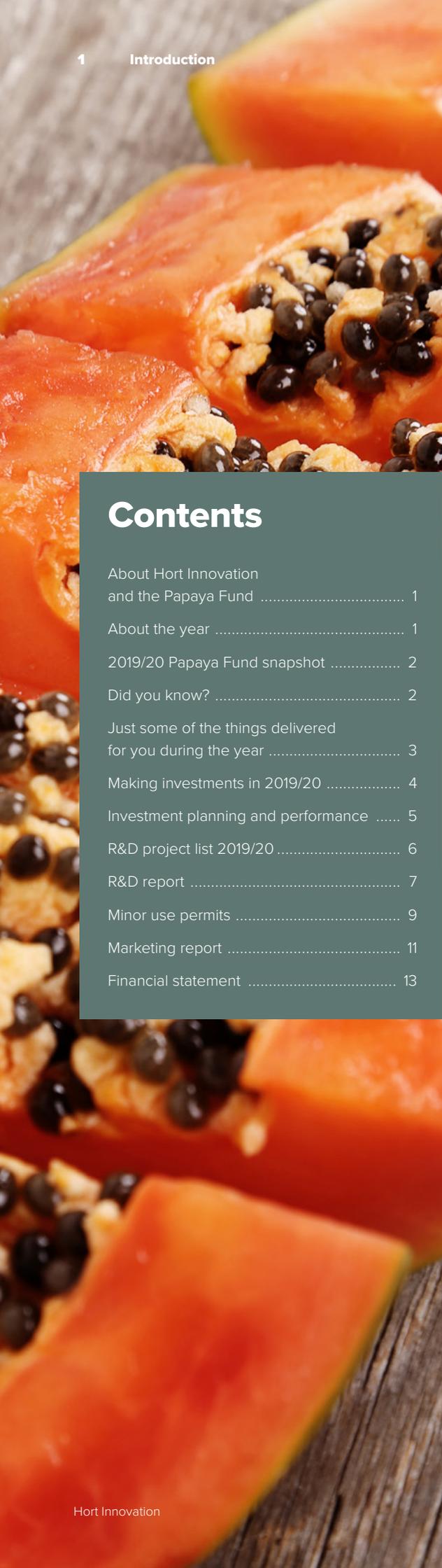




Papaya Fund

Annual Report 2019/20



Contents

- About Hort Innovation and the Papaya Fund 1
- About the year 1
- 2019/20 Papaya Fund snapshot 2
- Did you know? 2
- Just some of the things delivered for you during the year 3
- Making investments in 2019/20 4
- Investment planning and performance 5
- R&D project list 2019/20 6
- R&D report 7
- Minor use permits 9
- Marketing report 11
- Financial statement 13

About Hort Innovation and the Papaya Fund

Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australia’s horticulture sector. We work closely with industry to invest the papaya R&D and marketing levies, together with Australian Government contributions, into key initiatives for growers, through the Hort Innovation Papaya Fund. We’re extremely proud of the work we do to help drive productivity, profitability and demand for papaya growers, and for the horticulture sector at large.

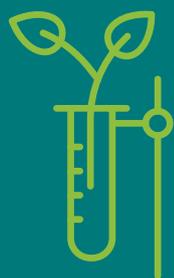
About the year

An intense and unpredictable year, 2019/20 certainly dealt challenges for the world, for Australian horticulture, and for Hort Innovation. There was ongoing drought, a devastating bushfire season, intense floods, the biosecurity threat of fall armyworm and, of course, the global and ongoing COVID-19 pandemic.

We encourage you to download a copy of the overarching Hort Innovation Annual Report 2019/20 at www.horticulture.com.au/annual-report-portal to better understand Hort Innovation’s responses to these events, and how the company was able to change its plans and priorities to best serve the sector.

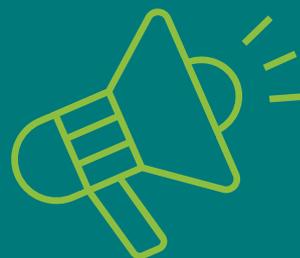
Through it all, though, activity in the Hort Innovation Papaya Fund remained strong. While some activities inevitably changed under COVID-19, it was still a solid year of investment. There was some \$225,000 invested in R&D for the industry, plus \$108,000 in marketing. Read on for an overview of what was delivered.

2019/20 Papaya Fund snapshot



\$225,000

invested in R&D



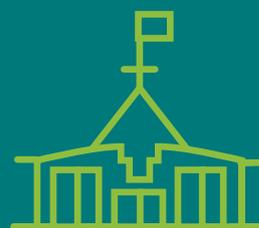
\$108,000

invested in marketing



10

active R&D
investments



\$382,000

in levies collected
by the government and passed
on to Hort Innovation for investment

Did you know?



\$27.5M

While production volume has remained steady in recent years, with an average of 15,000 tonnes per year, production value grew from \$24.9 million in 2013/14 to nearly \$28 million in 2018/19



65%

Red papaya accounts for 65 per cent of Australian production, while yellow papaya accounts for 35 per cent



85%

The majority of Australia's papaya production – 85 per cent – happens in Queensland, with the remainder grown in Western Australia and the Northern Territory

These facts and more can be found in the Australian Horticulture Statistics Handbook, which is delivered by Hort Innovation each year. The handbook is packed with horticulture statistical information and analysis for some 75 categories, for use by individual industries and the wider sector. The 2018/19 edition was released in early 2020 and, for the first time, features an interactive dashboard format for desktop users. See www.horticulture.com.au/horticulture-statistics-handbook.



Just some of the things delivered for you during the year:

- ✓ **The industry communications program**, delivering the *Papaya Press* magazine and the industry-facing section of www.australianpapaya.com.au
- ✓ **A guide to maximising pollination in papaya orchards**, available at www.bit.ly/papaya-pollination*
- ✓ **The papaya Harvest to Home dashboard** providing regular consumer behavioural data and insight reporting, at www.harvesttohome.net.au
- ✓ **New sensory work to support the development of premium papaya varieties** as part of the ongoing breeding and evaluation program (p7)
- ✓ **Preparation support for fall armyworm**, including emergency minor use permits and an educational podcast series, www.bit.ly/armyworm-podcast*
- ✓ **Information and data to assist through COVID-19**, including the new *Hort Innovation Insights* podcast (www.horticulture.com.au/webinars) and regular consumer attitude and behaviour information (www.horticulture.com.au/impact-monitor)*
- ✓ **A domestic marketing campaign** and, launched during COVID-19, **The Good Mood Food** across-horticulture campaign* (www.horticulture.com.au/the-good-mood-food)
- ✓ **Investments in the Hort Frontiers strategic partnership initiative** to address longer-term and often complex issues and opportunities critical to the future of Australian horticulture – see www.horticulture.com.au/hort-frontiers*
- ✓ **Projects supported by grants** secured by Hort Innovation, ranging from cross-sector Rural R&D for Profit Initiatives to horticulture-specific work to aid in access to crop protection products – see the Hort Innovation Annual Report 2019/20 for more*

*These initiatives were delivered outside of the Hort Innovation Papaya Fund and, in most instances, did not involve the industry levy

Making investments in 2019/20

The below diagram shows how Hort Innovation makes strategic levy investments on behalf of horticulture industries. The papaya R&D and marketing levies were invested this way during the year, guided by the Papaya Strategic Investment Plan and advice from the industry’s investment advisory panel.



To learn more about funding specific to the Hort Innovation Papaya Fund, visit www.horticulture.com.au/papaya. During the year, other sources of funding were also used to support activities for the benefit of Australian horticulture, including grant funding secured by Hort Innovation, co-investment dollars brokered through our Hort Frontiers initiative and centralised strategic levy reserves.

Investment planning and performance

During 2019/20, Hort Innovation continued to track investment expenditure against the Papaya Strategic Investment Plan, while looking towards new developments in 2021. Access an at-a-glance copy of the current investment plan at www.bit.ly/papaya-plan.

A performance analysis is coming

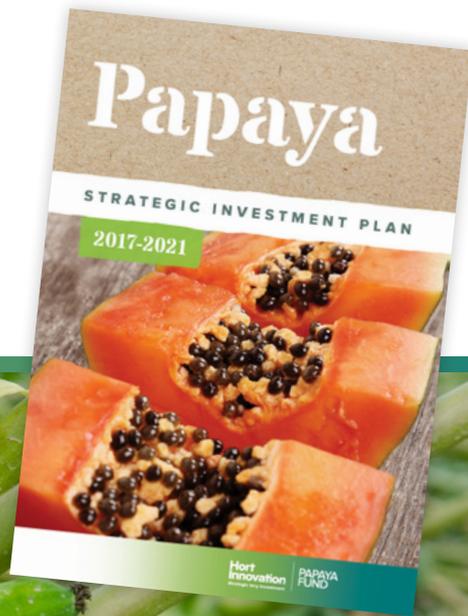
The industry's investment plan outlines key goals and outcomes for levy investment. With the plan due for renewal in 2021, Hort Innovation is undertaking a performance analysis to see how the industry has progressed against the current plan's ambitions. This will also help guide ongoing priorities for investment. Look for information to be published at www.horticulture.com.au/papaya in 2021.

See how your levy investments align to the industry's current plan

You can see how investment expenditure in the Hort Innovation Papaya Fund aligns to the industry's current strategic investment plan with the interactive analysis information available from www.bit.ly/papaya-investment. The analysis shows the allocation of funding against each of the papaya plan's outcomes, and gives an indication of the projects that are aligned to each outcome.

New ways of obtaining advice and setting priorities

In 2020/21, Hort Innovation will be implementing new ways of obtaining advice and setting priorities for industry investments. Renewed industry investment plans, plus new yearly (or as needed) program plans and new ways of consulting more broadly will mean more efficient investment and better outcomes for industry. Watch this space.



R&D project list 2019/20

NEW INVESTMENTS IN 2019/20

MT18006	Biosecurity plan for the lychee, papaya and passionfruit industries
MT19008	Strategic Agrichemical Review Process (SARP) updates
ST19020	Generation of data for pesticide applications in horticulture crops 2020

ONGOING INVESTMENTS IN 2019/20

PP16000	Papaya industry minor use program
PP16001	Australian papaya industry communication program
PP18000	National papaya breeding and evaluation program
PP18001	Papaya clean seed program
MT17015	Consumer behavioural and retail data for fresh produce
MT18011	Ex-post impact assessment*
ST17000	Generation of data for pesticide applications in horticulture crops 2018^

* This multi-industry project was a key monitoring and evaluation investment during 2019/20 – we encourage you to find the full details at www.horticulture.com.au/mt18011

^ Activities for the papaya industry under this investment are funded wholly through the government's AgVet grant program

INVESTMENTS COMPLETED IN 2019/20

ST16008	AgVet collaborative forum
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R&D report

Take a closer look at some of the key investments in the Hort Innovation Papaya Fund during 2019/20. You can also visit www.horticulture.com.au/papaya at any time to access information on new, ongoing and completed projects, and to download resources produced by levy investments, such as fact sheets and guides.

Biosecurity plan for the lychee, papaya and passionfruit industries (MT18006)

NEW IN 2019/20

Key research provider: Plant Health Australia

Beginning in 2020, this investment is reviewing and combining biosecurity plans for the papaya, lychee and passionfruit industries. The result 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, and 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 papaya industry's current biosecurity plan is available from Plant Health Australia at www.planthealthaustralia.com.au/papaya.

National papaya breeding and evaluation program (PP18000)

Key research provider: Griffith University

Ongoing through 2019/20, new red and yellow papaya varieties are continuing to be bred and evaluated under this program. The research team is focused on delivering new elite, genetically stable cultivars that meet the needs of growers and the preferences of consumers, and that are adapted to key growing areas in northern Queensland, including the Tableland and coastal regions. The ultimate goal is to expand the marketability and profitability of the Australian papaya industry.

Following on from previous levy-funded work, PP18000 includes new sensory work involving the use of professional taste panels and flavour mapping, conducted in collaboration with the University of Queensland, to support the development of premium varieties and drive consumer acceptability and preference for Australian papaya.

Papaya clean seed program (PP18001)

Key research provider: The Queensland Department of Agriculture and Fisheries

Beginning in 2018, this investment is tasked with delivering a clean seed protocol to help protect the papaya industry against papaya sticky disease.

Papaya meleira virus 2 (PMeV2) is a seed-transmissible virus that is associated with symptom development in papaya sticky disease. Investigations have found the virus in plant lines used to generate seeds for the industry, raising the need for a clean seed program.

The work is also investigating other causal agents of the disease and raising general awareness.



Australian papaya industry communication program (PP16001)

Key research provider: Cox Inall Communications

Ongoing through 2019/20, this program is responsible for keeping Australian papaya growers and other industry stakeholders informed about key industry issues and the latest R&D and marketing activities and results in a timely way. The goal is to facilitate the uptake of new information, technologies and practices – in turn helping growers forge more productive, profitable and resilient businesses.

Communications channels that are produced and maintained by the project include:

- » The biannual magazine, *Papaya Press*, which is distributed as a hard copy to the Papaya Australia database and is also available to access online via www.australianpapaya.com.au/for-growers/papaya-press
- » The industry-facing section of the www.australianpapaya.com.au website, which continues to be evolved.

Consumer behavioural and retail data for fresh produce (MT17015)

Key research provider: Nielsen

This multi-industry investment provides 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 papaya, 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 Papaya Fund marketing plans.

Papaya industry minor use program (PP16000)

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 papaya 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 [p9](#).

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.

Data generation investments (ST17000 and ST19020)

NEW IN 2019/20 (ST19020)

Key research providers: Eurofins (ST17000) and Staphyt (ST19020)

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.

These multi-industry projects are generating the data needed to support a range of label registrations and minor use permit applications and renewals across a variety of horticulture crops, including papaya. They include **Generation of data for pesticide applications in horticulture crops 2018 (ST17000)** and **Generation of data for pesticide applications in horticulture crops 2020 (ST19020)**, both of which are supported by grant funding through the Australian Government's Access to Industry Priority Uses of AgVet Chemicals program.

Strategic Agrichemical Review Process (SARP) updates (MT19008)

NEW IN 2019/20

Key research provider: AGK Services

This short investment is facilitating a 2020 Strategic Agrichemical Review Process (SARP) for several horticulture industries, including the papaya industry. Providing an updated view of current priorities and gaps regarding pest, disease and weed control, the completed papaya SARP report will assist in directing ongoing efforts to ensure the availability of and access to effective chemical controls. This may relate to pursuing chemical registrations with agrichemical companies, or minor use permits.

Minor use permits

The Hort Innovation Papaya 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.

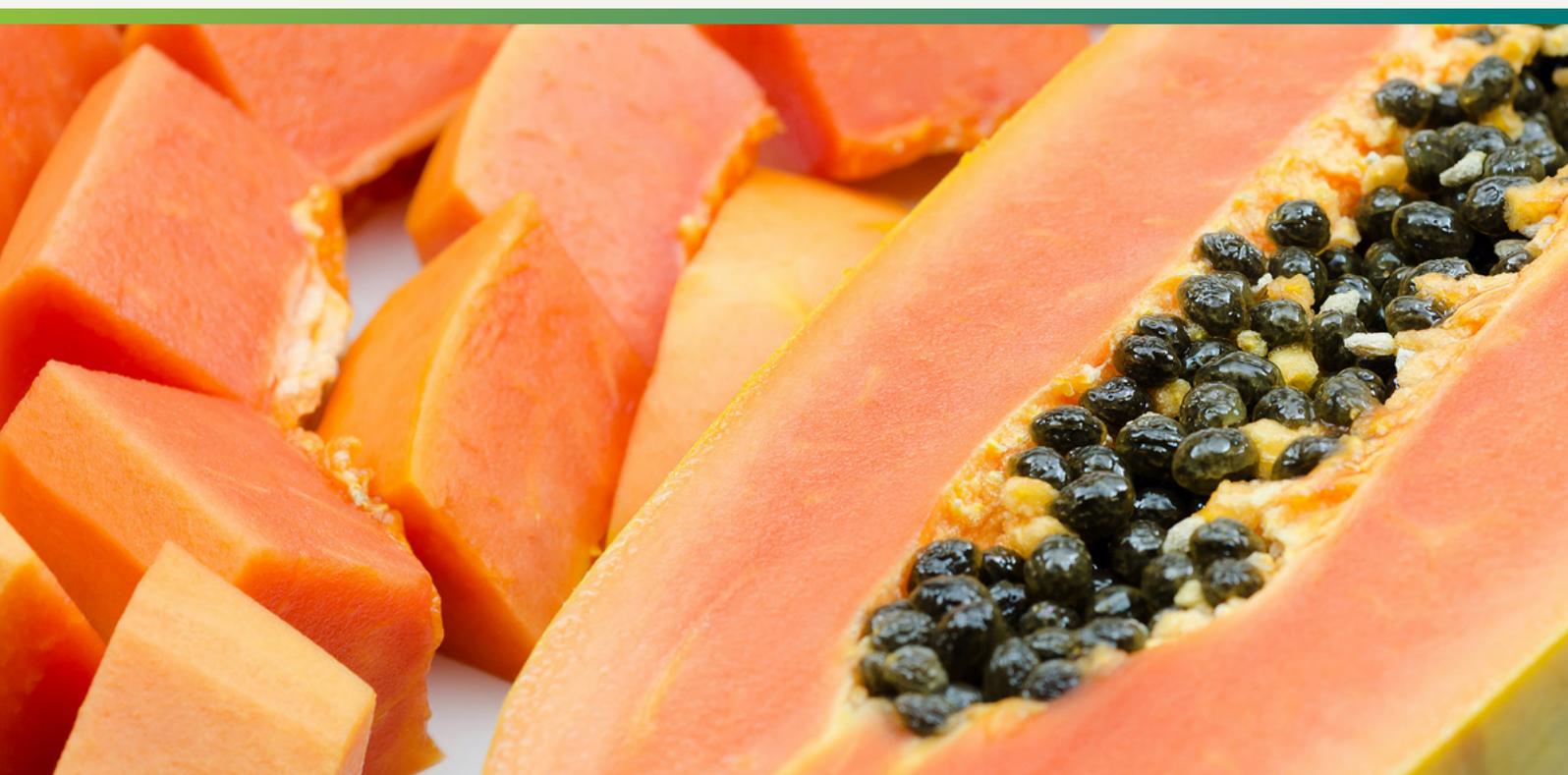
For full details on these activities and links to relevant information, visit www.bit.ly/minor-use-papaya.

Permits in 2019/20

During the 2019/20 financial year, successful renewals for PER12592 and PER80746 and a new emergency use permit PER89170 were prepared by Hort Innovation and submitted to the APVMA, facilitated through the **Papaya industry minor use program (PP16000)**.

Meanwhile, fall armyworm – an incredibly destructive exotic pest – was detected on Australian shores for the first time in 2020. To support readiness and protect the horticulture sector, Hort Innovation was involved in securing emergency permits for crop protection chemicals, with all horticulture industries having at least one effective option available to them by the end of 2019/20. For the papaya industry, PER89241 and PER89870 were obtained for this reason.

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 papaya industry, current as of 21 September 2020.

PERMIT ID	DESCRIPTION	DATE ISSUED	EXPIRY DATE	PERMIT HOLDER
PER12592 Version 2	Chlorothalonil and difenoconazole / Papaya / Black spot and brown spot	14-Aug-11	30-Apr-25	Hort Innovation
PER13076 Version 2	Propamocarb / Papaw or papaya (seedlings) / Damping off	05-Apr-12	31-Mar-22	Papaya Australia C/Hort Innovation
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
PER13671 Version 3	Beta-cyfluthrin (Bulldock 25 EC) / Papaya / Fruit-spotting bug and banana-spotting bug	28-Nov-12	28-Feb-23	Papaya Australia C/Hort Innovation
PER14098 Version 2	Etoxazole (Paramite Selective Miticide) / Papaya / Two-spotted mite	03-Oct-13	30-Jun-23	Papaya Australia
PER14097 Version 3	Abamectin and fenbutatin oxide / Papaya / Two-spotted mite <i>Please note: Abamectin use now registered on various labels</i>	31-Oct-13	30-Jun-23	Papaya Australia
PER12450 Version 6	Trichlorfon / Specified fruit crops / Fruit fly	06-Oct-11	31-Jan-21	Growcom
PER14417 Version 2	Copper as hydroxide / Papaya / Papaya fruit rot (Phytophthora)	28-Feb-14	31-Dec-24	Hort Innovation
PER14490 Version 2	Metalaxyl-M (Ridomil Gold), metalaxyl (Zee-mil) + phosphorous acid / Papaya / Phytophthora root rot and pythium	04-Apr-14	31-Mar-22	Papaya Australia C/Hort Innovation
PER13859	Dimethoate / Orchard clean-up – fruit fly host crops following harvest / Fruit fly	09-Feb-15	31-Jul-24	Growcom
PER80746 Version 2	Ethephon / Papaya / Fruit de-greening	18-Aug-15	31-Aug-25	Hort Innovation
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
Emergency use permit PER89170	Fludioxonil (Scholar Fungicide) / Papaya / Anthracnose and stem end rot (post-harvest dip or overhead treatment)	12-Feb-20	28-Feb-21	Hort Innovation
PER89241	Spinetoram / Tropical inedible peel / Fall armyworm	06-Mar-20	31-Mar-23	Hort Innovation
PER89870	Spinosad (Entrust organic) / Various including tropical and sub-tropical fruit crops (inedible peel) / Fall armyworm	21-Jul-20	31-Jul-23	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.

Keep up to date! Find monthly minor use permit updates in our *Growing Innovation* e-newsletter. Sign up for free at www.horticulture.com.au/sign-up.

Marketing report

Hort Innovation is responsible for investing the papaya marketing levy into a range of activities to drive awareness and consumption of the fruit, under the Hort Innovation Papaya Fund. Read on for a snapshot of activities and results from the 2019/20 marketing program.



The 2019/20 marketing program marked the second year of the three-year strategy to drive category growth for Australian Papaya. The focus of the strategy is on growing household reach by positioning Australian Papaya as a delicious and ideal fruit for families, particularly with its strong health benefits across the different life stages.

Public relations (PR)

As part of securing media coverage and conversation about papaya, a number of different activities were undertaken. Overall, these activities delivered a total of 15.5 million opportunities for people to see papaya content through a mixture of traditional and online coverage. This result represents an additional 3.3 million people being exposed to papaya content compared to last year.

The aim of the media outreach was to remind consumers of papaya availability, especially during the peak seasons of autumn and spring. Media materials included two seasonal press releases, new papaya-inspired recipes from influencers, the papaya health report and a 'tips and tricks' fact sheet. These materials were used to encourage media and influencers to drive conversation and coverage about Australian passionfruit during the spring and autumn peaks. The desired outcome was for consumers to develop confidence in selecting, storing and using papaya as part of a healthy diet.

Social media

The Papaya Australia Facebook page (www.facebook.com/papayaaustralia) performed exceptionally well, with a strong fan base and high level of community engagement (10 per cent average engagement rate versus the five per cent target).

A mix of created and curated content that focused on varietal information, grower updates and recipe inspiration was employed to drive awareness, education, and inspiration among target audiences. Grower content appealed greatly to fans and when accompanied with a seasonal update it garnered high engagement and reach on the page. With two posts per week throughout the campaign, the page delivered 1.8 million opportunities for Australian consumers to see papaya content.

Influencers

To further engage media around Australian Papaya and to amplify key messages to consumers, particularly during the spring peak, four key influencers were selected to produce bright, summery imagery for recipes that focused on parenting and health. The influencers the papaya marketing program worked with were Leah Itsines, Healthy Little Foodies, Rebecca Hawthorne and Panaceas Pantry. This activity provided two million opportunities for people to see beautiful papaya content.

Sampling events

In 2019, the marketing program conducted in-store sampling during September and October in Woolworths and Coles as well as independent grocery stores. The objective was to convert shoppers to buyers and to communicate key messages about the benefits of papaya. Over the course of this activity over 26,000 samples were distributed across 183 stores.

Impact of COVID-19

Due to the unfolding COVID-19 situation, the industry's social media content calendar was reviewed to ensure that communications were appropriate in the current climate while continuing to inspire Australians to eat papaya. With increasing interest in home cooking and health during this period, the review included the following decisions:

- » Refining the tone of voice to ensure contextual appropriateness (for example, no referencing 'entertaining with friends')
- » Ensuring messaging was helpful and useful during social distancing / isolation periods, such as showcasing recipes great for freezing, or sharing tips on extending the life of fresh produce through proper storage techniques
- » Dialing up health messaging to keep consumers aware of the nutritional benefits eating papaya can provide



- » Continuing educational messaging on selection, usage and storage ideas.

Also, the papaya marketing program had planned to run a sampling stand as part of the Tropical Fruit Exhibit at the Sydney Royal Easter Show in April. Unfortunately, the event was cancelled due to incoming COVID-19 restrictions.



THE GOOD MOOD FOOD

THE GOOD MOOD FOOD

In 2019/20, Hort Innovation created The Good Mood Food campaign to deliver an immediate and enduring behaviour-change message to motivate more Australians to eat more fruit, vegetables and nuts.

With the central message that these Aussie horticulture products are natural mood boosters, the campaign was developed to support the sector through the impacts of recent challenges including bushfires, drought, floods and of course COVID-19 – the effects of which continue to be felt in consumer spending and purchasing behaviour.

Initially running between May and November 2020, The Good Mood Food has been seen across the country on TV; in newspapers; on radio and music streaming services; online (including on YouTube and TV catch-up services); on social media; and via retail partnerships and advertising screens near supermarkets.

In July, 56 per cent of surveyed consumers said The Good Mood Food had positively influenced their shopping habits, and by the end of campaign's run, 98 per cent of all Australians were expected to be reached.

Learn more at www.horticulture.com.au/the-good-mood-food.

Financial statement

Financial operating statement 2019/20

	R&D (\$)	MARKETING (\$)	TOTAL (\$)
	2019/20 July – June	2019/20 July – June	2019/20 July – June
OPENING BALANCE	360,695	35,540	396,235
Levies from growers (net of collection costs)	192,033	189,869	381,903
Australian Government money	146,985	–	146,985
Other income*	4,803	359	5,162
TOTAL INCOME	343,820	190,229	534,049
Project funding	224,758	107,551	332,308
Consultation with and advice from growers	456	196	652
Service delivery – base	11,429	5,505	16,934
Service delivery – shared	17,326	7,905	25,231
Service delivery – fund specific	40,000	20,000	60,000
TOTAL EXPENDITURE	293,969	141,156	435,125
Levy contribution to across-industry activity	–	–	–
CLOSING BALANCE	410,546	84,612	495,158
Levy collection costs	4,774	4,639	9,413

* Interest, royalties

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

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