

Macadamia Fund

2017/18
ANNUAL REPORT



Content

Welcome	1
Making levy investments	2
R&D project list 2017/18	3
R&D report	5
Minor use permits	10
Marketing report	12
Financial statement	17

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SUMMARY BY
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We're for growers

At Hort Innovation it's our job to work with industry to invest the macadamia levy and Australian Government contributions into initiatives to help growers be as productive and profitable as possible – and 2017/18 was another fantastic year of growing better, together.

With more than \$2.36 million invested by Hort Innovation into R&D for the macadamia industry during 2017/18, I'm happy to be able to share with you all the key insights in this Hort Innovation Macadamia Fund Annual Report.

You'll find a top-level list of all R&D investments from the year on p3, and can explore the research projects in more detail from p5. Just some of the highlights include strong new and ongoing investments in pest and disease management, work to deliver new macadamia varieties and rootstocks, and continued programs to help growers access and implement best practice and new knowledge.

Meanwhile in marketing, the Macadamia Fund program saw some \$2.12 million invested during the year to raise the profile and consumption of Australian macadamias. Find an overview of this activity, delivered by our partner team at the Australian Macadamia Society, from p12.

On a personal note, thank you for welcoming me as your new Relationship Manager. I know that during 2017/18 my predecessor, Corrine Jasper, enjoyed getting to connect with you about everything going on in the Macadamia Fund, and getting to hear your thoughts and share ideas. During 2018/19 I'm looking forward to doing the same, with even more opportunities to connect in person and a reminder that you can reach me any time at dumi.mhlanga@horticulture.com.au or on 0447 091 186 if there's something you'd like to ask or discuss around levy investments.

I also encourage you to explore the easy ways you can stay close to all of the good things your levy is achieving throughout the year...

- » **Become a member.** Paying a levy doesn't automatically make you a Hort Innovation member, but signing up is free at www.horticulture.com.au/membership. As well as providing the opportunity for voting rights at the organisation's Annual General Meeting, Hort Innovation membership includes exclusive email alerts with industry-specific news and opportunities, direct invitations to explore investment updates and more.
- » **Check out Hortlink.** This digital publication provides an update on all new, ongoing and recently completed investments in the Hort Innovation Macadamia Fund. The latest edition is always available from the Macadamia Fund page at www.horticulture.com.au/macadamia, while members have *Hortlink* sent straight to their inboxes.
- » **Engage with your industry communications program.** The *National macadamia grower communications program* (MC15003) is dedicated to bringing the latest information and advice to growers, including news, outcomes and resources related to levy investments (look for the Hort Innovation Macadamia Fund logo to easily identify work related to your levy). The communications program is funded through the Hort Innovation Macadamia Fund and delivered by the Australian Macadamia Society, with more info available on p9.

Here's to another great year of investments and connection in 2018/19,

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Making levy investments

Discover how the macadamia levy and Australian Government contributions are invested through the Hort Innovation Macadamia Fund in this quick recap.

Where do investment ideas come from?

Great investments start with great ideas, and Hort Innovation encourages all growers and other industry participants to share their thoughts and suggestions for the research and marketing initiatives they want to see.

Ideas can be submitted any time via Hort Innovation's simple Concept Proposal Form. Visit www.horticulture.com.au/innovation-concept-pipeline.

Ideas can be for your specific industry – to be funded by the industry levy and, in the case of R&D, Australian Government contributions – or they can be for Hort Innovation's strategic partnership initiative, Hort Frontiers. Hort Frontiers projects address broader, longer-term and more complex issues facing Australian horticulture as a whole, and are funded through partnerships with co-investors. Visit www.hortfrontiers.com.au for more.

How are levy decisions made?

Let's talk 'SIPs' and 'SIAPs'!

Investments specific to the Hort Innovation Macadamia Fund are guided by the industry's Strategic Investment Plan (SIP), which was finalised by Hort Innovation in August 2017 after close consultation with growers and other industry stakeholders.

The SIP outlines key industry priorities for investment and can be found on the Macadamia Fund page at www.horticulture.com.au/macadamia.

The SIP document is used like a 'roadmap' by the macadamia Strategic Investment Advisory Panel (SIAP) – a panel made up of growers and other industry representatives, which has a key role to play in the investment process. The SIAP discusses investment ideas at consultation meetings, with the SIP guiding them, in order to provide advice to Hort Innovation on potential levy investments.

Details of the SIAP panellists and summaries of the SIAP's meetings can be found at www.horticulture.com.au/macadamia.

What happens next?

The SIAP's advice is used by Hort Innovation to work suitable ideas into project proposals. The proposals are then made public for potential delivery partners to submit responses. Current opportunities are always listed at www.horticulture.com.au/delivery-partners.

At the end of the process the 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.

How can I keep track of investments?

Newly contracted projects are announced in Hort Innovation's *Hortlink* publication, with the latest edition emailed directly to members three times a year and always available from the Macadamia Fund page at www.horticulture.com.au/macadamia. *Hortlink* also provides updates on ongoing and recently completed investments.

The industry communications program, run through the investment *National macadamia grower communications program* (MC15003), also provides regular information on levy-funded activity. See [p9](#) for more.



R&D project list 2017/18

NEW INVESTMENTS IN 2017/18

MC16018	Macadamia integrated disease management
MC17000	Independent mid-term evaluation of the national macadamia grower communications program
MC17001	Developing a macadamia industry tree stock standard
MC17004	Independent mid-term evaluation of the Australian macadamia industry innovation and adoption program
MC16012	Evaluation of a biocontrol for husk spot of macadamia
MT17015	Consumer behavioural and retail data for fresh produce
ST16008	AgVet collaborative forum

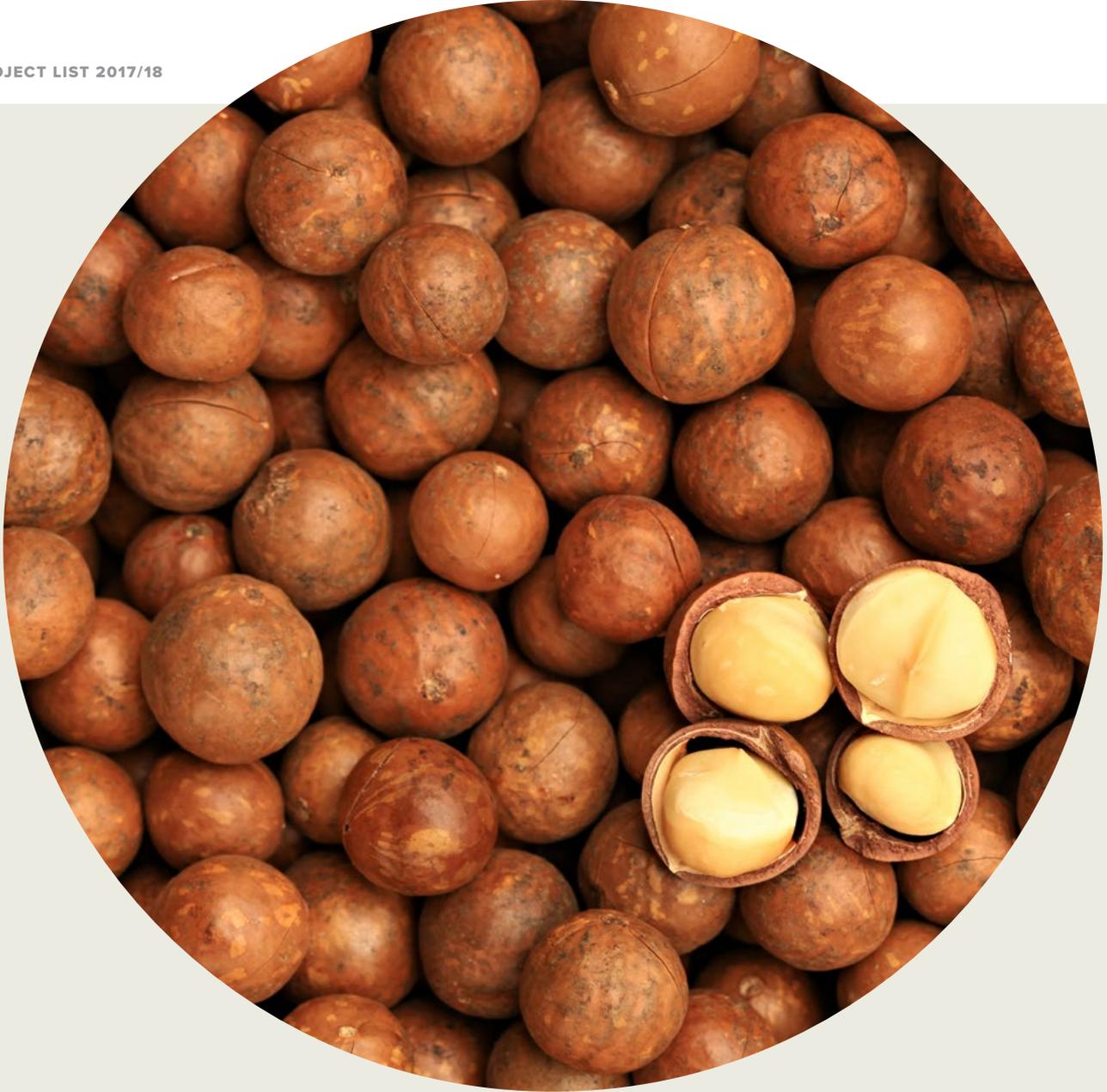
ONGOING INVESTMENTS IN 2017/18

MC11001	Macadamia Regional Variety Trials – series 3, phase 2
MC13008	Biology, species and genetic diversity of macadamia lace bugs
MC13014	Macadamia – propagation and precocity*
MC14000	Macadamia second generation breeding and conservation
MC15003	National macadamia grower communications program
MC15004	Australian macadamia industry innovation and adoption program
MC15005	Benchmarking the macadamia industry 2015-2018

ONGOING INVESTMENTS IN 2017/18 (continued)

MC15007	Still wild about macadamias – conserving a national icon*
MC15008	Establishing an open-source platform for unravelling the genetics of macadamia: integration of linkage and genome maps*
MC15009	Macadamia crop forecasting 2015-2018
MC15013	Consultancy services for crop forecasting project MC15009
MC16000	Innovation rootstocks for the Australian macadamia industry
MC16001	Macadamia harvest improvement review
MC16002	Macadamia industry minor use program
MC16003	Coordinator for the IPM program for the Australian macadamia industry
MC16004	IPM program for the Australian macadamia industry – NSW DPI
MC16005	IPM program for the Australian macadamia industry – DAF
MC16006	IPM program for the Australian macadamia industry – IPM Technologies
MC16007	IPM program for the Australian macadamia industry – University of Sunshine Coast
MC16008	IPM program for the Australian macadamia industry – BioResources
MT16005	Enhanced National Bee Pest Surveillance Program
MT16010	Horticultural trade data 2017-2019
ST16006	Generation of residue, efficacy and crop safety data for pesticide applications in horticulture crops 2017

* These flagged projects did not involve the industry levy, and were instead funded by Hort Innovation using voluntary contributions and Australian Government funding. They were carried over from the original Horticulture Australia Limited (HAL).



INVESTMENTS COMPLETED IN 2017/18

MC12007 Disease management in macadamia Industry

MC15002 Generation of residue data for pesticide minor use permit applications in macadamias

MC16700 Contribution to the 2nd International Macadamia Research Symposium 2017

MC16013 Macadamia gross value of production (GVP) analysis

MT13061 Understanding the purchase behaviour of fresh produce consumers

MT15032 Monitoring and evaluation framework for the industry Strategic Investment Plan

MT15033 Strategic Investment Plan

During the 2017/18 financial year, all Australian levy paying horticulture industries also contributed to across-industry projects addressing issues that affect horticulture as a whole. Visit www.horticulture.com.au/across-horticulture for financial documents and information on this program.

R&D report

Take a closer look at some of the key levy investments in the Hort Innovation Macadamia Fund during 2017/18. 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/macadamia as they become available.

Macadamia integrated disease management (MC16018)

NEW IN 2017/18

Key research provider: The University of Queensland

Beginning in late 2017, this project is tasked with delivering a holistic integrated disease management program – which is compatible with integrated pest management – to increase the productivity and profitability of macadamia growers and the Australian macadamia industry at large.

Its work includes a combination of research, training and communication activities, to improve management approaches and diagnostic capabilities for a range of priority diseases for the industry, including husk spot, Phomopsis husk rot, flower bight complex, Phytophthora root rot, and branch dieback. Specific research activities include...

- » Building a better understanding of the biology and spread of priority diseases
- » Looking at disease resistance, including investigating varietal susceptibility and developing tests for screening germplasm for resistance traits
- » Diagnostic and surveillance work, including developing and assessing diagnostic protocols and working towards early detection and characterisation of new and emerging pathogens
- » Crop protection activities including screening and looking at the efficacy of crop protection products, developing use patterns for them and developing disease management strategies.

Developing a macadamia industry tree stock standard (MC17001)

NEW IN 2017/18

Key research provider: Nursery & Garden Industry Australia

Contracted by Hort Innovation in early June 2018, this new investment will develop a tree stock standard that will help boost macadamia orchard productivity, through improvement in nursery stock physiology as well as pest management. The project will take existing guidelines under the Nursery Industry Accreditation Scheme Australia (NIASA) Best Management Practice program and add to them with a dedicated Macadamia Nursery Stock Standard Appendix – listing the specific criteria required for growing macadamia nursery stock to a standard that meets industry expectations, including around form, graft, roots and trueness to type.

Consumer behavioural and retail data for fresh produce (MT17015)

NEW IN 2017/18

Key research provider: Nielsen

Contracted in June 2018, this multi-industry investment is tasked with providing regular consumer behaviour data and insight reporting to a range of industries, including the macadamia industry. This 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 will be available to support strategic activities, as well as Hort Innovation Macadamia Fund marketing plans.

At the time of writing, the data and insights were soon to be easily accessible via a new online dashboard – look for further information in industry and Hort Innovation channels as it becomes available.

This project represents an evolution of previous investment *Understanding the purchase behaviour of fresh produce consumers* (MT13061).





Contribution to the 2nd International Macadamia Research Symposium 2017 (MC16700)

NOW COMPLETE

Key research provider: The University of Queensland

This investment supported industry participation – including through student scholarships – at the International Macadamia Research Symposium, held in Hawaii during September 2017, as well as the 2017 American Society of Horticultural Science Annual Conference. The events brought together the international research community, with learnings brought back for the benefit of the Australian macadamia industry. A wrap-up of the research symposium can be found from p70 in the summer 2017 edition of the industry's levy-funded *News Bulletin*.

Disease management in macadamia industry (MC12007)

NOW COMPLETE

Key research provider: The University of Queensland

Established in 2012 and drawing to a close during 2017, this investment brought together a team with extensive knowledge and contacts to deliver improved, sustainable and efficient disease management strategies for the macadamia industry.

Among its broad range of work, the project involved...

- » Developing and communicating to industry sustainable and integrated disease management strategies for husk spot, caused by the fungal pathogen *Pseudocercospora macadamiae*. This management system extended from risk assessment and cultural practices (including those to break an existing disease cycle) to the application of crop protection products and the use of resistant macadamia varieties. Information was communicated to growers at various MacGroup meetings.
- » Developing and communicating to industry management strategies for Phytophthora root rot – caused by soilborne pathogen *Phytophthora cinnamomic* – involving targeted application of crop protection products and an

increased focus on soil health. During the final year of the investment, the industry reported increased and increasing adoption of integrated management approaches for Phytophthora diseases.

- » Providing diagnostic services to the macadamia industry to identify and investigate new and emerging diseases of potential high risk to macadamia productivity.
- » Developing a framework for integrated disease management throughout the production chain, to help make the industry resilient to the resurgence of old or occurrence of new pathogens.

Macadamia gross value of production (GVP) analysis (MC16013)

NOW COMPLETE

Key research provider: Australian Bureau of Statistics

This short project worked with the Australian Bureau of Statistics (ABS) to review the calculation of GVP for the macadamia industry. Specifically, it looked at the potential to use business data from within the macadamia supply chain to replace traditional ABS survey data.

The work was instigated by the idea that survey coverage issues may be contributing to a potential underestimation of production. It involved a pilot study to see if data from nut processors could be drawn into the process as an alternate source of information to be used in GVP estimates – reducing the traditional survey burden on growers and maximising the use of data already collected.

While providing proof of concept, the pilot study identified issues which will need to be navigated before such data substitution can be undertaken on an ongoing and systematic basis. Hort Innovation is working with the ABS and macadamia industry to establish the next steps for this area of research.

Want to keep up to date with the latest information on new, ongoing and recently completed R&D investments throughout the year? Check out Hort Innovation's **Hortlink** publication – the latest edition is always available from your grower page, www.horticulture.com.au/macadamia.

Macadamia regional variety trials – series 3, phase 2 (MC11001)

Key research provider: The Queensland Department of Agriculture and Fisheries

This project, due to conclude in early 2018/19, has been involved in the evaluation of new macadamia varieties established in earlier industry work. The information it generates will ultimately help guide growers in making decisions about new varieties for orchard expansion, development and possible replanting. The varieties it helps commercialise will have benefits including higher and more consistent production of high-quality kernel, resulting in a more profitable and prosperous industry in Australia, based on internationally competitive exports.

Integrated pest management program for the Australian macadamia industry (various projects from MC16003 to MC16008)

Key research provider: Various

This ongoing program is responsible for developing, demonstrating and facilitating the adoption of integrated pest management (IPM) strategies, to ultimately support macadamia growers in having pest-resilient farming systems.

It is made up of multiple, interrelated sub-projects, with areas of work including...

- » How inter-row vegetation management can influence the presence of beneficial insects in macadamia orchards
- » Various field trials, testing combinations of IPM tools across the orchard, in each of Australia's macadamia growing regions
- » How insects respond to compounds and odours of interest, with an initial focus on *Sigastus* weevil (here, laboratory work will ensure that field trials ultimately involve compounds pests detect and are attracted to)
- » Growing knowledge of key macadamia pests, as well as beneficials, working towards the development of pest identification and management guides
- » Establishing and maintaining laboratory colonies of pests and biological control agents for use across the program's work, including behavioural studies investigating pest preferences in relation to food, shapes and colours
- » Working with local advisors, pest consultants and industry development officers to develop and deliver extension activities around the project.

Macadamia harvest improvement review (MC16001)

Key research provider: Colere Group in partnership with others

This ongoing investment is investigating opportunities for improving harvesting in the macadamia industry. Its work includes...

- » Reviewing current harvest practice, machine performance and orchard conditions to identify where nuts are being lost, where and how many – with current estimates suggesting losses from nut maturity through to processor delivery of more than 15 per cent (equating to a potential \$2000 to \$2600 in lost revenue per hectare)
- » Exploring new and existing technologies, practices and systems for nut collection/managing harvest – with the aim of reducing the macadamia harvest window by several weeks
- » Helping growers identify specific issues within their businesses.

Macadamia second generation breeding and conservation (MC14000)

Key research provider: The University of Queensland

This investment began in 2015 to progress genetic improvement for the Australia macadamia industry. It is working to produce new cultivars that will provide the industry an advantage over its international competitors.

Specifically, the project is evaluating 3555 seedling progeny already established, and aims to increase the second generation population size by 10,000.

Other significant activities of the project relate to the genetic control of husk spot disease and abnormal vertical growth, evaluating alternative breeding strategies, screening rootstocks for tree size control and productivity, and determining suitable pollinisers for elite selections.



Innovative rootstocks for the Australian macadamia industry (MC16000)

Key research provider: The Queensland Department of Agriculture and Fisheries

This ongoing project is analysing and identifying rootstock genotypes that offer the best prospects for productivity improvements in the Australian macadamia industry. Over 2000 mature trees utilising some 200 rootstocks are being assessed under commercial orchard management conditions, with productivity and quality assessments compared to those of current industry rootstocks Beaumont and H2.

Biology, species and genetic diversity of macadamia lace bugs (MC13008)

Key research provider: The University of New South Wales

Macadamia lace bug (MLB) has a significant impact on the macadamia industry, but the taxonomy, genetics and ecology of the insect remains poorly understood. Established in 2014, this investment is investigating key aspects of MLB including lifespan, food sources, where they lay their eggs and the like. The project is looking at whether out-of-season flowering is driving outbreaks, and how far individual insects can disperse. It is also examining the genetics of the insect to determine whether there are 'cryptic' species infesting macadamias that may be overlooked.

Generation of residue, efficacy and crop safety data for pesticide applications in horticulture crops 2017 (ST16006)

Key research provider: Eurofins Agrisearch

The generation of pesticide residue, efficacy and crop safety data is required to support label registration and minor use permit applications made to the Australian Pesticides and Veterinary Medicines Authority which, when approved, provide access to safe and effective chemicals for the management of pests, weeds and diseases. This investment is responsible for producing the data required to support a range of registration and permit applications across a host of horticulture industries, including macadamia.

The now-completed *Generation of residue data for pesticide minor use permit applications in macadamias* (MC15002) played a similar role in data generation.



Macadamia industry minor use program (MC16002)

Key research provider: Hort Innovation

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

For more on minor use permits, including a list of permits, see [p10](#).

All current permits for the industry remain searchable at portal.apvma.gov.au/permits, while permit updates are also circulated in Hort Innovation's *Growing Innovation* e-newsletter, which levy-paying members receive monthly. Not a member? Sign up to the Hort Innovation membership program for free at www.horticulture.com.au/membership.

Australian macadamia industry innovation and adoption program (MC15004)

Key research provider: The Australian Macadamia Society

Beginning in 2016, this investment aims to enhance the adoption of innovation and technology, and facilitate capacity building, in the Australian macadamia industry. It supports the role and activities of a dedicated macadamia industry productivity development manager (MIPDM). Activities facilitated by the MIPDM and run through the project include...

- » MacGroup workshops
- » Regular grower meetings and annual consultants' meetings
- » Field days and trips
- » The production of communication materials such as videos and content for industry publications.

The MIPDM is also responsible for undertaking constant engagement with growers and the wider industry, management of emerging issues, and the identification and development of new opportunities for the industry.

National macadamia grower communication program (MC15003)

Key research provider: The Australian Macadamia Society

Beginning in 2016, this investment shares R&D and marketing outcomes and other knowledge with growers and other industry stakeholders. The goal is to support growers in adopting new practices and technologies, increasing orchard productivity and profitability.

The project works in conjunction with the *Australian macadamia industry innovation and adoption program* (MC15004) to form an integrated communications program for the industry.

A number of regular communication channels are produced and maintained by MC15003, including but not limited to:

- » The macadamia industry website, www.australian-macadamias.org/industry
- » Quarterly *Australian Macadamia Society News Bulletin* magazines, containing key information and outcomes on levy-funded R&D and marketing outcomes
- » Monthly industry e-newsletters
- » A variety of 'e-blasts' (short emails) on a range of topics, such as regional updates, event invites and other urgent information
- » Hard copy mail-outs as required, including event invitations
- » Production and distribution of media releases promoting industry events and activities
- » Biennial Australian Macadamia Industry Conferences.

Macadamia crop forecasting 2015-18 (MC15009)

Key research provider: The Queensland Department of Agriculture and Fisheries

This investment is responsible for producing macadamia crop forecasts each year, designed to be accurate to within 10 per cent of the actual final crop. It provides a tool for improved decision-making for macadamia businesses and the wider industry, and maintains an informed, viable and sustainable industry. Long-term forecasts also allow planning for adequate infrastructure and industry marketing well in advance.

Benchmarking the macadamia industry 2015-18 (MC15005)

Key research provider: The Queensland Department of Agriculture and Fisheries

This project supplies on-farm benchmarking information for the macadamia industry. By collecting planting, production, quality and other data and analysing trends across the industry, its goal is to allow informed decision-making and help facilitate improved farm productivity and profitability for macadamia growers and other stakeholders.

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 macadamia industry is one of several contributors to the work, with the program now part of the Hort Frontiers Pollination Fund.

Full details of completed research can be found in project final reports which, when finalised, are available to order at www.horticulture.com.au/final-report-order-form. Final reports are free to Australian horticulture levy payers, registered Hort Innovation members and industry representative bodies.

Minor use permits

Why minor use permits?

While the use of pesticides and other chemicals in the horticulture industry is being modified through the increasing uptake of integrated pest management approaches, there remains a need for the strategic use of specific chemicals.

Chemical companies submit use patterns for product label registrations to the Australian Pesticides and Veterinary Medicines Authority (APVMA), and the macadamia industry is generally provided with a number of label registrations because of its 'major' crop status in this area. However, there are instances where chemical companies consider the market size too small to generate adequate commercial returns, based on the R&D investment required. This is where minor use permits come into play. The APVMA's national permit system adds some flexibility to the approval process and provides a legal framework that can allow access to products for minor use purposes.

Permits in 2017/18

During the 2017/18 financial year, a successful interim renewal for PER81162 was prepared by Hort Innovation and submitted to the APVMA, facilitated through the *Macadamia industry minor use program* (MC16002). Also prepared during the year, and submitted just inside 2018/19, was an application for a new minor use permit for the use of Avatar in the control of *Sigastus weevil*. At the time of writing, this application remained with the APVMA for assessment.

Meanwhile new permit PER84766 was issued during 2017/18, with the application submitted through the industry minor use program in the previous financial year, supported by data from the project *Generation of residue data for pesticide minor use permit applications in macadamias* (MC15002).

Find details for all of these permits in the table that follows.



Current permits

Below is a list of minor use permits for the macadamia industry, current as of September 1, 2018.

PERMIT ID	DESCRIPTION (CHEMICAL/CROP/PEST OR USE)	ORIGINAL DATE OF ISSUE	EXPIRY DATE	PERMIT HOLDER
PER11462 version 2	Ethephon / Macadamia / Promote nutfall	07-May-09	30-Jun-20	Australian Macadamia Society (AMS)
PER11635 version 2	Petroleum oil / Macadamia / Macadamia felted coccid	01-Jul-10	30-Jun-20	AMS
PER12796 version 2	Methomyl / Macadamia / Banana fruit caterpillar	22-Jul-11	30-Jun-21	AMS
PER13642 version 2	Chlorpyrifos and Maldison / Tree nuts / Australian plague locust	01-Sep-12	30-Jun-25	Australian Nut Industry Council C/Hort Innovation
PER13689 version 4	Trichlorfon / Macadamia nuts / Macadamia lace bug, fruit-spotting bug, banana-spotting bug, green vegetable bug (2-day WHP)	14-May-13	30-Sep-21	AMS C/Hort Innovation
PER14276 version 2	Diazinon / Macadamia / Macadamia lace bug	01-Dec-13	30-Nov-20	AMS C/Hort Innovation
PER14852	Pyrethrins (Pyganic) / Macadamia / Macadamia lace bug	21-Aug-14	31-Mar-19	AMS C/Hort Innovation
PER81162 version 2	Abamectin / Macadamia / Thrips, broad mites and flat mites	28-Oct-15	30-Apr-20	AMS
PER81463	Acephate / Macadamia / Sigastus weevil	24-Dec-15	31-Jan-21	AMS C/Hort Innovation
PER84766	Phosphorous acid (foliar and trunk applications) / Macadamia / Phytophthora root rot and trunk (stem) canker	30-Nov-17	30-Nov-22	AMS C/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**, which levy-paying members receive monthly. Not a member? Sign up for free at www.horticulture.com.au/membership.

Marketing report

Hort Innovation is responsible for investing the macadamia marketing levy into a range of activities to drive awareness and consumption, under the Hort Innovation Macadamia Fund. These activities are managed by our partner team at the Australian Macadamia Society, who have provided this quick summary of trade and consumer marketing highlights from 2017/18.

TRADE CAMPAIGN HIGHLIGHTS

The trade campaign has been keenly focused on activating the Australian macadamia industry's three-year international marketing strategy, designed to drive steady growth in global demand in anticipation of more robust supply becoming available. The strategy's centrepiece is the 'Innovation Initiative', rolled out in a series of instalments, outlined below.

'Macadamia Marketing Toolkit' launch

The Marketing Toolkit has been helping the commercial sector convey a compelling story about macadamias and illustrate the many benefits to food manufacturers of including macadamias in their innovation pipelines. Powerful consumer research is a key component of the Toolkit, providing product developers with evidence that macadamias are a sought-after ingredient that can elevate any product they're included in. The first two rounds of research were conducted in 2017/18, focused on global food and beverage trends, and the bakery category, as described below. Research will continue over the next two years, focusing on those product categories that offer the most scope to innovate using macadamias.

Global food and beverage trends

In December 2017, new research was released examining the latest global consumer trends for food and beverages, how they're manifesting in both western and Asian markets, and what they mean for macadamias. It identified five key macro trends that are set to shape the food and beverage landscape over the next five to seven years:

- » Control of health: consumer in control
- » Here and now: instant gratification
- » No filter: the need for trust
- » Global fusion: the need to explore
- » Memorable food: the need to escape.

These trends, and the opportunities they offer up for macadamias, are detailed in the Marketing Toolkit, with more information available at www.bit.ly/2laEvsb.



Bakery category trends

Consumer research released in April 2018 highlighted key innovation hotspots for macadamias in the bakery category in both Asian and western markets. The study found consumers seek out bakery products for eight key reasons: pleasure, adventure, discernment, joy, connection, comfort, control, and balance.

Consumers often feel conflict when buying a bakery product, with guilt, cost reservations and quality concerns all creating barriers in consumers' minds. However, the presence of macadamias in a product breaks down these barriers, elevating the eating experience and making consumers perceive the product as more luxurious, unique, healthy, balanced, desirable, pure or authentic.

The research identified five key product innovation opportunities for macadamias in the bakery category, explored further at www.bit.ly/2MY1GXp.

Macadamia Innovation Challenge

The world-first Macadamia Innovation Challenge concluded its first phase in March 2018. The Challenge invited competitors (food professionals and university students) to submit innovative concepts for new packaged food products containing macadamias in the snacking, ice-cream and bakery categories, with either an Asian or western flavour profile. There were two trips to the SIAL food exhibition in Paris and a cash prize on offer.



The finalists and judges from the first Macadamia Innovation Challenge



Ten finalists travelled to Byron Bay for the judging event and VIP winner announcement ceremony. The three winning entries were Macadamia Mind Food Bars, Macadamia & Miso Caramel Cookies, and Macci Ice Cream. The events attracted strong media attention, with macadamia coverage achieved domestically and internationally. Many of the macadamia product concepts developed for the Challenge are now available for adoption by interested food manufacturers and product developers globally. Read more at www.bit.ly/2O1Rujj.

Trade e-news

Monthly trade e-newsletter *The Macadamia Review* has continued to keep trade audiences updated on the Australian macadamia industry. Published globally in English, German, Chinese and Japanese, the publication is a vital and widely shared source of industry information. Content covers a range of topics including innovation, health news and consumer insights.

CONSUMER CAMPAIGN HIGHLIGHTS

Blogger outreach

The 2017/18 Christmas and New Year period was leveraged via an effective blogger outreach campaign. Christmas macadamia gift boxes were sent to a selection of influential Australian bloggers, inspiring an influx of high-quality new content, including recipes, competitions and craft ideas that were shared on the industry's social media platforms. This messaging was amplified by each of the influencers sharing their content with their own audiences as well. Highlights included lime macadamia dip with sweet potato chips from *Eat Pray Workout* (www.bit.ly/2OMBMHU), macadamia shortbread from dietitian Simone Austin (www.bit.ly/2QSmhiV), and macadamia Christmas craft ideas from *Mother Natured* (www.bit.ly/2OM22BW).

In South Korea, collaborations with a selection of food bloggers resulted in new Christmas recipes including macadamia salmon steaks, macadamia mac and cheese, and macadamia lollipop cookies, as well as a beauty recipe for macadamia oil body balm.

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Occasion-based activity and content

- » In Japan, the New Year is spent eating 'Osechi' with family – colourful, traditional dishes, containing ingredients that symbolise good fortune. This year the macadamia marketing program created recipe ideas for Osechi dishes using macadamias.
- » In Taiwan, an interactive Facebook event saw fans invited to choose their favourite virtual macadamia gift to reveal a New Year blessing. There were four 'gifts' to choose from, with each delivering a unique blessing for energy, luck, safety or fortune.
- » Australia Day remained a key occasion to promote macadamias. For 2018, content focused on how to enjoy the perfect Aussie picnic. Recipes from the blogger outreach campaign provided perfect content, such as macadamia and Vegemite cheese scrolls and lemon myrtle roasted macadamias. In international markets, Facebook fans were asked to nominate what dish they would bring to an Australia Day picnic.
- » For Chinese New Year, a suite of activity was executed on Chinese social media channel Weibo. Tapping into the Chinese tradition of preparing 'Nianhuo' (snacks for spring festival), the countdown content was snack-focused, with fans invited to share their snack ideas. A macadamia pot-sticker dumpling recipe featured on the eve of Chinese New Year, and fans were encouraged to share their New Year dinner plans for the chance to win a macadamia prize. The close of the festival saw a shift to health messaging, highlighting macadamias as a great weight management snacking choice for people who over-indulged during the holiday period.
- » 'White Day', falling a month after Valentine's Day, is a popular celebration in many Asian markets. To engage a younger female audience in South Korea, Australian Macadamias celebrated White Day with a twist, inviting single women to tag their single friends on the Australian Macadamias Facebook page for South Korea, for the chance to win macadamia prizes. In Taiwan, fans were encouraged to post a romantic message on the country's Australian Macadamias' Facebook page on White Day, while the page also shared macadamia recipes to celebrate the day.





- » For Mother's Day 2018, Mother's Day content was shared in all markets, with highlights including the release of a new recipe for macadamia filled pastry roses in Australia, Germany and Japan (www.bit.ly/2O6EXgg); an exclusive recipe for macadamia scones with jam and macadamia cream, complete with a 'how to make' video in Australia; a Mother's Day blog post in Japan outlining the health benefits of macadamias and encouraging fans to give a hand-made macadamia gift; and interactive Mother's Day Facebook games in Taiwan and South Korea.
- » With macadamia 'moon cakes' increasingly popular, the Moon Festival in China provided an excellent opportunity to connect with and grow the Chinese fan base, and further embed macadamias in the celebratory conversation. Social media messaging was given an Australian flavour and showed Chinese fans how the Moon Festival is celebrated in Sydney, differentiating content from that of other brands in the crowded Moon Festival messaging space.

Competitions

A number of competitions were hosted in social media channels for both Australian and international audiences, to help drive conversation around and engagement with Australian Macadamias. These included...

- » A spring Facebook competition in October 2017, with the Australian Macadamias Facebook community participating for the chance to win a macadamia picnic hamper. The promotion helped to grow the consumer email database to more than 16,000 and generated online content that was used in blog and social media posts.
- » A 'Celebrate Harvest' Facebook competition run with the Australian fan base in May 2018. With the chance to win a year's supply of macadamias, it was the most successful Facebook competition to date. More than 7300 entries

were received, and the activity grew the consumer email database by 4315 people. It was also an opportunity to ask fans what their favourite kind of macadamia product is, with 'snack mixes' the top response.

- » A German Christmas giveaway. The German Facebook community participated strongly in a Christmas giveaway, with fans offered the chance to win Noan roasted and salted macadamias by answering a simple question. The competition kept fans engaged in the lead-up to Christmas, with weekly chances to win.

Events

Highlights from international and domestic events included...

- » The inaugural International Women's Day campaign in China. In 2018, the marketing program incorporated International Women's Day into its consumer campaign in China for the first time. The activity, executed via Weibo and WeChat, encouraged Chinese women to take good care of their health, in line with the overarching brand message for Australian Macadamias in China: 'Beauty from the inside out'. The campaign offered Chinese fans the chance to win a private macadamia degustation at a Beijing restaurant, prepared by a high-profile food blogger.
- » The Northern Rivers Sample Food Festival. Australian Macadamias sponsored this event for the seventh consecutive year, with the strongest results to date. The media reach target was exceeded by 360 per cent, with more than one million people reached across social and traditional media channels. The stand-out platform was Instagram, fuelled by the success of the #AusMacadamias 'Instameet' event hosted by two professional Instagrammers. Learn more about this at www.bit.ly/2OPRySn.

Financial statement

Financial operating statement 2017/18

	R&D (\$)	MARKETING (\$)	TOTAL (\$)
	2017/18 July – June	2017/18 July – June	2017/18 July – June
OPENING BALANCE	919,678	1,626,144	2,545,822
Levies from growers (net of collection costs)	1,445,510	2,700,465	4,145,975
Australian Government money	1,198,016	–	1,198,016
Other income*	24,732	143,297	168,029
TOTAL INCOME	2,668,258	2,843,762	5,512,020
Project funding	2,369,737	2,121,999	4,491,736
Consultation with and advice from growers	40,516	13,774	54,290
Service delivery – Base	99,597	88,255	187,852
Service delivery – Shared	150,819	133,643	284,462
Service delivery – Fund specific	187,557	163,902	351,459
TOTAL EXPENDITURE	2,848,226	2,521,573	5,369,799
Levy contribution to across-industry activity	60,866	–	60,866
CLOSING BALANCE	678,844	1,948,332	2,627,176
Levy collection costs	1,815	3,348	5,163

At the end of 2016/17, the industry's pro rata share of levy funds were committed to strategic reserves (\$222,780 for R&D and \$456,058 for marketing), and so have been deducted from the 2017/18 opening balance.

* Interest, royalties

Service delivery costs explained

Base service delivery (flat rate) = keeping the lights on

This figure contributes to the standard fixed costs that are incurred with the running of the business (for example, costs relating to rent, utility bills, equipment). These costs are calculated on a monthly basis and are based on actual program expenditure.

Shared service delivery (flat rate) = related to program delivery

Shared costs are related to program delivery and include costs that are incurred in supporting activities relating to R&D and marketing programs that are not attributable to any one levy industry (for example, costs relating to procurement and information technology activities). These costs are calculated on a monthly basis and are based on actual program expenditure.

Fund specific service delivery (flat rate for 2017/18) = direct servicing costs

These are the actual costs for activities and services that are directly incurred in the administration of levy program expenditure, and which are identifiable and attributable to a specific levy investment fund (for example, costs around direct relationship, marketing and fund management, and logistical costs around industry advisory meetings and activities). From 2018/19 these costs will be charged at cost on a monthly basis.

For more information explaining the costs in the financial summary, visit www.bit.ly/2x7ERLC.

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