to Australia media was used to help drive lychee awareness, education and inspiration through high-reaching coverage. This involved the distribution of a media release announcing the season, plus the provision of tips for selecting, storing and peeling lychees, and inspiring ideas for eating them, particularly as a feature in festive/ party platters.

Lychee party platters created by well-known platter stylist The Platter Project were also sent to eight top tier media and foodie influencers in December 2018, together with media materials about the lychee season, usage ideas and images from existing campaign material.

A second round of media pitching was also completed around the Chinese New Year season, tapping into the popularity of lychees around this celebration.

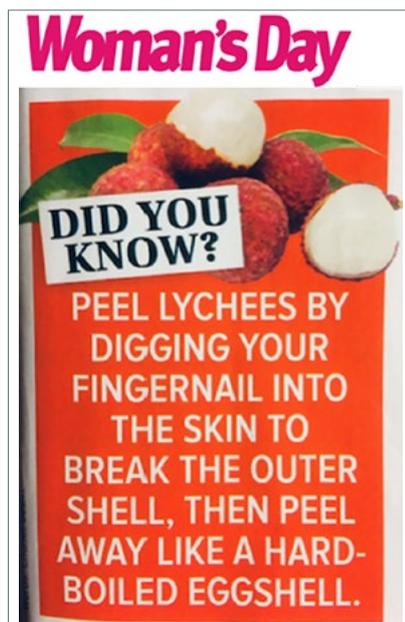
All media coverage carried key campaign messaging such as lychees being in season, content highlighting the taste and the 'platter entertaining' angle.

Over the course of the campaign, 19 pieces of coverage were secured across traditional and social media, with a total reach of 2.67 million people. Top tier outlets including *Woman's Day* and *The Herald Sun* featured lychees in print, while Body+Soul and prominent foodie influencers including Nourish Naturally, Maddie Lumley, Sunkissed Kitchen and the Biting Truth shared lychee material on social channels.

Social media

Social media activity is a great tool for campaigns with a small budget, being a cost-efficient way to reach the public (an opportunity previously only available via 'above the line' media such as television and newspapers). It's also a way to 'keep a finger on the pulse' in terms of how people are consuming lychees, to answer any questions they have, and to give people an opportunity to simply share their love of the fruit.

Using curated lychee content, the Aussie Lychee Facebook (www.facebook.com/aussilychees) and Instagram (@aussilychees)

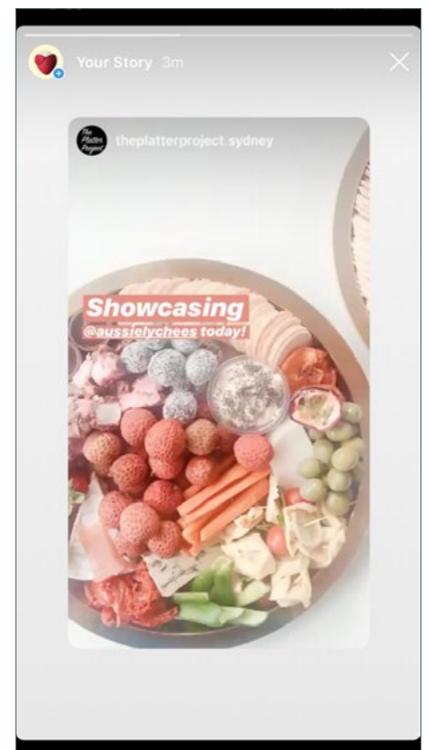
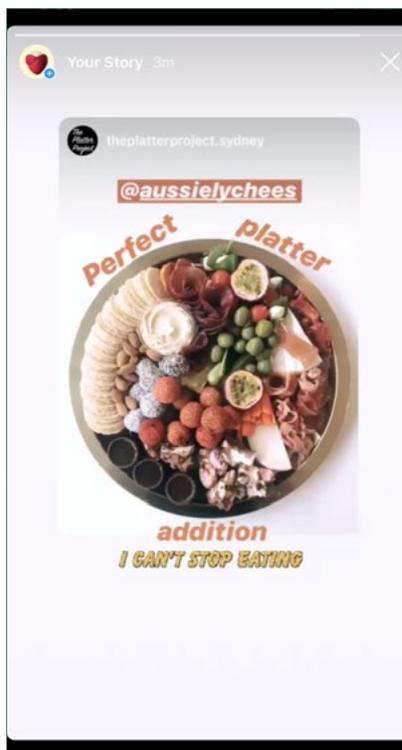




channels celebrated the summer season by featuring the delicious fruit, sharing lychee tips, providing insight into lychee growers, and promoting the key message of lychees as a #perfectplatterpartner.

Over the course of the campaign, lychee social content was seen 1.1 million times by lychee fans and target consumers of Australian lychees.

To maximise the reach of the #perfectplatterpartner message and engage Australian lychee fans, a social competition was also run in January 2019. This encouraged consumers to share their own lychee platter creation along with why lychees are the #perfectplatterpartner to win a platter from The Platter Project. This competition helped to generate additional reach and gain quality lychee images to repurpose in the Aussie Lychee social channels for future campaigns.



Financial statement

Financial operating statement 2018/19

	R&D (\$)	MARKETING (\$)	TOTAL (\$)
	2018/19 July – June	2018/19 July – June	2018/19 July – June
OPENING BALANCE	138,825	9,191	148,017
Levies from growers (net of collection costs)	115,048	52,453	167,501
Australian Government money	106,016	–	106,016
Other income*	2,848	-13	2,835
TOTAL INCOME	223,912	52,440	276,353
Project funding	157,398	24,077	181,475
Consultation with and advice from growers	9,916	3,246	13,162
Service delivery – base	7,421	1,718	9,139
Service delivery – shared	12,298	2,847	15,145
Service delivery – fund specific	25,000	17,199	42,199
TOTAL EXPENDITURE	212,033	49,087	261,120
Levy contribution to across-industry activity	4,888	–	4,888
CLOSING BALANCE	145,817	12,544	158,361
Levy collection costs	3,873	1,787	5,660

* Interest, royalties



Connect with your levy!

**Visit www.horticulture.com.au/sign-up
to sign up for free Hort Innovation communications,
including industry-specific alerts, opportunities
and general horticulture news**

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