What happened in the Papaya Fund last year?

Annual Report 2021/22

Hort Innovation
Strategic levy investment

PAPAYA FUND

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 Papaya Fund. We're proud of the work we do to help drive productivity, profitability, and demand for papaya growers and the horticulture sector.

Read on for an overview of what Hort Innovation delivered in the Papaya Fund during the year.

We also encourage you to download a copy of the overarching Hort Innovation Annual Report 2021/22 at www.horticulture.com.au/annual-report-portal to see how Hort Innovation worked to benefit the horticulture sector during the year.

In this report...

Papaya Fund snapshot 2021/22

$232,032
invested in R&D

$156,826
invested in marketing

$334,551
in levies collected
by the Government and passed on to Hort Innovation for investment

Industry facts

44%
Papaya production since 2012/13 has grown 44 per cent to 18,330 tonnes in 2020/21

48%
The value of papayas in the foodservice sector has increased 48 per cent compared to that of its pre-COVID value in 2018/19

85%
The majority of Australia's papaya production happens in Queensland (85 per cent), 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. See **www.horticulture.com.au/horticulture-statistics-handbook**.

Consumer insights

5.7kg
Australian households purchased an average of 5.7kg of papaya in 2021/22

1.2 million
1.2 million Australian households purchased papaya in 2021/22

These insights were made available through the Harvest to Home platform (**www.harvesttohome.net.au**) delivered as part of an investment providing regular consumer behaviour data and insight reporting.

Just some of the things delivered for you during the year

Access to consumer insights through multi-industry investments to understand consumer behaviours, attitudes and purchase intentions – see www.horticulture.com.au/papaya

Collection of production figures for papaya to support growers to make more informed decisions – read more at hortinn.com/pp20003

A communications and extension program to support papaya growers in adopting improved practices on-farm and keeping up-to-date with the latest industry news – see hortinn.com/pp20000

Continued work into developing premium papaya varieties through the levy-funded breeding and evaluation program (hortinn.com/pp18000) and a Hort Frontiers investment determining the genetics of sensory preferences (hortinn.com/as19003)

A domestic marketing program – read more on p10

The papaya Harvest to Home dashboard providing regular household purchase data and insight reporting at www.harvesttohome.net.au

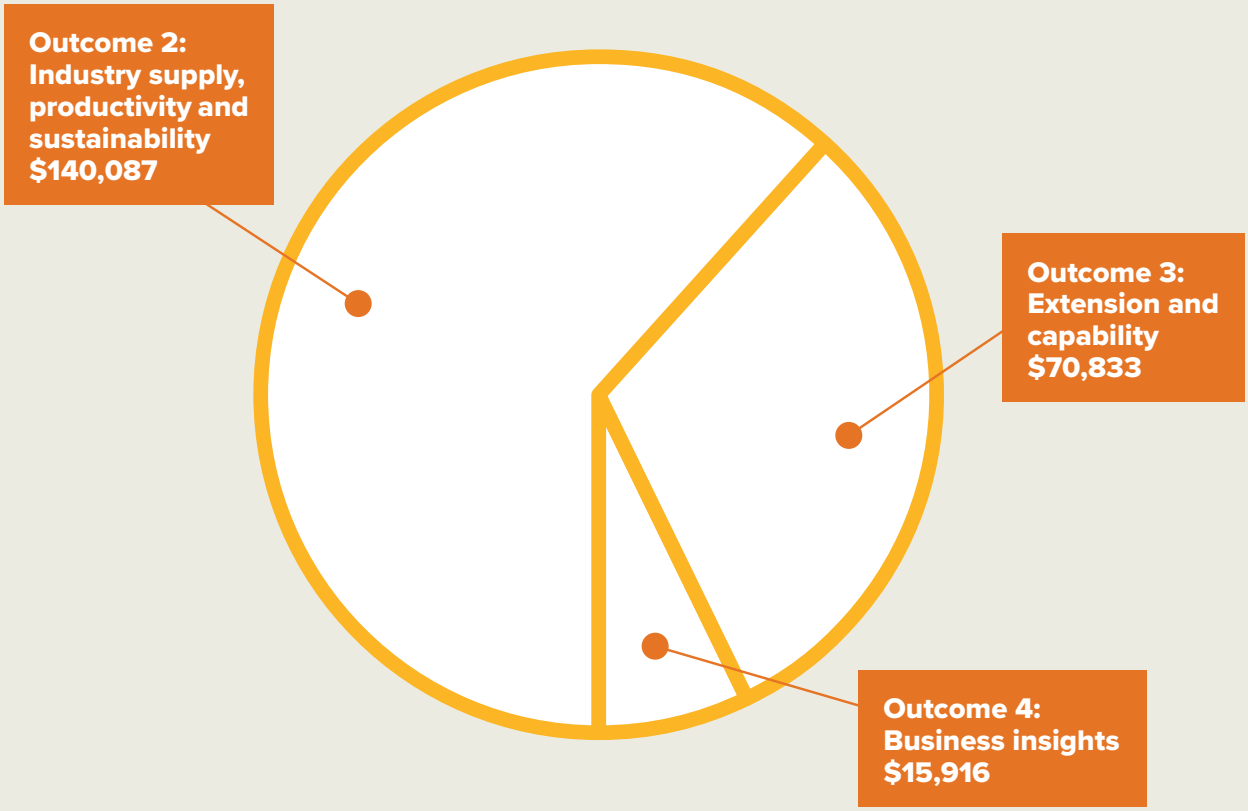
Investments in the Hort Frontiers strategic partnership initiative to address longer-term and often complex issues and opportunities critical to the future of Australian horticulture – see www.horticulture.com.au/hort-frontiers*

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 2021/22 for more details*

You can visit www.horticulture.com.au/papaya at any time to access information on new, ongoing and completed projects, and to download resources produced by your levy investments.

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

Here's how your R&D levy was invested over the year



The papaya Strategic Investment Plan (SIP) guides investments specific to the Hort Innovation Papaya Fund. The SIP features priority outcome areas identified and agreed upon by the industry. Hort Innovation works to invest in R&D and marketing initiatives aligned to these.

The above chart shows how project expenditure in the Papaya Fund during 2021/22 was aligned to the SIP. We have allocated each project to a SIP outcome based on its primary objective.

Which projects were in each of the SIP outcome areas?

Outcome 1: Demand creation

Demand creation supports the Australian papaya industry to develop existing and future domestic markets.

Marketing activities during 2021/22 also contributed towards the demand creation outcome. You can read more about this year's papaya marketing campaign on p10.

Outcome 2: Industry supply, productivity and sustainability

The Australian papaya industry has increased profitability, efficiency and sustainability through innovative R&D, sustainable BMPs and varieties.

Project title and code	2021/22 investment	Status	More information
Plant Biosecurity Research Initiative – Phase 2 (HA19007)	$232	Ongoing	
Biosecurity plan for the lychee, papaya and passionfruit industries (MT18006)	$2,890	Ongoing	hortinn.com/mt18006
Regulatory support and coordination (pesticides) (MT20007)	$829	Ongoing	hortinn.com/mt20007
Papaya industry minor use program (PP16000)	$700	Ongoing	hortinn.com/pp16000
National papaya breeding and evaluation program (PP18000)	$90,000	Ongoing	hortinn.com/pp18000
Papaya clean seed program (PP18001)	$45,436	Ongoing	hortinn.com/pp18001

Outcome 3: Extension and capability

Improved capability and an innovative culture in the Australian papaya industry maximises investments in productivity and demand.

Project title and code	2021/22 investment	Status	More information
Papaya industry extension and communications program (PP20000)	$70,833	Ongoing	hortinn.com/pp20000

Outcome 4: Business insights

The Australian papaya industry is more profitable through informed decision-making using consumer knowledge and tracking, production statistics and benchmarking and independent reviews.

Project title and code	2021/22 investment	Status	More information
Consumer demand spaces for horticulture (MT21003)	$957	Ongoing	hortinn.com/mt21003
Consumer behavioural data program (MT21004)	$2,182	Ongoing	hortinn.com/mt21004
Foodservice foundational market insights (MT21011)	$5,459	Completed	hortinn.com/mt21011
Pilot program: Consumer usage, attitude and brand tracking (MT21201)	$229	Ongoing	hortinn.com/mt21201
Consumer usage and attitude tracking 2022/23 (MT21202)	$790	Ongoing	hortinn.com/mt21202
Papaya market supply data capture and analysis (PP20003)	$6,300	Ongoing	hortinn.com/pp20003

Financial operating statement

Papaya Fund
Financial operating statement 2021/22

	R&D ($)	Marketing ($)	Total ($)
	2021/22 July – June	2021/22 July – June	2021/22 July – June
OPENING BALANCE	**497,873**	**134,696**	**632,569**
Levies from growers	167,417	167,134	334,551
Australian Government money	136,897	–	136,897
Other income*	892	175	1,068
TOTAL INCOME	**305,206**	**167,309**	**472,516**
Project funding	232,032	156,826	388,858
Consultation with and advice from growers	845	362	1,207
Service delivery	40,916	34,351	75,267
TOTAL EXPENDITURE	**273,793**	**191,539**	**465,333**
CLOSING BALANCE	**524,489**	**105,676**	**630,165**
Levy collection costs	4,797	4,790	9,587

*Interest, loyalties

Levy collection costs – These are the costs associated with the collection of levies from industry charged by Levy Revenue Services (LRS)
Service delivery – Also known as Corporate Cost Recovery (CCR), this is the total cost of managing the investment portfolio charged by Hort Innovation

Making sure that levy investment decisions align with industry priorities

What will be the Papaya Fund's focus over the next five years?

Hort Innovation developed the papaya Strategic Investment Plan (SIP) in 2021 to reflect current priorities for the papaya industry, involving extensive consultation with papaya growers and industry stakeholders, including Papaya Australia. The SIP is the roadmap that helps guide Hort Innovation's oversight and management of individual levy industry investment programs.

The papaya SIP lays the foundation for decision-making in levy investments and represents the balanced interests of the papaya industry. The most important function of the SIP is to make sure that levy investment decisions align with industry priorities.

The papaya SIP identifies four outcome areas that will contribute to the productivity and profitability of the sector. They are:

- Industry supply, productivity and sustainability
- Demand creation
- Extension and capability
- Business insights.

What projects will the Fund be investing in next year?

The papaya Annual Investment Plan (AIP) 2022/23 details how Hort Innovation spends levy funds over 12 months. The papaya industry SIP guides investment decisions, and our consultation process prioritises investments based on potential impact and levy fund availability.

Hort Innovation publishes Annual Investment Plans each year over the lifespan of the SIP and advises industry stakeholders via various communication channels.

Hort Innovation will continue to report on fund performance regularly, focusing on outcomes and the impact of investments.

Visit www.horticulture.com.au/papaya-fund-management to view both documents and better understand how Hort Innovation invests your levy.

A journey towards using air induction nozzles

An extension and communication program for the papaya industry is helping growers adopt improved practices on-farm

The investment *Papaya industry extension and communications program* (PP20000) is tasked with supporting Australian papaya growers in adopting improved practices on-farm and keeping up to date with the latest industry news, information, resources and technologies. The program is improving knowledge, awareness, skills and aspirations of papaya growers and other supply chain stakeholders in order to increase the profitability and sustainability of the Australian papaya industry.

Delivered by the Queensland Department of Agriculture and Fisheries (QDAF), the project team is working collaboratively with the papaya industry, relevant stakeholders and value chain members to co-design and implement a program that focuses on:

- Agronomic practices which improve input efficiencies
- Integrated pest and disease management (particularly Papaya meleria virus and Phytophthora)
- Improved post-harvest value chain management practices.

A papaya spray workshop was held in April 2022 as part of the program, hosted by Michael Oldano of RMC Farming in Cowley, Queensland. The workshop revisited key concepts behind air blast spraying in papaya and provided practical demonstrations of newer technologies in air blast spraying such as air induction nozzles.

Michael is likely to be the first grower to use air induction nozzles on his sprayer in the papaya industry after hosting the workshop. He says that it has been a journey and he has come through with some learnings that I'm happy to pass onto other growers in the industry.

Meet Michael Oldano, papaya grower from Cowley, Queensland

Michael and his wife Claudia grow papaya and sugarcane at their property in Cowley, South of Innisfail, with their two sons, Adam and Josh, who are both interested in carrying on the family business.

Why did you participate in the spray efficiency workshop?

"Spray coverage was identified as a topic growers wanted more information about as part of our new extension and communications program. I put my hand up to host the workshop as I had just purchased a second-hand sprayer to retire my old one, and I was interested in making sure it was set up correctly for my farm.

I was also curious about looking at spray coverage of the top of my papaya leaves, as I have been dealing with the emerging pest, African spider mite, which colonises the top of the leaf, as opposed to the bottom of the leaf."

Michael Oldano, papaya grower, Cowley, Queensland.

Continued

Did you learn anything?

"The workshop and exposure to new concepts such as air induction was just the beginning of my journey to get the basics right. The spray workshop demonstrated the use of air induction nozzles to improve coverage on the upper side of the leaf and its success meant that I immediately saw a place for air induction in my own set up.

The workshop also connected me with industry members who had experience in setting up sprayers. Given my interest in the topic, there has been a lot of follow up from other growers which has assisted me in my own journey. Since the workshop I have trialled three different nozzle arrays on my sprayers and I have improved my set up by changing the number of air induction nozzles used, their orientation and their spray quality. I'd like to thank Graham Betts from AskGB, Dave Doolan from GF Rural and Allan Blair for their assistance throughout this process.

Now I'm in a position where I can share my own learnings with other growers. For example, one of key pieces of feedback I have for growers pursuing air induction nozzles is the need for excellent filtration in the systems. I needed to install an additional 80mm in-line filter as well as individual nozzle sieves."

I'm very optimistic that on my third attempt, I now have the set-up exactly right for my orchard, but I'll be engaging with my agronomist for the final nod that we have optimal coverage."

Michael Oldano, papaya grower, Cowley, Queensland

What has been the benefit?

"I'm very optimistic that on my third attempt, I now have the set-up exactly right for my orchard, but I'll be engaging with my agronomist for the final nod that we have optimal coverage. With my current step, I'm also finding that I have been able to reduce the amount of water volume being sprayed, and the amount of chemical (particularly copper) that I'm using – which is a big saving.

My sons are also very interested in the extension and communications program, and it has been a great opportunity for me to impart some of my own experience with them, as well as learn together and solve a problem."

Getting papaya on more Aussie plates

Hort Innovation is responsible for investing the papaya marketing levy into a range of activities to drive awareness and consideration. Here's a quick look at some of the activities and achievements in 2021/22.

In 2021/22, the Australian Papayas social media campaign was designed to drive awareness and encourage consumers to start the weekend with a "taste of the tropics." This was achieved by creating engaging social media content targeted at 'independent singles' with delicious recipes and fresh imagery.

Social media

Social media activity aimed to increase awareness of the Australian papaya season amongst our target audience via an 'always-on' strategy on Facebook and Instagram. One post was shared on each channel weekly, with 68 posts during the campaign.

Social media activity educated and reminded consumers about the fruit and seasonal supply. This evoked inspiration for mouth-watering usage ideas and kept Australian papaya on consumers' shopping lists.

The posts with the highest engagement rates (likes and comments) were a recipe for 'mango, banana and papaya breakfast parfaits' on Instagram (1,066 engagements, 27 per cent engagement rate) and an image of 'papaya, chia and oat parfaits' on Facebook (1,293 engagements, 6 per cent engagement rate).

Some highlights of the campaign were:

- More than 2.1 million impressions across Facebook and Instagram (higher than the KPI of 1,850,000 impressions)
- More than 28,300 engagements across Facebook and Instagram, against a KPI of 28,000
- Average engagement rate on Facebook of 4 per cent and 13 per cent on Instagram (against KPIs of 4 per cent and 10 per cent, respectively)

Recipe development

Renowned food photographer Bonnie Coumbe was introduced to the campaign to create a suite of new recipes and imagery for Australian papaya. These were designed to excite and inspire consumers with refreshing, nourishing and adventurous new ways to enjoy papaya.

Leaning into the 'weekend breakfast' occasion, to appeal to the 'independent singles', the following assets were created:

- Three new papaya recipes, with 40+ new recipe images: BBQ papaya boats, papaya and ginger jam and papaya pancakes
- 60+ hi-res produce lifestyle images.

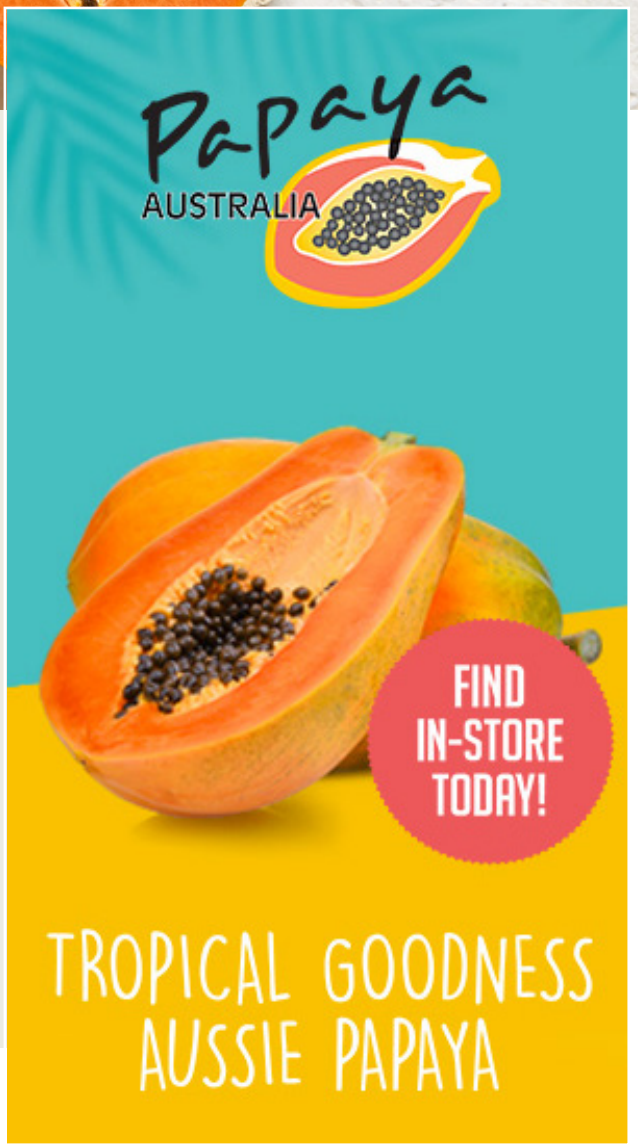
Brand partnership

Australian Papaya benefited from a first-time partnership with News Corp, with home page takeovers, simple usage applications and recipes on Taste.com.au, Australia's top food website.

The partnership has resulted in 1.33 million impressions across the site, and 2,881 page views from inclusions, such as:

- Two Taste TV packages with pre-roll
- Social video and surrounding media
- Homepage takeovers
- Recipe recommendations.

The high engagement has inspired consumers to consider papaya in their everyday shops and to showcase the fruit in their everyday meals.



In 2021/22 the Hort Innovation Marketing function underwent a significant shift in their approach to investing marketing levies. You can read more about this in the 2021/22 Hort Innovation Company Annual Report at www.horticulture.com.au/annual-report-portal.

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 to manage pests, weeds and diseases.

For full details on these activities and links to relevant information, visit hortinn.com/papaya-minor-use.

Current permits

Below is a list of minor use permits for the papaya industry, current as of 15 August 2022.

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
PER91912	Propamocarb / Papaw or papaya (seedlings) / Damping off	16-Dec-21	31-Dec-26	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 Please note: Abamectin use now registered on various labels	31-Oct-13	30-Jun-23	Papaya Australia
PER14417 Version 2	Copper as Hydroxide / Papaya / Papaya fruit rot (Phytophthora)	28-Feb-14	31-Dec-24	Hort Innovation
PER14490 Version 3	Metalaxyl-M (Ridomil Gold), Metalaxyl (Zee-mil) + Phosphorous acid / Papaya / Phytophthora root rot and pythium	04-Apr-14	31-Mar-27	Hort Innovation
PER13859	Dimethoate / Orchard cleanup – 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

Continued

Current permits (continued)

Permit ID	Description	Date issued	Expiry date	Permit holder
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
PER89170 Version 2	Fludioxonil (Scholar fungicide) / Papaya / Anthracnose and stem end rot (post-harvest dip or overhead treatment)	12-Feb-20	28-Feb-24	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
PER12450 Version 7	Trichlorfon / Specified fruit crops / Fruit fly	06-Oct-11	30-Nov-25	Hort Innovation
PER89943	Trivor Insecticide (acetamiprid + pyriproxyfen) / Custard apples, lychee, papaya, passionfruit, persimmons and olives / Various pests including fruit spotting bugs, olive lace bug, fruit fly suppression, mealybugs, scale insects, plant hoppers, leafhoppers and light brown apple moth	29-Jan-21	31-Jan-24	Hort Innovation

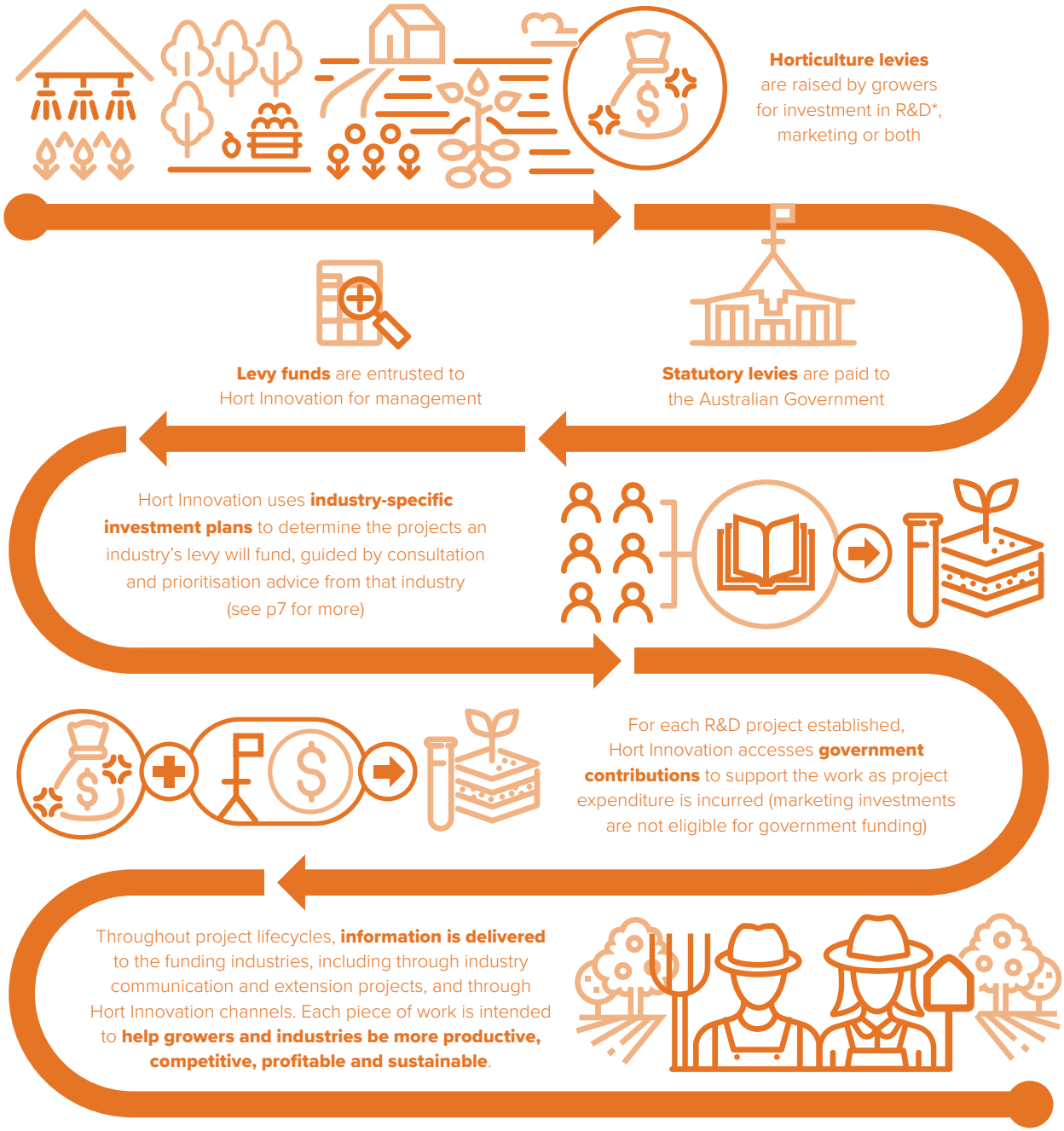
All efforts have been made to provide the most current, complete and accurate information on these permits, however you should always confirm all details on the APVMA website at portal.apvma.gov.au/permits. Details of the conditions of use associated with these permits can also be found on the APVMA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

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.

How strategic levy investments are made in the Papaya Fund

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 2022-2026 and advice from the industry's investment advisory panel.



* Encapsulating extension and international trade

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 reserve.

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