

Annual Report 2015/16

Horticulture
Innovation
Australia

Breaking new ground



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Horticulture Innovation Australia Limited Annual Report 2015/16

Breaking new ground

Since its transition from Horticulture Australia Limited,

Horticulture Innovation Australia Limited (Hort Innovation) has worked to lay the foundations, build the structure and construct the framework to support it in achieving its vision to grow the future of Australia's horticulture industries.





Chair's report

SELWYN SNELL, CHAIR

WORKING TOGETHER FOR THE FUTURE

Horticulture is extremely diverse and makes a substantial contribution, accounting for approximately 18 per cent of the total value of Australian agriculture. With the industry forecast to grow by eight per cent between 2016 and 2020, reaching a gross value exceeding \$10 billion by 2020¹, we have an exciting future ahead.

Horticulture is a significant industry that demands an equally significant vision, and this is at the heart of what the Horticulture Innovation Australia Limited (Hort Innovation) Board has been working on – to support the development of the industry today to help drive it forward for future generations. As the link between the needs of industry, the capabilities of science and technology, and the potential of marketing, Hort Innovation's vision is to grow the future of Australia's fruit, vegetable, nut, plant and tree industries by guiding the decisions today that better shape tomorrow.

Investing more than \$100 million annually in research and development (R&D) and marketing, we are focused on outcomes that support increased productivity, farm gate profitability and global competitiveness of Australian horticulture industries. To do this, it is vitally important that we work collaboratively with growers, members of the production supply chain, our delivery partners and government.

In making good investment decisions, we place high emphasis on the wisdom, insights and good counsel that is gathered from industry through a wide and varied consultation. The strength of the advice that is provided to Hort Innovation from the various Strategic Investment Advisory Panels and Expert Advisory Panels is the foundation upon which all of our investing is made. This advisory framework is central to Hort Innovation and when coupled with other grower meetings and workshops, has provided us with robust external input.

The Board is committed to this ongoing engagement of external consultation and sees it as a critical component of the guiding force of the company. Such engagement can only serve to build a confidence that our investments from both a levy and co-investment perspective are made in the interest of all stakeholders, most particularly growers.

¹ Agricultural commodities, Australian Bureau of Agricultural and Resource Economics and Sciences, March quarter 2016, (nominal figures).



In addition, the Board sees the strengthening of the relationship between Hort Innovation and the wider industry, particularly the Industry Representative Bodies as both advisors and as delivery partners, as mutually beneficial in all of our efforts to communicate with growers. With the Board's combined knowledge and capabilities, there is room for everyone to work together towards industry goals and horticulture industry issues.

Our effort on collaboration also extends more broadly across agriculture. Working closely with other RDCs, Hort Innovation is committed to being part of the dialogue on cross-sectoral strategies in recognising the role horticulture plays in the overarching agriculture industry.

With the conclusion of the transition phase, Hort Innovation has laid a strong foundation and is well placed to get on with the job of delivering results from the public money for which we are entrusted. These fundamental changes have enabled the company to achieve a record-breaking year of investment in horticulture R&D of over \$78.1 million. We will always look for opportunities to improve our operational undertakings and I am confident that the company will continue to grow the trust of our stakeholders when delivering such impressive results.

As we look ahead we do so with a passion to continue to connect with industry through valuable consultation and clear communication; we look ahead with commitment to work with all stakeholders to ensure the best in knowledge and thought leadership; and we look ahead with dedication to cultivate ideas and innovations that drive progress and outcomes for the horticulture industry and the Australian community as a whole.

I would like to thank my fellow Directors for their vision and work ethic, our CEO John Lloyd, for his tenacity and persistence, and his team for their dedication and commitment to horticulture growers and the industry. I would like to thank the Hon. Barnaby Joyce MP, Minister for Agriculture and Water Resources, and Senator Anne Ruston, Assistant Minister for Agriculture, as well as their offices and the Department, for the clear direction they have provided and the support they have shown us in taking this journey.

Thank you must be given to the growers, Industry Representative Bodies and all other stakeholders of Hort Innovation for the successes that we have been able to jointly achieve this year, despite some shared challenges. We look forward to generating results and outcomes, and working with growers in achieving the goals that we have set. The Board is committed to this success, and having broken new ground, we look forward to continuing this journey of playing our role in enabling Australian horticulture's potential

Selwyn Snell, Chair



CEO's report

JOHN LLOYD, CEO



THE FOUNDATIONS ARE LAID AND WE'RE GETTING ON WITH THE JOB

In 2015/16 our staff worked diligently to transition from the old to the new organisation, develop and implement new systems and processes, consult and communicate widely and, most importantly, to continue to invest for the benefit of horticulture growers.

It's been a busy but productive time, with foundations laid and achievements made.

During 2015/16, Hort Innovation made investments in close to **200 R&D projects**, leveraging its partnership with the Australian Government to optimise the amount of government dollars available for horticulture. **Over \$78.1 million was invested** in these R&D projects, which work towards productivity improvement and economic growth for Australian horticulture through the development and application of new technologies and science.

Hort Innovation also **broke new ground** with its marketing investments, conducting the first-ever marketing campaign for the onion industry and delivering the mushroom industry's largest marketing campaign to date. There was also the introduction of a statutory marketing levy on sweetpotatoes during this time. **Over \$16.9 million was invested** across 25 marketing programs.

These achievements were made possible by the hard work of the Hort Innovation team and all our stakeholders, and were facilitated by the **new organisation's structure and funding model**. It is this funding model that provides Hort Innovation with a framework to tackle both short- and long-term outcomes for the horticulture industry. The new model developed for investing principally has two funding streams: levy (Pool 1), coupled with government contributions; and co-investment (Pool 2), also coupled with government dollars, as outlined on pages 10-11.

The prioritisation of where these monies are invested and how the outcomes are delivered for each funding stream comes from our broad-ranging engagement, consultation and advisory activities.

Working with industry for the benefit of growers

Levy (Pool 1) funds are invested strategically in R&D and marketing that aligns with industry-specific priorities for the benefit of growers. The utilisation of co-investment (Pool 2) funds allows Hort Innovation to seek and drive collaboration with co-investors from private enterprise, state departments of agriculture, universities and organisations like CSIRO, on projects with longer-term benefits and a broader scope.

Importantly, investment decisions are based on advice from industry, facilitated by the establishment of Hort Innovation's investment and expert advisory panels. These panels provide a consultation framework that is geared towards industry's role in investment decision-making.

At the end of June 2016, we had established **18 Strategic Investment Advisory Panels (SIAPs)** within Pool 1, with the formation of panels in process for remaining industries. These skills-based SIAPs are tasked with providing Hort Innovation strategic investment advice in relation to the R&D and marketing activities.

Likewise with Pool 2, Hort Innovation has established **four Expert Advisory Panels (EAPs)** aligned to specific funds that will work with the sector to drive the **\$40 million investment** into new, long-term, strategic cross-industry R&D.

I'd like to take the opportunity to thank all those people involved with our panels for their time, commitment and passion.

Keeping communication channels open

Further to these advisory panels, it has been our aim to **create and improve pathways for engagement and consultation** with as many stakeholders as possible from what is a varied and sometimes complex agriculture sector.

During the reporting period we held eight 'Between the Rows' growers' meetings, that built on the six held last year. The meetings gave us the forum to convey the new Hort Innovation obligations and intentions, and to hear directly from growers about their concerns and ideas. These were factored into our planning and strategies for moving forward.

Fourteen Levy Payer Workshops were also held across seven states and territories to gain insights from stakeholders, primarily growers, to assist in the development of the company's **inaugural Strategic Plan**, setting the strategy to 2018. This strategic plan is the roadmap that enables Hort Innovation to guide, deliver and track its direction and investment, and is available on our website. It was submitted to the Australian Government in April 2016.

Continually talking to growers has been extremely valuable in gaining key insights across Hort Innovation's operations, levy investments and co-investments. The importance of transparency in decision-making, the availability of information and a desire to get involved were key themes to arise from grower engagements during 2015/16. We have taken, and will continue to take, positive actions in response to such feedback.

Hort Innovation has now developed **a new way for receiving, generating and actioning ideas for projects** that will help the horticulture industry grow and thrive. Any stakeholder can now submit an idea or concept for a project investment at any time through our website, using what is referred to as the Concept Pipeline.

This process for innovation allows Hort Innovation to develop ideas in partnership with our many stakeholders and then work with our advisory panels to select and enhance the best concepts. The SIAPs and EAPs assist us to review and evaluate ideas that align with the investment priorities that have been predetermined in strategic plans within each industry, in the case of levy investment, and across horticulture, in the case of co-investment.

We have worked to build stronger connections within the community that we serve, particularly for our members, with an emphasis on the provision of information and transparency. This is being achieved through our face-to-face dealings with stakeholders and our more formal communication channels, especially digital publications.

A new unit for trade matters

On the trade front, our **new Trade Unit** is ramping up. In September 2015 we signed a Memorandum of Understanding (MoU) with the China Entry-Exit Inspection and Quarantine Association (CIQA). In early 2016, 11 delegates representing

four key Chinese provinces inspected local farms to take a close up look at the stringent packing, pest management and produce quality standards of our Australian fruit growers.

In line with our ongoing commitment to play a role in boosting Australia's horticulture trade, in June 2016 Hort Innovation appointed a General Manager for the Trade Unit to focus on a trade strategy for the Australian horticulture industry as a whole. We have established a Trade Assessments Panel (TAP) and an industry Trade Advisory Panel (iTAP) to assist the company fulfil its obligations to provide advice to the Department of Agriculture and Water Resources about the prioritisation of new and improved technical market access for Australian horticulture.

Keeping the momentum rolling, together

Hort Innovation is dedicated to the growth and sustainability of the Australian horticulture industry and I would like to thank the team at Hort Innovation for their own dedication, persistence and perseverance. It has been a busy 12 months, but we are steadfast in our commitment to deliver outcomes on our investments for Australian horticulture growers.

Further I would like to thank all the growers, Industry Representative Bodies and other stakeholders who have collaborated, counselled and supported us in our endeavours. Thank you for your time, insights and advice.

I would also like to personally thank the Minister for Agriculture and Water Resources, his staff and his department for their ongoing support and assistance, and also the Assistant Minister for Agriculture for her ongoing cooperation and collaboration.

We have laid the foundations and are now in great shape to look forward to the next 12 months and beyond, working with the people in the horticulture industry towards a successful and sustainable future.

John Lloyd, CEO



One vision

...And that vision is to grow the future of Australia's horticulture industries by making the decisions today that help shape tomorrow.



A year of breaking new ground

Horticulture Innovation Australia Limited (Hort Innovation) is a not-for-profit, grower-owned Research and Development Corporation for Australia's \$9 billion horticulture industry.

Hort Innovation invests more than \$100 million annually in R&D and marketing to increase the productivity, farm-gate profitability and global competitiveness of Australian horticulture industries.

As the link between the needs of industry, the capabilities of science and technology, and the potential of marketing, Hort Innovation's vision is to grow the future of Australia's fruit, vegetable, nut, plant and tree industries by making the decisions today that help shape tomorrow.

Hort Innovation is funded by grower levies and Australian Government contributions, as well as other industry contributions and co-investment.

Our commitment

CONNECT with industry through comprehensive consultation and clear communication that affords transparency and accountability.

COLLABORATE with the government, investors, the research community and other stakeholders and delivery partners to ensure the best in knowledge and thought leadership.

CULTIVATE ideas and drive technological and science-based innovation, marketing activities and trade initiatives that drive progress and outcomes.

Our mission

To increase the on-farm productivity, farm-gate profitability and global competitiveness of Australia's horticulture industries by making strategic investments across R&D, marketing and trade.

Laying the foundations

In 2015/16, Hort Innovation continued its transformation with a new corporate vision, organisational strategy, internal structure and culture, and new business processes and systems. The strategic themes that led Hort Innovation through this organisational change were:

- ✓ **Leadership in horticulture**
- ✓ **Strong connection with stakeholders**
- ✓ **Re-inventing the operating model**
- ✓ **Protecting and respecting current investments and planning.**

It was critical for Hort Innovation to lay strong foundations from which it could build activities and outcomes for industry. Much work was involved in the re-inventing of the operating model, with key achievements highlighted throughout this report.

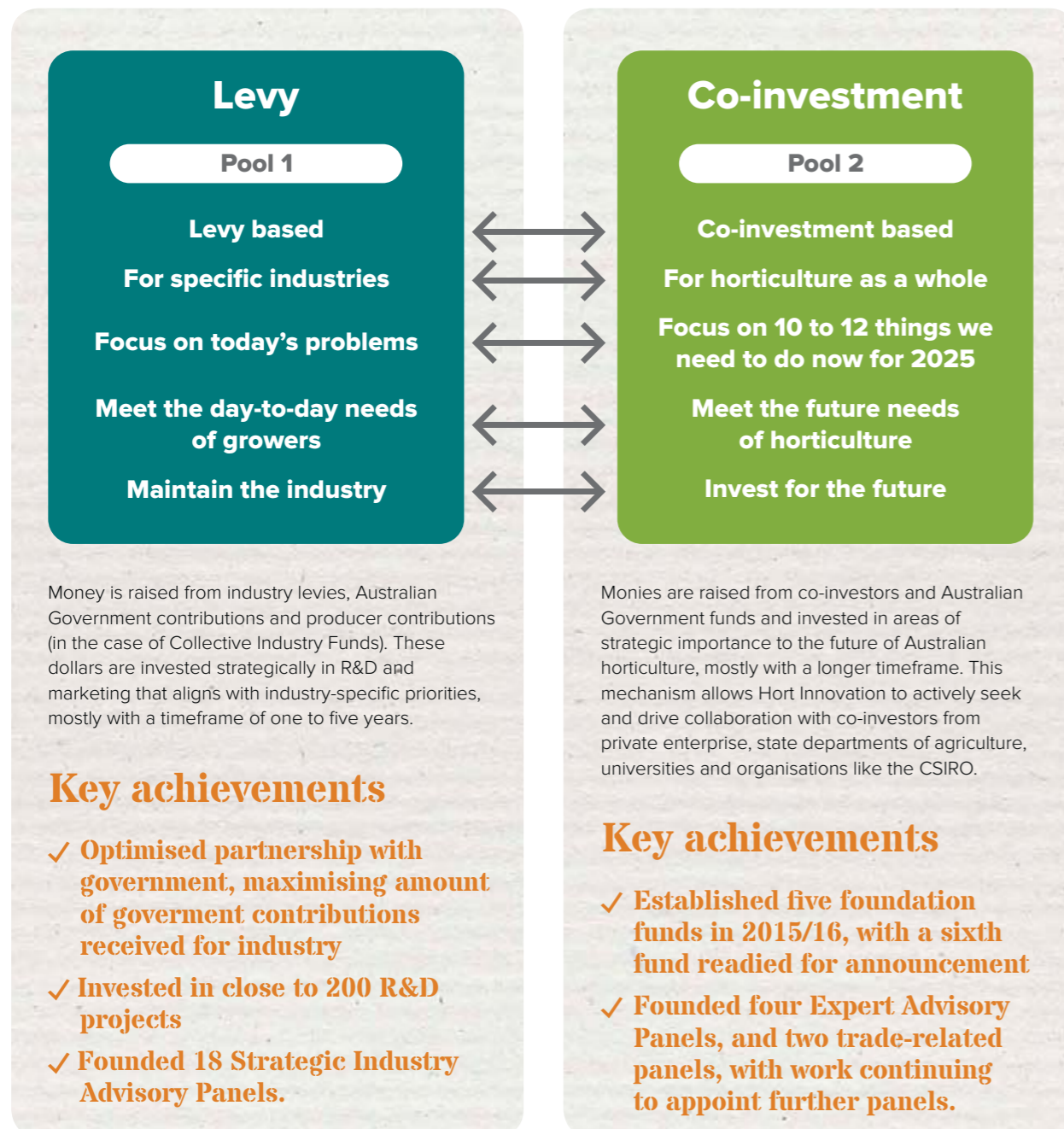
Operational KPIs delivered as outlined in the Hort Innovation Annual Operating Plan included:

Organisational design systems and processes
Funding model to drive innovation
Review of ongoing / legacy projects
Regional growers consultation meetings
New consultation and investment advisory mechanisms for new projects
Register of members and register of levy payers
Procurement and reporting framework determined
Evaluation and monitoring framework determined
Corporate governance documents and framework
Accounting systems, procedures and controls for the management of funds established
Risk, fraud and intellectual property plans
Compliance audit and certificate reports

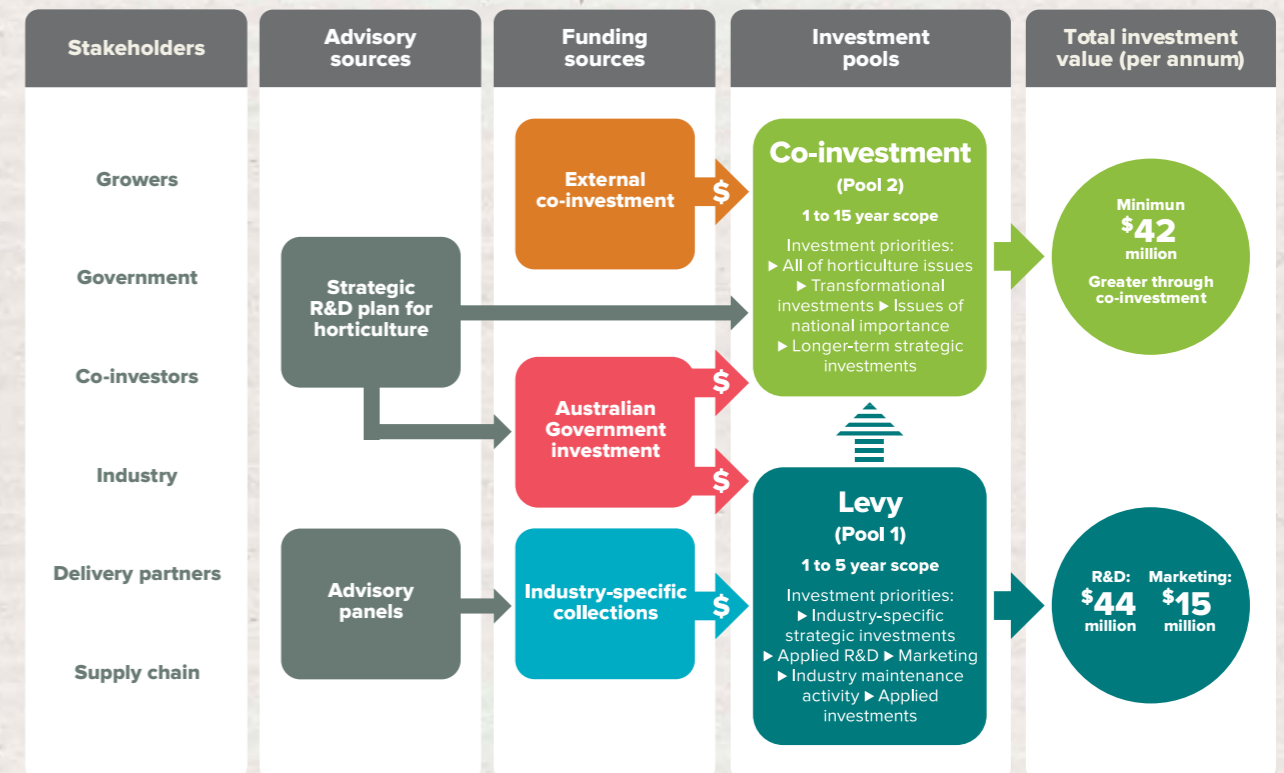
Driving short- and long-term **outcomes**

Critical to the future of Hort Innovation is its **funding model**, which has been developed with the aim to provide the horticulture industry the opportunity to focus on both short- and long-term outcomes.

To achieve productivity improvements and profitability growth, and to remain competitive, it is necessary for an industry to both sustain and grow. With this in mind, Hort Innovation's funding model balances the horticulture investment portfolio between applied R&D and marketing, and longer-term strategic R&D.



Funding model



More than 50 levies are collected through 33 commodities by the Australian Government which, in addition to government contributions, are used to stimulate growth from the ground up. To support transformation, Hort Innovation invites interested parties to co-invest money in projects that impact on all growers. These collective investment dollars are channelled through our two-pool funding model.

Levies and Australian Government contributions make up the first pool of funding (Pool 1). These levy dollars are only invested back into the industry from which they were collected. The second pool of funding from co-investors (Pool 2) is used to seed the more ambitious, longer-term, whole of industry projects.

The total investment pools equal about \$100 million every year.

Solid new foundations to support delivery of outcomes

Our Constitution

Hort Innovation's Constitution outlines the company's priorities as the industry services body for Australian horticulture:

- » Provide leadership to, and to promote the development of, the Australian horticulture industry
- » Increase the productivity, farm-gate profitability and global competitiveness of the horticulture industries by:
 - » The strategic allocation and investment of Levies, Australian Government Contributions, Producer contributions and monies received from investors in research, development, extension and marketing funds, programmes and services
 - » Providing information, services and products related to research, development, extension and marketing activities or outcomes
- » Support capacity building by maintaining a diverse range of research, development, extension and marketing services providers
- » Promote and further the interests of Australian horticulture industries overseas in relation to the export of Australian horticulture products to, the sale and distribution of Australian horticulture products in, and the consumption of Australian horticulture products in countries other than Australia.
- » Be accountable to Levy Payers, Producer Contribution Payers, Investors and the Australian Government for the company's use of, as applicable, Levies, Producer Contributions and payments from investors
- » Engage in any other activities for the benefit of Members, Levy Payers, Producer Contribution Payers, the Australian Horticultural Industries, co-investors and the Australian community generally which are not inconsistent with the requirements of the Act and the Deed of Agreement
- » To do all such things as are incidental, convenient or conducive to the attainment of all or any of the above priorities.

Hort Innovation's Constitution can be viewed at www.horticulture.com.au/about

Hort Innovation is not an industry representative body. Under its Deed of Agreement with the Australian Government, Hort Innovation is not able to engage in agri-political activity – this is the role of the industry representative bodies. Hort Innovation's Deed of Agreement with the Australian Government can be viewed at www.horticulture.com.au/about



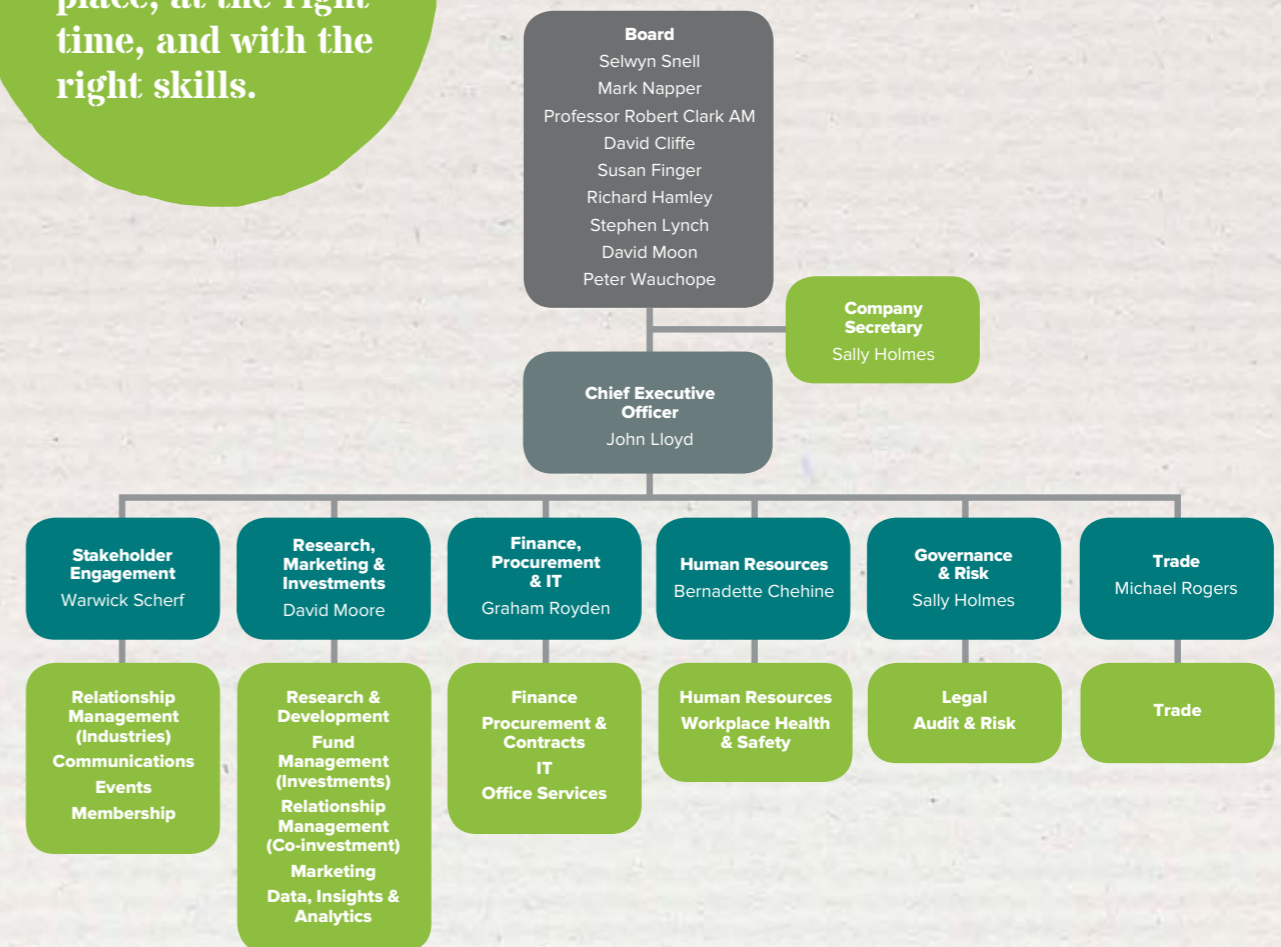
Our organisational structure

Hort Innovation's organisational structure has been designed to position our staff and assets to most effectively carry out our strategic activities and align directly to how we make decisions that deliver on our strategic priorities.

While Hort Innovation's head office is in Sydney, we also have a permanent presence interstate in both Melbourne and Brisbane. The company currently has 74 employees who provide national industry coverage across the strategic portfolio of activities of research, marketing and investments, as well as stakeholder engagement, while managing the corporate environment within finance, procurement, IT, human resources, good governance, and risk management.

Hort Innovation is committed to fostering a culture of safety and providing a safe and healthy place to work for all of our employees, contractors, visitors and other non-employees. Hort Innovation has implemented a robust Workplace Health & Safety Program consisting of training, policies, procedures, emergency personnel and equipment to minimise workplace safety risks and ensure the wellbeing of our people and those around us.

Making sure we have the right people in the right place, at the right time, and with the right skills.



In line with Hort Innovation's ongoing commitment to boost Australia's horticulture trade, Michael Rogers was appointed as Trade & Export General Manager on June 23, 2016, providing a wealth of experience in government and industry across a broad range of agrifood issues, including international trade arrangements, industry export priorities, foreign investment and infrastructure.



Hort Innovation's Board is skills-based and currently comprises nine non-executive Directors:

- » Two Directors elected by voting members of Hort Innovation at the 2015 Annual General Meeting (AGM)
- » Two Directors appointed by non-retiring members of the Hort Innovation Board following the 2015 AGM
- » Three former Horticulture Australia Limited Directors (HAL Nominees)
- » Two Directors appointed to the Board by the Minister for Agriculture and Water Resources, the Hon. Barnaby Joyce (Minister's Nominees).

Hort Innovation's Constitution requires that in 2016, five Directors retire from the Board, three of these being HAL Nominees and two being Minister's Nominees. Accordingly, there is a need for the recruitment of five Directors in 2016. Retiring Directors may nominate for re-election.



Our teams in detail

Stakeholder Engagement

This function contains the Relationship Management (industries), Communications, Events and Membership teams.

Accountability: That the organisation is managing stakeholder expectations and communicating with them effectively, including facilitating and translating the delivery and outcomes of investments, and reaching out to growers with membership opportunities.

Research, Marketing & Investments

This function contains the R&D Management, Fund Management (investments), Relationship Management (co-investment), Marketing and Data, Insights & Analytics teams.

Accountability: Investing funds in quality and value-for-money research and marketing. Increased focus on investment returns through the Fund Management capability, greater focus on data and increased focus on developing new sources of co-investment.

Trade

This function contains the Trade Unit, which is a new area of focus under Hort Innovation's Constitution and recognises the opportunities for growth both domestically and abroad.

Accountability: Developing export opportunities and building markets overseas where consumers recognise value and appreciate quality, premium Australian horticulture products.

Finance, Procurement & Information Technology

This function contains the Finance, Procurement & Contracts, IT and Office Services team.

Human Resources

This function contains the Human Resources and Workplace Health & Safety Teams.

Governance & Risk

This function contains the Legal and Audit & Risk teams.

Accountability: The processes and expenditure of operating the company, and optimisation of the operations, assets and talent of the company. The requirements of finance, risk and compliance, systems, recruitment and development of quality resources are carefully managed to optimise the operations of the company.

Working collaboratively to grow and achieve

Hort Innovation is the link between the needs of industry, the capabilities of science, and the potential of marketing. Committed to investing for the balanced interest of the horticulture industry, investment decisions are prioritised by the current needs highlighted by each horticulture levy industry.

To gain the necessary insight from industry for levy (Pool 1) investments, Hort Innovation undertakes consultation with growers through industry-specific Strategic Investment Advisory Panels (SIAPs), made up of panellists representing those levy industries.

From a co-investment (Pool 2) perspective, Expert Advisory Panels (EAPs) are in place to work with Hort Innovation to guide the investments within each co-investment fund.

Hort Innovation is committed to an ongoing dialogue with stakeholders through an engagement program of meeting with representative bodies such as Voice of Horticulture and industry representative bodies (IRBs); state and regional grower groups such as PMA Australia-New Zealand Limited (PMA A-NZ) and Australian Horticulture Exporters' Association (AHEA); the supply chain such as retail supermarkets and Central Markets of Australia Association (CMAA); our delivery partners and the research community such as state research agencies, CSIRO, National Horticultural Research Network (NHRN), the Australian Government and other industry agencies such as Plant Health Australia (PHA) and the CRC network.



Levy (Pool 1) – Strategic Investment Advisory Panels

Part of establishing Hort Innovation has been the need to drive new consultation processes with growers. An interim advisory framework for levy (Pool 1) investments involved consulting with growers as a primary source of advice, inclusion of IRBs in the advisory groups, and maintaining a level of continuity from the previous HAL advisory framework.

Hort Innovation then moved to establish Strategic Investment Advisory Panels (SIAPs) for each levy industry with the aim to provide transparent and robust advice on investments. In 2105/16, 18 SIAPs, each aligned to a levy-paying industry, were formed.

The objective of the SIAPs is to help guide the way that levy funds are invested and provide transparent and robust investment advice.

SIAPs are comprised of industry supply chain stakeholders, a majority of whom are levy paying growers. Based upon appropriate skills criteria, panellists were appointed to ensure that suitably qualified levy payers populate each panel. Panels may also include IRB representation on the

respective industry panel, and where applicable, a lead agency representative from within the National Horticulture Research Network (NHRN).

The application process is thorough and commences with an Expression of Interest process administered by an independent third party. From here, successful applicants are determined through interviews conducted by a panel including a Hort Innovation director, an industry body director or nominee, and an independent third party representative. There is also scope for further panellists to be brought on board as required in the future, in line with the needs of each industry.

Most SIAPs have conducted their inaugural meetings where topics have included the existing investment program, strategic investment planning and any short-term, industry specific R&D and marketing priorities. For further information on SIAPs go to the Hort Innovation website at www.horticulture.com.au.

Relationship Managers consult with levy industries

to determine their needs and expectations, and work to ensure these are met. Contact details for all industry Relationship Managers are available on the Hort Innovation website (www.horticulture.com.au).

Co-investment (Pool 2) – Expert Advisory Panels

In February 2016, Hort Innovation announced four Expert Advisory Panels (EAPs) to work with the sector to drive the minimum \$40 million investment into new, long-term, strategic cross-industry R&D across four of the five foundation areas established in the 2015/16 period: Health, Nutrition & Food Safety; Green Cities; Leadership; and Asian Markets (a fifth foundation fund, Fruit Fly, was also established in this period, while a sixth, Pollination, was readied for announcement).

EAPs are in place for co-investment funds to assist Hort Innovation in guiding investments. Hort Innovation will continue to take on feedback from its ongoing consultation program when considering the establishment of new funds.

Each of the four EAPs features a broad cross-section of specialist representatives including growers, subject matter professionals, and state government experts. Recruitment was conducted via a public Expression of Interest process with a panel of two independent experts working with Hort Innovation Relationship Managers to determine the successful panellists, with scope to expand panel membership as required.

In determining the funding priorities for co-investment, a broad consultation process was conducted with stakeholders that involved the publication and circulation of a consultation paper that profiled the most significant issues facing Australian horticulture. In response, more than 100 written submissions were received, along with supplementary feedback that was provided through direct stakeholder contact. A summary of this feedback was shared online and through regional grower meetings and workshops during the 2015/16 financial year.

Expert Advisory Panels are in place for co-investment funds to assist Hort Innovation in guiding investments.

Expert Advisory Panel members

ASIAN MARKETS FUND

Mr Rowan Little, General Manager Business Development and Intellectual Property, Montague

Ms Lisa Nguyen, Former State Director, SA/NT, Australian Trade Commission (AUSTRADE)

Mr Nick Macleod, Director, Vegetable and Deciduous Fruit RD&E, Horticulture & Forestry Science, Queensland Department of Agriculture & Fisheries (QDAF)

Mr Peter Crawley, Managing Director, Growing Innovations Management Pty Ltd

Mr Peter Barnard, Director, Oliver & Doam Consulting

Mr Greg Murdoch, Fund Manager, Hort Innovation

Mr Angus Street, Relationship Manager – Strategic Co-investment, Hort Innovation

HEALTH, NUTRITION & FOOD SAFETY

Dr Geoffrey Annison, Deputy Chief Executive, Australian Food & Grocery Council (AFGC)

Mr Richard Bennett, Technology Manager, PMA Australia-New Zealand Ltd & Fresh Produce Safety Centre

Ms Veronica Graham, Manager, Food Systems and Nutrition Policy, Department of Health and Human Services

Dr Barry McGookin, General Manager Innovation, Skills and Development, Food Innovation Australia Ltd (FIAL)

TBC, representative from Department of Agriculture and Water Resources

Dr Alok Kumar, Relationship Manager-Strategic Co-investment, Hort Innovation

Mr Tim Archibald, Fund Manager, Hort Innovation

LEADERSHIP FUND

Mr Christopher Downs, Research Director (Food), CSIRO Food & Nutrition

Mr Jeremy Badgery-Parker, Director and Principal Consultant, Primary Principles Pty Ltd

Professor Jim Pratley, Emeritus Professor of Agriculture and Strategic Research professor of Agriculture, Charles Sturt University

Dr Callum Wilson, Research Leader, Tasmanian Institute of Agriculture, University of Tasmania

Mr John Maher, Chief Executive Officer and Managing Director, Ruralco Holdings Ltd

Ms Sharyn Casey, Relationship Manager – Strategic Co-Investment, Hort Innovation

Mr Stuart Burgess, Fund Manager, Hort Innovation

GREEN CITIES FUND

Mr David Matthews, Managing Director, Proteaflora Nursery Pty Ltd

Ms Julie Francis, Water Sensitive Urban Design Coordinator, City of Melbourne

Dr Mark Gibbs, Director, Knowledge to Innovation, Queensland University of Technology

Mr Warwick Savvas, Senior Associate, Living Architecture Practitioner, Aspect Studios

Ms Sharyn Casey, Relationship Manager – Strategic Co-Investment, Hort Innovation

Mr Stuart Burgess, Fund Manager, Hort Innovation

Growers' meetings

Growers' meetings held throughout the year provided growers with the opportunity to share feedback and ideas on the proposed investment priorities and to engage directly with Hort Innovation management. Building on the schedule of meetings from the previous year, eight grower meetings were held this financial year including:

- » July 13 – Sydney
- » July 21 – Adelaide
- » August 4 – Bunbury
- » August 5 – Gingin
- » August 10 – Orange
- » August 19 – Mildura
- » August 20 – Cranbourne
- » August 24 – Coffs Harbour.

Hort Innovation Chair Selwyn Snell and CEO John Lloyd attended meetings with open and robust discussion around a number of key issues including:

- » Process of electing the Board
- » Annual General Meeting process
- » Existing projects and their legacy
- » Cross-industry representation
- » Advisory panels – selection of members and processes
- » Pool 2 model and framework.

Levy Payer Workshops

Hort Innovation held Levy Payer Workshops to assist with the development of the company's inaugural Strategic Plan, setting the strategy to 2018. The workshops provided the forum to consult with levy payers, the Australian Government and other horticulture stakeholders to shape the company's strategy.

The strategy was also underpinned strongly by Hort Innovation's Constitution and the Deed of Agreement with the Australian Government. Presentations were delivered at each workshop regarding company operations, particularly in relation to levy investments (Pool 1) and strategic co-investment funding (Pool 2).

Held from January to March 2016, the Levy Payer Workshops took place in:

- » **South Australia**
Adelaide Hills
- » **New South Wales**
Batlow
Richmond
- » **Queensland**
Bowen
Brisbane
Glass House Mountain
- » **Northern Territory**
Darwin
- » **Tasmania**
Launceston
- » **Victoria**
Mildura
Shepparton
Werribee
Robinvale
- » **Western Australia**
Perth
Swan Valley.

Feedback was received at each workshop and collated into a summary that was uploaded to Hort Innovation's website. This valuable feedback also contributed towards compilation of the company's inaugural Strategic Plan.



Strategic Plan 2016–2018

The focus for the Strategic Plan is looking forward and directing the company's energies to drive a powerful, innovative and effective program of investment in R&D and marketing that will see Australian horticulture grow, thrive and prosper now and in the future.

Most importantly, the Strategic Plan gives our stakeholders transparency and ensures our activity is consistently geared to delivering on our investments, whilst communicating and listening to stakeholders in an environment of continuous improvement.

The Strategic Plan is available for download on Hort Innovation's website, as is a two-minute, introductory motion graphic to the Strategic Plan, *Breaking New Ground*, which is a snapshot of who we are and what we do. The Strategic Plan was delivered to Government in April 2016.

Annual Operating Plan 2016–2017

The Annual Operating Plan (AOP) was updated to reflect work undertaken and delivered, and to reflect the outcomes. As required under the Statutory Funding Agreement, the new AOP was provided to Government in June 2016 and details the activities to be undertaken and KPIs set in order to deliver our corporate strategies and investment priorities as outlined in our Strategic Plan.

Implementation of activities outlined in Strategic Plan

Corporate strategy: Communicate and listen to stakeholders

Activities

Communications strategy – Implement a holistic communications strategy to link all face-to-face and other channel communications together in one plan.

Brand content – Develop consistent content, messages and guidelines for use externally on the value we deliver and “what it means to be part of horticulture and Hort Innovation”.

Advisory mechanism – Implement and manage a successful fit-for-purpose advisory mechanism, panels and process to seek advice and inform investments in R&D and marketing.

Consultation process – Manage and deliver a process to communicate and seek input from the wider population of growers (outside the advisory mechanism) in both face-to-face and digital formats, and publish outputs of feedback events.

Membership – Manage membership application processes including allocating voting rights and managing processes at the AGM.

Feedback mechanism – Develop and manage a feedback, complaints and continuous improvement process to listen, investigate root causes and learn from our feedback.

New systems – Implement and optimise the new Customer Relationship Management and reporting systems to use information to improve the quality of relationships and communication.

Key performance indicators

Stakeholder survey – Quantitative, measuring level of industry penetration and sentiment; and qualitative, measuring top growers and performance evaluation setting the baseline data for improvement.

Feedback/complaints – Quantity and resolution times.

Engagement measures – Digital monitoring and website statistics.

Progress to date

- » Implementation of the communications strategy is underway to align target audiences with content through face-to-face, digital and print media channels, with appropriate regularity, including:
 - » Face-to-face engagement – audience-tailored key messages are being delivered one-to-one (through the Relationship Managers) and one-to-many through participation at industry events.
 - » Online engagement – digital solutions for grower information, knowledge sharing and community building via communication channels Grower Intel, Growing Innovation and Hortlink.
 - » Outreach engagement – currently averaging 280 pieces of media coverage per month generated by an average of one to three media releases per week and the profiling of projects through media events. These events involve close collaboration with key partners.

Progress to date (continued)

- » A current project is underway to develop a grower resource centre on the Hort Innovation website.
- » Reporting and publishing of the following is in process:
 - » The financial position of all investment funds quarterly
 - » The status of 2015/16 investments within each fund during the first quarter
 - » Project final reports.
- » Formal guidelines have been generated and work with delivery partners is underway to ensure that communication content generated by investments acknowledge Hort Innovation and the Australian Government.
- » An engagement plan to work more closely with industry-specific communication programs to ensure messaging and brand identity is complementary of the RDC model and Hort Innovation is underway.
- » Feedback mechanisms are in progress to improve the consultation process.
- » A fit-for-purpose advisory mechanism, involving Strategic Investment Advisory Panels, has been established as a first point of advice on concepts received through the investment funnel, enabling Hort Innovation to seek investment and procurement advice from industry.
- » Learnings and continual improvements between advisory mechanisms are shared via summaries of meetings on the Hort Innovation website.
- » The development of industry endorsed Strategic Investment Plans is progressing, with the plans due for completion by the end of the calendar year.
- » Consultation with stakeholders at different levels:
 - » One-to-one, through a series of targeted face-to-face meetings with major growers and major supply chain entities in the horticulture industry and within each industry sector conducted by CEO John Lloyd and other leaders of the organisation
 - » One-to-many, through Hort Innovation participation at industry events.
- » Membership is being encouraged via a newly developed, easy to use membership form and attendance at industry events and seminars such as the 2016 National Horticulture Convention.
- » A feedback process is being embedded into the company's workflow system to enable better tracking, reporting and management of stakeholder feedback.
- » A complete rollout of our CRM has been activated with fine-tuning underway to meet changing business needs.

Implementation of activities outlined in Strategic Plan

Corporate strategy: Deliver on investments

Activities

Levy (Pool 1)/Co-investment (Pool 2) model – Implement and manage a fund-based investment process to enable strategic funds, increased investment discipline and focus on industry research and marketing.

Co-investment (Pool 2) funds – Establish co-investment funds up to their capacity of investments and seed new funds in line with consultation based on market demand and investment capacity.

Strategic Investment Plans (SIPs) – Implement and manage a process to establish and review SIPs for all funds.

Procurement process – Implement and manage a new procurement process for greater transparency and contestability to deliver improved value for money.

Evaluation framework – Implement a monitoring and evaluation framework at all levels of investment (project, fund and corporation).

Innovation process – Build an end-to-end innovation funnel process that encourages concepts and develops them into investment through a robust process of advice, analysis and decision-making.

Portfolio compliance – Ensure current and future portfolios remain compliant against the new Statutory Funding Agreement.

Market access/trade – Build and manage a new function that engages with industry and overseas stakeholders and delivers tangible growth to export value.

Systems to support delivery of investments

– Implement upgraded systems across finance, procurement and innovation workflow.

Key performance indicators

Investment capacity – Maximise investment spend and pipeline of forecast investment/innovation.

Process times – Efficiency of investment process and turnaround times.

Procurement effectiveness – Value-for-money achievement through competitive processes.

Baselines – Year one establishment of baselines for future assessment.

Progress to date

- » The fund management model is critical to the functioning of Hort Innovation and provides a collaborative environment that has transparent workflow systems and reporting, particularly evident in the SIAPS and EAPs.
- » Non-government co-investment dollars have been acquired for Pool 2 with the contracting of significant projects and investment.
- » A procurement process has been fully activated to ensure that project proposals that deliver the best return on investment and focus on industry impact, benefit and adoption are chosen.
- » A total of four EAPs were formed to provide input and collaboration on all projects, with work to establish further panels commenced.
- » The innovation process to attract new concepts has been fully activated with concepts being fed into the funnel for investigation and possible development once reviewed by appropriate panel/s. All associated systems and processes have been activated and are in the process of being refined and reviewed.
- » Internal processes are under review to ensure the Statutory Funding Agreement is the key guiding principle in the investment approval process through a number of checkpoints and that all investments are in alignment with national R&D priorities.
- » Expert advice is being provided to Hort Innovation and the Australian Government through the industry Trade Advisory Panel (iTAP) and Trade Assessments Panel (TAP).
- » All horticulture industries under the Australia Fresh umbrella will be attending three upcoming trade events in Asia and the Middle East.
- » Export strategies for industries are underway so that an all-of-horticulture trade strategy can be developed as a future industry roadmap.
- » A new finance system has been implemented, including an expense management system and greater integration of workflow systems with document management, finance and reporting systems to ensure efficiency, accuracy and transparency.

Implementation of activities outlined in Strategic Plan

Corporate strategy: Develop our culture and leadership

Activities

High-performance culture – Implement the HR Strategy to achieve delivery on our commitment to our key stakeholders, and achieve our vision of growing the future of Australia’s horticulture industries through our people.

Innovation/brand – Develop guidelines and key messages for use internally on “What it means to be part of horticulture and Hort Innovation”.

External leadership – Seek opportunities to invest in the capacity of industry leadership through our levy and co-investment funds, including industry awards/programs.

Diversity and citizenship – Develop and implement a diversity policy for Hort Innovation and our investments to lead the industry by example, and implement initiatives that demonstrate our participation in the RDC and wider research community.

Risk frameworks and internal audit – Manage the organisation’s risk strategy and internal audit frameworks to support our teams and protect our performance.

Board and AGM – Support our Board with transparent reporting to ensure risks are managed and optimal decisions are made. Implement a compliant AGM and voting process to ensure eligible voting members “have their say” on leadership of Hort Innovation.

Key performance indicators

Hort innovation culture and engagement survey – Pulse survey to evaluate overall culture health and sentiment.

Hort Innovation leadership performance – Develop measures and metrics to indicate leadership is on track and performing well.

Horticulture industry leadership – Capacity building through the investment of co-investment leadership fund.

External survey – Assess sentiment towards Hort Innovation’s leadership and culture.

Progress to date

- » Leadership workshops with senior staff have been implemented and action planning integrated into staff Personal Development Goals. Business goals are in the process of being finalised across the business with every team members’ individual goals linked to the goals of the business.
- » The Behavioural Capabilities Framework has been redesigned and embedded in performance management processes and other HR tools. All staff have been briefed and provided with collateral regarding the Framework and how to action it to promote collaboration, deliver quality, exercise sound judgement, make an impact, demonstrate agility and innovation, and lead.
- » Our strategic vision for developing culture and leadership has been set, which leads into key People Initiatives.
- » Opportunities for networking to build more comprehensive networks across horticulture have been engaged.
- » Internal audits across all departments have commenced.
- » Suitable policies and procedures have been developed throughout the company to guide operations.
- » An internal platform to encourage greater peer recognition has been implemented to support engagement and productivity.
- » There is regular review and updating of the Board risk register and all departmental risk registers to identify any new risks or alteration in risk ratings from time to time.
- » Hort Innovation staff at all levels have been involved in the identification and management of risk.
- » The fraud risk framework has been reviewed and will be regularly reported to the Audit & Risk Committee.
- » Internal training for all management and staff on risk management and systems of good governance has commenced.
- » Applications for membership are reviewed regularly against Constitutional requirements to ensure eligibility and timely registration of eligible members on the member register.
- » The annual reporting (statutory declaration) process required of grower members to provide a compliant but user-friendly method of validation of voting eligibility and allocation of voting rights is under review.

Awareness, adoption, advocacy

Communication has been a major focus for Hort Innovation with the aim to build a good communications engine and systems to do things well, ensuring transparent and timely communication with all stakeholders, particularly growers. The goal is to facilitate the translation of investment to value for growers, government and consumers and communicate the R&D, marketing and trade investment outcomes that improve the productivity, profitability and competitiveness of horticulture.

To support the below online outreach channels, Hort Innovation also engaged in face-to-face communication by providing sponsorship and exhibiting and participating in over 10 industry events, expos, field days and symposiums.

The key digital communication channels initiated this year include:

Communication channel	Frequency	Purpose
Growing Innovation	Fortnightly	News Providing horticulture news for growers across R&D, trade and marketing
HortLink	Quarterly	Report Linking horticulture growers with the latest information on levies in action across R&D, marketing and trade
Grower Intel	When required	Alert Information and updates from Hort Innovation, specific to an industry or industry-wide
Website www.horticulture.com.au	Always on	Information one-stop-shop Updated information across Hort Innovation investments, projects, tenders, news and events



Connect, collaborate, cultivate

Hort Innovation is the grower-owned industry services body for Australian horticulture – membership is what our company is built on. One of our focuses is to ensure we are constantly engaged with our current members, whilst continually encouraging new membership. Hort Innovation currently has close to 2000 members.

On November 26, 2015, Hort Innovation transitioned to industry ownership. Tanoa Pty Ltd (the initial 'caretaker' member of Hort Innovation) was removed from the member register and the approved applicants for membership to November 26, were entered on the register and became the members (in accordance with Article 6.5 of the Constitution).

Hort Innovation members receive information on what is happening with the company and how they can be involved, including through consultation events for their industry. Membership is free and Hort Innovation is committed to providing value to members, ensuring communications are relevant, and making available multiple opportunities for them to engage with the company.

Levy-paying growers can also choose to become voting members of Hort Innovation, providing a direct say through voting at the Annual General Meeting (AGM) – we actively encourage levy paying growers to do this.

Membership to Hort Innovation is a grower's link to innovation with membership benefits geared to connect with industry, collaborate and cultivate ideas.

Members are provided with:

- » **Hortlink: a quarterly update on each levy industry program**
- » **Free access to Hort Innovation Final Reports***
- » **Growing Innovation: fortnightly e-news**
- » **Grower Intel: industry alerts**
- » **Direct invitations to participate in industry events, as well as Hort Innovation consultations and forums**
- » **Participation in a community of growers with opportunities to share knowledge, gain experience and develop networks**
- » **Opportunity to exercise voting rights at Hort Innovation's Annual General Meeting.**

* Final Reports are free to Australian horticulture levy payers, registered Hort Innovation members and industry representative bodies. Accessing a Final Report is a straightforward process at the resources section of Hort Innovation's website.



Hort Innovation's two-pool funding model ensures that the current needs of horticulture industries are being met now, whilst driving the sustainability of Australian horticulture.



Levy pool – the now... delivering outcomes for today

Hort Innovation's levy-based funding pool (Pool 1) focuses on investments in R&D and marketing to stimulate industry-specific advancements that are generally near-term.

Annually, Pool 1 investments are about \$44 million in R&D and \$15 million in marketing. These investments are wide-ranging in terms of ambition, scope and budget, with a general lifespan of one to five years (though there are some projects with longer lifespans and longer-term strategic aims). Investment decisions are prioritised by the current needs highlighted by each horticulture levy industry.

Annually, Pool 1 investments are about \$44 million in R&D and \$15 million in marketing.

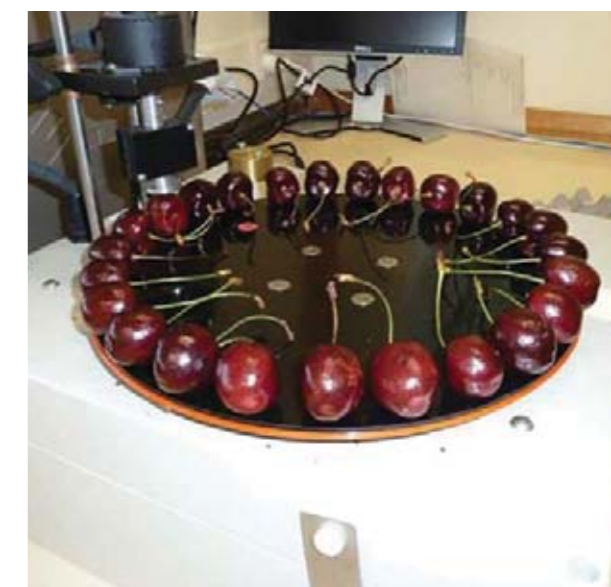
Levy in action – project snapshot

Improving fruit quality and consistency in cherries through maximised nutrient availability (CY12002)

The aim of this project is to investigate whether soil microbiology can be utilised to maximise the availability and uptake of plant nutrients, to in turn boost crop yields and fruit quality.

The Tasmanian project is progressing on target and is providing interesting information on annual changes under alternative and conventional nutrient management. A Derwent Valley site has been established for four seasons and a Nicholls Rivulet site for three seasons. Although they have different soil types and cultivars, the two sites have shown similar trends to date, with a higher percentage of A-grade fruit and a reduction in cracking in fruit from the alternative treatments. All sampling and assessments have been completed for the 2015/16 season and data analysis was to follow.

The alternative treatments involve humates with combined minerals, and with 'effective microbes' (a mix of about 80 different species of co-existing beneficial microorganisms).





Co-investment pool – the future... working towards long-term benefits

Hort Innovation's co-investment funding pool (Pool 2) focuses on investments with longer-term benefits, a broader scope, and a transformational impact across the horticulture industry.

Hort Innovation and co-investors invest a minimum of \$40 million across the following funds established in 2015/16: Asian Markets; Fruit Fly; Green Cities; Health, Nutrition and Food Safety; and Leadership. Ultimately, Pool 2 will have 10 to 12 strategic co-investment funds, with the sixth fund, Pollination, launched shortly after the end of the 2015/16 period.

Hort Innovation and co-investors invest a minimum of \$40 million in Pool 2 programs across key priorities.

Co-investment in action – project snapshot

Which plant where, when and why database (GC15002)

This project brings together a consortium of researchers to investigate the suitability of various plant species under current and future climate scenarios. The project is the first of its kind and will culminate in an online interactive tool that will map the distribution of suitable habitats for various plant species across Australia.

It will be relevant both now and in the future as our cities get hotter and our climate patterns change. The tool will be publicly available and designed for use by a wide range of stakeholders, from nursery and turf growers to developers, landscape planners and designers, councils, and individuals.

Users will be able to select from a range of filters to choose the right species of plant for various urban areas – from street plantings to housing developments and open spaces.

Details on the heat mitigation properties of various plants and their ecosystem benefits such as pollination and improvements to soil quality will also be available. A national best practice technical design guide will be developed as part of the project to demonstrate best practice case studies of species selections around Australia.

High-priority industry needs

Research and development

three
areas of activity

Each year, Hort Innovation invests around \$100 million raised from grower levies, other contributions from industry, and Australian Government funds in R&D and marketing.

Marketing

Activities beyond the farm gate

International competitiveness and new markets

Trade

Marketing – Activities beyond the farm gate



For industries that have marketing levies, Hort Innovation invests in campaigns that encourage people to buy, eat, trust and enjoy more horticulture products. Hort Innovation works with industry to develop strategies, and with communication partners to create and implement campaigns that have a measurable impact across all mediums.

Hort Innovation has a team of highly skilled and experienced Marketing Managers who oversee and drive campaigns that predominantly focus on domestic market development by linking consumer trends to the unique characteristics of horticulture products. In addition to supporting individual industries, Hort Innovation has a role in taking a big-picture view to ensure industry campaigns work in harmony and use integrated approaches to leverage off each other.

Marketing in action – project snapshots

MUSHROOMS MAKE THEIR MARK

Hort Innovation launched the biggest marketing campaign in the Australian mushroom industry's history in May 2016, running across television, out of home and digital media with the aim of encouraging home cooks to add mushrooms to their everyday dishes. The focus has been on showing how adding mushrooms makes meals healthier and tastier to address research that found resistance to using mushrooms amongst less-confident cooks, and to drive use of mushrooms as an ingredient in more meals more often.

The above-the-line investment was delivered in conjunction with PR and media outreach activity, social media, a national events and in-store campaign, and retailer engagement.

PERSIMMONS PUNCH ABOVE THEIR WEIGHT

In a strategic move away from traditional outputs, the persimmon marketing program centred on two key audiences – 'Foodie' and 'Health' – and focused on engagement via one specific output: educational events with key influencers across these two areas. This was done in order to get more bang for a limited buck and use the influence and reach of food and health industry leaders to drive the persimmon message, create demand and deliver strong return on investment.

With a target of 80 media hits, the campaign generated 165 pieces of coverage across print, online and social media, effectively more than doubling the KPI. The reach was upwards of 10.7 million. The Australian Persimmons Facebook page doubled in fans during the campaign, to 13,334. The target of Facebook likes of 2000 for the campaign saw more than quadruple achieved at 8321. Instagram followers increased by almost double to 760, well surpassing the target of 500. The total social media reach of the campaign was over 1.8 million.

Key achievements

ONIONS GO UNDERCOVER IN INDUSTRY MARKETING FIRST

The first-ever marketing campaign for the Australian onion industry has been launched. The Australian Onions 'Secret Serve' campaign aims to drive onion consumption by three to five per cent by promoting onions as a versatile, reliable, nutritious and delicious food. The campaign has a specific focus on parents with young children and will be encouraging these consumers to include onions in more meals. The opportunity for the Secret Serve campaign is huge, as research shows almost 95 per cent of kids aged two to 18 aren't getting the recommended daily serves of vegetables.

SWEETPOTATO LEVY KICKS OFF

Hort Innovation has been planning for the implementation of the new sweetpotato industry marketing levy, exploring existing research into the behaviour and attitudes of consumers who shop, prepare and consume sweetpotato. This will inform the strategic direction of the industry's marketing plan. Levy payments began on January 1, 2016, with growers paying a statutory marketing levy charge of one per cent on all sales.

Inspiring consumers with new ways to prepare and eat sweetpotato, building knowledge around different varieties, and exploring health and nutritional benefits will drive consumer demand for the produce. Foodservice, processing and export will also form part of possible growth strategies for the industry. In-market activities are expected to be deployed in 2017.



R&D – High-priority industry needs

Innovation is key to the future success of Australian horticulture. It sits at the heart of R&D that seeks to develop and implement new technologies and science to in turn make big gains in productivity and economic growth.

Hort Innovation's investment approach in R&D takes the form of short-term projects that have less technical risk, as well as long-range transformational R&D that has the potential to make a significant impact. The short-term investments in R&D seek to stimulate ongoing incremental improvements and are more likely to be industry specific and therefore are primarily be funded from industry levies and government contributions. R&D that is longer-term, higher in ambition and risk, and transformational will, when successful, bring wide industry benefit and is funded from government and co-investment contributions.

This diversification in our R&D investment portfolio better positions Australian horticulture to recognise and act on future opportunities and is driven by a team of R&D Managers who are subject-matter experts across such areas as emerging technology, biotechnology, integrated pest management and plant biosecurity.

Hort Innovation's R&D team drives the process from scoping the research brief to receiving and assessing the Final Report. Hort Innovation's R&D team work to shape the investments, meaningfully contribute to the process and drive the outcomes of all R&D projects for industry. They hold to account delivery partners, are accountable for the results and outcomes of projects, and work closely with industry to shape investments.

R&D in action – project snapshots

GLOBAL-FIRST AGREEMENT WITH AUSTRALIAN RETAILERS

In May 2016, Hort Innovation announced a project to harmonise produce safety requirements across key supermarket retailers, collaboratively driven by the horticulture sector using cross-industry levy funds.

In a world-first, major grocery retailers (ALDI, Coles, Costco, Metcash and Woolworths) and the horticulture industry have agreed to streamline fresh produce safety requirements, lowering the cost of doing business and improving food safety across the fresh-produce supply chain in Australia.

The new model will bring down the number of audit elements required to supply retailers from more than 200 combined to around 60, while strengthening food quality standards through the acceptance of internationally benchmarked auditing programs.

A pilot launch of the new program has been conducted, with the full standardised food safety initiative expected to begin by the end of 2016.



USING AUTONOMOUS SYSTEMS TO GUIDE VEGETABLE DECISION-MAKING ON-FARM (VG15003)

The goal of this project is to research, develop, evaluate and support the adoption and commercialisation of technologies that aim to reduce production cost and increase on-farm productivity in the vegetable industry, in particular in brassica, lettuce and baby leaf growing.

These technologies include intelligent sensors and precision applicators, automated information processing systems and intelligent mobile platforms including robotics. The technologies will collectively provide timely and accurate information about crop status (including yield, quality and forecasting) and minimise input costs through the precision application of chemicals and water, and in some cases the use of non-chemical automated systems for precision crop and weed handling.

Due to the success of this project and opportunities identified, further investments in robotics have been initiated such as the project *Evaluating and testing autonomous systems developed in VG15003 in Australian vegetable production systems (VG15059)*.



Key achievements

INDIA AND AUSTRALIA RESEARCH DEAL

In March 2016, Hort Innovation signed an historic \$6 million co-operative research deal with the Indian Government as it moves to strengthen the nation's crop output. The Memorandum of Understanding (MoU) outlines a joint commitment to conduct research into strengthening both nations' horticulture products. Currently Hort Innovation, industry representatives, the Australian Government and the Indian Government are working together to scope the research strategy with Expressions of Interest from potential research partners and co-investors to be called for later in 2016.

RESEARCH DEAL SIGNED WITH WORLD'S LARGEST AGRICULTURAL RESEARCH ORGANISATION

In June 2016, a landmark research agreement between Hort Innovation and the Indian Council of Agricultural Research was signed, marking the second such agreement with a substantial Indian agricultural agency in as many months. The MoU will allow both countries to work on a number of agreed collaborative research areas for the mutual benefit of horticulture growers. Research focus areas include best-practice biosecurity and post-harvest research sharing, pollination, diagnostic techniques and the application of genomics across a number of horticulture crops.





Trade – International competitiveness and new markets

Hort Innovation works to develop export opportunities and build markets overseas where consumers recognise value and appreciate quality, premium products. This is a new area of focus under Hort Innovation's Constitution and recognises the opportunities for growth both domestically and abroad.

Prior to October 1, 2015 citrus exporters were required to hold a licence from Hort Innovation (prior to 2015, Horticulture Australia Limited) and to adhere to the conditions on that licence. On October 1, 2015 the legislation that specified citrus to the United States and oranges to all export markets as regulated products and markets sunsetted (ceased to be law).

From July 1, 2015 to November 1, 2015, Hort Innovation carried out the role of Industry Export Control Body by:

- » Issuing licences to citrus exporters to regulated markets; and
- » Pursuant to the licence conditions under Regulation 7(3) of the Horticulture Marketing and Research and Development Services (Export Efficiency) Regulations 2002, reviewing, determining and publishing minimum prices to be paid by exporters to packers for:
 - a. oranges, mandarins, tangelos, grapefruit, lemons and limes bound for the United States; and
 - b. oranges bound for China.

On November 1, 2015 the Secretary of the Department of Agriculture and Water Resources assumed the powers of the horticulture industry export control body from Hort Innovation.

When it comes to the export market, Australia does not have the production capacity in most industries to be a supplier of quantity (with exceptions such as some temperate fruit and nut industries). The main opportunity for Australian horticulture is to export premium, quality fresh food. It is our ambition to build recognition of Australian horticulture products as standing for taste, quality, clean, green and premium produce. To do this we must strive to present our products in a unified way across all our marketing efforts, export initiatives, and in trade conversations and negotiations.

A range of industry trade projects have been or are in the process of being assessed and updated following the McKinna Review, which was a multi-industry project commissioned by Hort Innovation to monitor and evaluate export development activities. New trade strategies have been developed for the citrus, summerfruit, and apple and pear industries, with the cherry industry's in process and the table grape's also to be looked at. Other industries including the avocado and vegetable industries have had trade strategies developed and are currently in implementation phase.

Trade in action – project snapshots

DECISION BY SOUTH KOREA TO ACCEPT AUSTRALIAN IMPORTS OF BLOOD ORANGES

Peak citrus industry group Citrus Australia and Hort Innovation welcomed South Korea's decision to accept Australian imports of blood oranges. Prior, Korea's Animal and Plant Quarantine Agency's policy only permitted Australian Valencia and Navel oranges. This decision was a key win for blood oranges.

A series of trials – being funded by Hort Innovation using the citrus industry R&D levy and Australian Government contributions, and being conducted by the South Australian Research and Development Institute – are currently underway to support expanded access for a number of citrus varieties to Japan.

AUSTRALIAN NECTARINE GROWERS GAIN ACCESS TO THE CHINESE MARKET FOLLOWING A NEW IMPORT PROTOCOL AGREEMENT BY BOTH COUNTRIES

The new import protocol agreement allows the export of nectarines from across Australia. The agreement also sets an important precedent in that as part of this protocol, the Riverland region in South Australia has been recognised as fruit fly free and able to export nectarines without the pest management requirements that exist for other commodities that are exported to China.

Under the new China trade protocol, nectarines being exported outside of Tasmania and the Riverland must adhere to stringent fruit fly treatments. For example, nectarines from Western Australia will need to undergo cold treatment at 2.1°C for 21 days or a combination with methyl bromide. Nectarines from eastern states can be shipped using cold treatment at 3°C for 18 days or a combination with methyl bromide.



Key achievements

AUSTRALIA AND CHINA SIGN TRADE MEMORANDUM OF UNDERSTANDING FOR HORTICULTURE

In September 2015, Hort Innovation and the China Entry-Exit Inspection and Quarantine Association (CIQA) signed a Memorandum of Understanding (MoU) – a demonstration of the long-term commitment to building the relationship between Australia and China.

The MoU seeks to create a framework for mutually beneficial engagement of horticultural trade interests between the two countries and is one part of the Australian horticulture industry's holistic trade strategy, including identifying opportunities arising from the China-Australia Free Trade Agreement (ChAFTA).

CHINESE TRADE OFFICIALS INSPECT AUSTRALIAN FARMS AND PRODUCE

In March 2016, Hort Innovation hosted 11 delegates representing four key Chinese provinces including the high-ranking Chair of CIQA's Plant and Animal Health Committee – a key agency charged with determining import activity into the country.

This follows the MoU that the organisation signed with China in September 2015, and saw Chinese quarantine officials inspect two local farms to get a close-up look at the stringent packing, pest management and produce quality standards of Australian fruit growers.

The delegation also visited summerfruit and apple orchards in Cobram and Shepparton as well as touring Melbourne retailers to gain a sense of the quality and range of fresh produce available in Australia's domestic retailers.



five

co-investment funds

Co-investment fund (Pool 2): Investing to grow the future of Australian horticulture

The Hort Innovation structure allows for the creation of a co-investment fund (Pool 2) that is able to pool seed money, create a single strategic plan and a clear set of R&D investment priorities that are attractive to other co-investors.

The pooling of these dollars is intended to allow for longer-term investments in large, key strategic projects that are needed to overcome the challenges facing the horticulture industry and realise a healthier and stronger industry in the long term. It is the intention of the co-investment fund to invest in larger, longer-term R&D priorities for the broader benefit of the horticulture industry and encourage participation from specialist service providers.

Pool 2 operates as a portfolio of strategic co-investment funds identified as critical to the future prosperity and profitability of Australia's horticulture industries. Each is designed to address five critical co-investment themes arising from the Hort Innovation Consultation Paper feedback process.

Five foundation co-investment funds were established in 2015/16, each governed by a Co-Investment Strategic Intent document that outlines the key investment themes.

Building capacity	Building the capacity of Australia's horticulture industries, with an emphasis on developing future industry leaders and innovators.
Driving growth	Reinforcing the need to stimulate domestic and export growth by focussing on a better understanding of domestic and Asian market consumer preferences and how changing demographics may influence product development and value-chain practices in Australia's horticulture industries over the next decade.
Stimulating productivity	Investigating advanced production technologies, processes and systems that will help drive changes in productivity and enhance Australia's global competitiveness across all horticulture industries.
Managing risk	Managing Australia's horticultural risk from a biosecurity, market access, food safety and pest and disease management perspective.
Ensuring sustainability	Ensuring a sustainable horticulture sector, in the context of the key input and environmental challenges associated with pollination, land, soil, water and energy.



Building capacity

Leadership Fund

PURPOSE

To build a globally competitive, innovative, resilient and profitable horticulture industry through investment in programs that build leadership and develop people at all stages of their career.

OBJECTIVE OF INVESTMENTS

To build a new pool of industry leaders by investing in sector-wide programs to attract newcomers, retain and develop current employees and build the industry's research capacity.

INVESTMENT THEMES & OUTCOMES

Retain existing employees

An increased pool of professionals with the skills and training required to adapt to industry change

Build future leaders

Identification of a new pool of industry leaders to drive innovation across the sector

Promote careers in horticulture

An increase in the number of 'job ready' career entrants in the horticulture sector

Build research capacity

Increased research innovation in Australian horticulture to drive global competitiveness

INVESTMENT OUTCOME

A strong, resilient sector equipped to innovate and meet the changing needs of industry.

In the Leadership Fund, all investments are required to align with one or more of Hort Innovation's key investment themes – these are outlined in the fund's Strategic Intent document (available on the Hort Innovation website). The key investment themes include:

- » Retaining existing employees by creating pathways to leadership to support employees at all stages of their career
- » Promoting careers in horticulture by attracting and supporting new entrants to positions of industry leadership
- » Driving research innovation through investment in programs which support innovative and transformative research.

PROJECT SNAPSHOT

Masterclass in global horticultural business – retaining existing employees

This masterclass program is the first project of its kind in Australia. It combines the expertise of what is currently ranked the number one university in agriculture and forestry in the world, the Wageningen Academy in the Netherlands, with New Zealand's specialist land-based university, Lincoln, as well as the leading Australian horticulture university, the University of Tasmania.

Best described as a mini-MBA, the masterclass will be available to growers and people working in the supply chain looking to take their business to the next level. Under this investment, up to 30 selected industry leaders each year will be exposed to a nine-month program of learning that focuses on global trends in agriculture and horticulture, international business, innovation, value chains, and governance and risk.

The first enrolments open in late 2016 and begin in early 2017. Thirty participants will be selected each year for participation in this unique five-year program.

Driving growth

Asian Markets Fund

PURPOSE

To build a globally competitive, unified, agile and profitable Australian horticulture industry through sustainable investment in high-value and high-growth Asian markets.

OBJECTIVE OF INVESTMENTS

To, in collaboration with government, commercial partners and industry stakeholders, maximise sustainable return for the Australian horticulture industry derived from Asian markets.

INVESTMENT THEMES & OUTCOMES

Understand the market

Identification of market requirements and trends

Collaborative relationships

Trade, channel and consumer loyalty to Australian horticulture products

Set the standard

Market awareness, understanding and trust of Australian horticulture product attributes

Value chain innovation

Efficient distribution, logistic management and retailing of Australian horticulture products

INVESTMENT OUTCOME

Sustained export market growth for the horticulture industry in Asian markets.

The Asian Markets Fund focuses on key market growth opportunities throughout the Asian region. Research will seek to prioritise future market access strategy and specifically address key barriers to progress. It will also assist the identification of target markets and consumer segments that will drive exponential export growth in niche premium products with higher margins. A whole-of-chain research and development approach to Asian market access and maintenance is relevant across industry where the learnings are applicable to all horticulture businesses and thus will enhance the reputation of Australian horticulture in its export markets.

Such an approach will enable co-investment from outside the traditional levy system, most importantly from transport logistics and retail, where vital research is required to remove and reduce current barriers to successful market access and penetration. The Asian Markets Fund will work with an expert panel to scope program and project briefs that have sufficient co-investment funding support; cross-industry relevance; grower support; and realistic potential to stimulate and sustain exponential export growth in a variety of horticulture industries.

The rapid growth of Asia's consumer class – from 525 million in 2010 to an estimated 3.2 billion by 2030 – will drive demand for premium, high-quality and safe horticulture produce from Australia.



In February 2016, Hort Innovation established two panels to help promote and boost Australian exports overseas and closely link industry to the new Hort Innovation Trade Unit. The **Trade Assessments Panel (TAP)** and an industry **Trade Advisory Panel (iTAP)** provide counsel and advice to Hort Innovation's Trade Unit in its endeavours to ensure the health and longevity of Australia's horticulture export industry.

The **Trade Assessments Panel** impartially assesses and applies commercially relevant scrutiny to applications for technical market access and improvement. It comprises five experts, including the Chair, Peter Wauchope, a Director on the Hort Innovation Board. Other members include Gavin Foord, a West Australian industry specialist with more than 25 years' experience in agricultural management, research and development; Michael Daysh, Northern Territory Government Department of Primary Industry Market Development Officer; Wayne Prowse, horticultural statistics specialist; and Tony Mahar, National Farmers' Federation Deputy CEO.

The **Trade Advisory Panel** is convened on an as-needed basis. The panel comprises a broad cross-section of specialist representatives, including:

- » Michelle Christoe, Executive Officer, Australian Horticultural Exporters' Association
- » Peter Leach, Market Access Focus Team Leader, QLD Department of Agriculture Forestry & Fisheries
- » Michael Coote, Export Development National Manager, AUSVEG
- » Tony Mahar, Deputy Chief Executive Officer, National Farmers' Federation
- » Gaethan Cutri, Owner Operator, Cutri Fruit
- » Hugh Molloy, Treasurer, Cherry Growers Australia
- » David Daniels, Market Access Manager, Citrus Australia
- » Scott Montague, Executive Director, Montague Fresh
- » John Moore, Chief Executive Officer, Summerfruit Australia
- » Robert Gray, Chief Executive Officer, Australian Mangoes
- » Jeff Scott, Chief Executive, Australian Table Grapes
- » Elliot Jones, General Manager, Costa Group
- » Bronwyn Warfield, Principal Market Development Officer, Queensland Department of Agriculture & Fisheries (formerly Principal Trade & Investment Officer, Trade and Investment Queensland)

Recruitment was conducted via a public Expression of Interest process with the goal of forming effective, diverse, transparent and experienced advisory and assessment panels.

These panels are Hort Innovation advisory mechanisms, with advice provided to Hort Innovation for its consideration, with relevant information provided to industry in the course of standard business practice. The Trade Unit will communicate the decisions of market access and improvement applications to the TAP to applicants, including the rationale behind decisions taken. Currently there are no existing applications – all existing applications were considered by the last Office of Horticultural Market Access (OHMA) Committee at its meeting held in Sydney on July 9, 2015.

Towards the end of the 2015/16 period, Hort Innovation further sought Expressions of Interest for suitability qualified and experienced individuals to provide advice on nut-related trade issues. These individuals will be appointed by Hort Innovation to a nut industry Trade Advisory Panel (niTAP), again facilitated by Hort Innovation's Trade Unit.

The **nut industry Trade Advisory Panel** will provide advice to Hort Innovation, and through Hort Innovation to government, in driving export outcomes for the combined nut industries through the consideration of trade issues of significance. The niTAP will discharge these responsibilities through the experience of its expert members and will provide commercially relevant advice to Hort Innovation, ensuring industry's central role in providing input to inform Hort Innovation's advice to government on a range of industry issues as they arise. Specifically, the panel will provide advice on:

- » The identification of trade impediments for horticultural products including government and commercial restrictions
- » Commercial viability of existing proposals
- » Across-industry trade initiatives
- » Recommendations for research programs to address the issues identified.



PROJECT SNAPSHOT

Australia Fresh – increasing export and consumption of Australian horticulture products overseas

Australia Fresh is the industry export market development program for fruits, nuts and vegetables, designed to promote and increase the export and consumption of Australian horticulture products overseas.

The Australia Fresh brand is a unifying symbol that communicates, adds value and strategically compliments individual industry export programs. It provides a united presence for Australian horticulture at international trade shows, including Asia Fruit Logistica (Hong Kong) and China Fruit & Vegetable Fair (China), to further develop export opportunities in these key markets.

This year Australia Fresh will exhibit at these trade shows as well as, for the first time at the International Perishable Expo - Middle East (WOP Dubai), the only dedicated trade show for fresh produce in the Middle East.

Strong links with the Australian horticulture industry enable Australia Fresh to place international buyers in contact with leading Australian growers, industry bodies and reliable exporters.

With an increasing focus on market development to grow Australian horticulture's market share in Asia and the Middle East, Hort Innovation will also have a presence at other key international trade events including FoodEx Japan and Gulf Foods, as well as providing inbound and outbound trade missions.



Health, Nutrition & Food Safety Fund

PURPOSE

To deliver safe, nutritious and healthy Australian horticulture products to consumers by developing novel products, technologies and processes.

OBJECTIVE OF INVESTMENTS

To co-invest with suitable partners in R&D programs that influence increased consumption of Australian horticulture products in domestic and key export markets for increased benefits of health, nutrition and food safety.

INVESTMENT THEMES & OUTCOMES

Value chain

Understand and integrate – deliver the integrated food safety and nutrition program in horticulture

Consumer behaviour

Understand demand, preference and risks – develop tailored superior food products as desired by the end-user

Innovation

Develop new products and technologies – develop innovative products and tools supporting efficient supply chain

Adoption

Source, collate and share good information – develop robust information to make wise adoption decisions

INVESTMENT OUTCOME

Deliver benefit to growers, consumers and the supply chain through the increased consumption of safe and nutritious horticulture produce.

Hort Innovation is co-investing in a range of initiatives under the Health, Nutrition & Food Safety Fund. These are designed to support strategic and long-term R&D to deliver safe, nutritious and healthy Australian horticulture produce to consumers by developing novel products, technologies and processes.

In this fund, all investments are required to align with one or more of Hort Innovation's key investment themes that were identified in consultation with industry stakeholders – these are outlined in the fund's Strategic Intent document (available on the Hort Innovation website).

PROJECT SNAPSHOT

Naturally Nutritious (HN15001)

One of the main objectives of Hort Innovation's *Naturally Nutritious* project, led by the University of Queensland, is to provide initial research into the development of innovative products that are nutrient-dense, can be differentiated in the marketplace, and are both visually attractive and flavoursome.

The project was initiated by integrating a proposal by Dr Roger Hellens of Queensland University of Technology. Named 'Simply Red', a focus of the proposal was to assess anthocyanian pigments in fruit and vegetables.

Naturally Nutritious specifically targets numerous key investment themes of the Health, Nutrition & Food Safety Fund. Objectives directly address the development of differentiated, value-added nutritional food products and address science-based validation of Australian fresh produce. The project also addresses consumer behaviour by gaining understanding on demand, preference and risks. The project focuses on the following research areas:

- » Screening of germplasm and exploratory bioprospecting for nutrition-enhanced products to create nutrient-dense fruits, vegetables and nuts
- » Building the evidence base for the nutritional benefits of fresh produce
- » Identifying nutritional value decline in supply chain and means of preserving nutritional content to point of consumption.

Managing risk

Fruit Fly Fund

PURPOSE

Identification of fruit fly solutions through discovery, design and delivery so that the impacts of fruit flies are negated.

OBJECTIVES OF INVESTMENT

To deploy adoptable solutions that provide fruit fly control and enhanced market access, in collaboration with visionary co-investors from private and public research institutes, commercial partners and industry stakeholders.

INVESTMENT THEMES AND OUTCOMES

Area Wide Management (AWM) and Sterile Insect Technology (SIT)

AWM and SIT commonly deployed in Australian fruit industries

Develop and maintain capacity

Full pipeline of research capability

Trade and market access alignment

Acceptance of AWM/SIT and systems control approaches by our trading partners

Novel control technologies

Identification and deployment of novel technologies against fruit fly

INVESTMENT OUTCOME

Maintained export markets – fruit fly as a second-order issue for our trading partners.

The Fruit Fly Fund is committed to a strategic, coordinated and national approach to Queensland fruit fly (Qfly) and Mediterranean fruit fly (Medfly) management. The fund further develops the capabilities to use control techniques such as Sterile Insect Technology (SIT) – that could transform the way Qfly and Medfly are managed in Australia. Managing fruit fly in a more sustainable and environmentally friendly way, the research program includes the production of sterile insects and work involving biological, ecological and logistical factors. Australia is on the right track to managing Qfly in a more sustainable and environmentally friendly way. The Fruit Fly Fund works with an expert panel to monitor program and project progress, and assess any changes and/or expansion to the research scope of the fund.



PROJECT SNAPSHOT

Fruit fly arsenal to strengthen through \$5M investment

Awarded through the Australian Government Rural Research and Development for Profit program, Hort Innovation was successful in securing a \$1.65 million grant to strengthen the industry's fight against a species of fruit fly that is a barrier to the nation's export trade.

The grant will facilitate a five-year program that aims to erase trade partners' concerns about Medfly in Australia and complement a further \$3.4 million toward the project from Hort Innovation, Murdoch University and research partners.

A state-of-the-art laboratory at Murdoch University will be equipped to provide post-harvest treatments to control Medfly risk.

As a part of the project, researchers will:

- » Develop 'data packages' for key export commodities such as apple, avocado, blueberry, capsicum, cherry, pear, and strawberry, involving a series of trials using treatment to convey clear patterns in results, demonstrating effective treatments against Medfly
- » Develop new technologies to help treat produce prior to export, including the aim to create small-scale, mobile equipment for growers to use cost effectively in packing sheds
- » Identify treatments that can become standard protocols for use by fruit and vegetable exporters.

Hort Innovation was successful in securing a \$1.65 million grant to strengthen the industry's fight against a species of fruit fly.



Ensuring sustainability

Green Cities Fund

PURPOSE

To invest in strategic longer-term research which drives a measurable increase in urban green space.

OBJECTIVE OF INVESTMENTS

To build on the momentum generated by 202020 Vision and drive co-investment in collaborative and innovative research which addresses the current knowledge gaps across the four investment themes.

INVESTMENT THEMES AND OUTCOMES

Climatic and environmental

Australia will be better placed to manage future climatic and environmental challenges through increased application of urban greening in design

Metrics and measurements

Increased demand for continued growth in urban greening due to the ability to provide clear and tangible measurements on its benefits

Culture and community

Increased urban greening at a grassroots level across Australia leading to healthy, sustainable and resilient communities

Knowledge and information

Ability to measure and report on progress in increasing urban greening across Australia

INVESTMENT OUTCOME

A strong, sustainable and economically viable future for all stakeholders in Australia's non-food horticulture sector.

The Green Cities Fund leverages the diverse stakeholder interest in 202020 Vision, a marketing initiative that creates connections and designs new ways to increase urban green space. To build on the momentum created by 202020 Vision and support the industry's non-food sector, Hort Innovation launched its research-focused Green Cities Fund in late 2015. Under the fund, Hort Innovation co-invests in strategic, longer-term research that drives a measurable increase in urban green space, working to ensure a strong, sustainable and economically viable future for all stakeholders in Australia's non-food horticulture sector.

PROJECT SNAPSHOT

Greener cities – healthier lives (GC15005)

This project will provide the first systemic evidence on the benefits of green space on people, from birth to older age. It will provide industry and policy makers with evidence-based research on the minimum threshold of local green space necessary for favourable health and societal outcomes through an investigation into five key research questions:

- » Does a greener neighbourhood buffer the harms of air pollution to promote better pregnancy health outcomes and give children in urban areas a healthy start in life?
- » Do adults in greener areas stay mentally healthy, keep slim and physically active over time, resulting in a lower risk of developing certain cancers and cardiometabolic diseases such as type 2 diabetes?
- » Do adults living in greener neighbourhoods visit general practitioners less, take fewer medications, stay out of hospital for longer and use fewer health-sector dollars as a consequence?
- » Does more green space translate into better educational outcomes because children are healthier and have spaces to grow socially, interact and be physically active?
- » What types or features of green spaces are preferred by older adults, how do these preferences vary between social and cultural groups, and how do they manifest in terms of outdoor recreation?



Greener cities, healthier lives.

Decisions to strengthen the horticulture industry of **today** and shape the horticulture industry of **tomorrow**

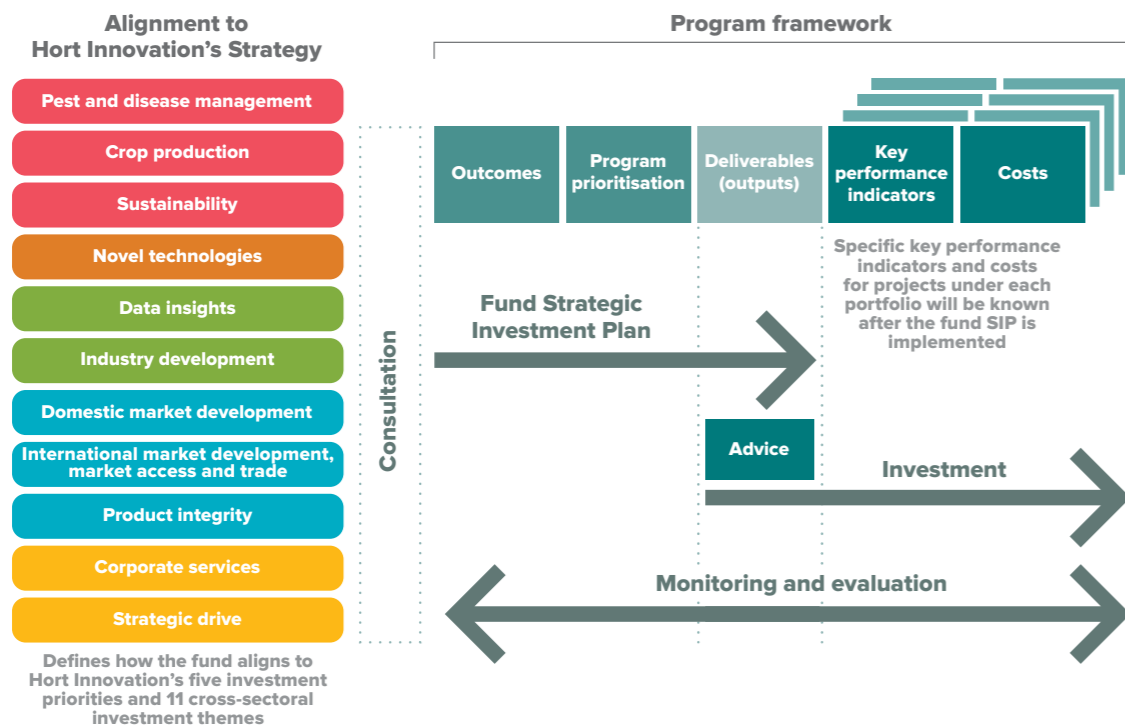
Hort Innovation's Program Framework is the mechanism that links Hort Innovation's strategy and investment priorities to the investment process through the Strategic Investment Plan (SIP) for each fund.

The SIPs assist Hort Innovation to prioritise and implement the specific R&D and marketing programs. Dynamic reporting against the monitoring and evaluation framework will track progress, while the intention of investments of each fund strategy will be reported regularly including through annual reports and Hort Innovation's Annual Operating Plan.

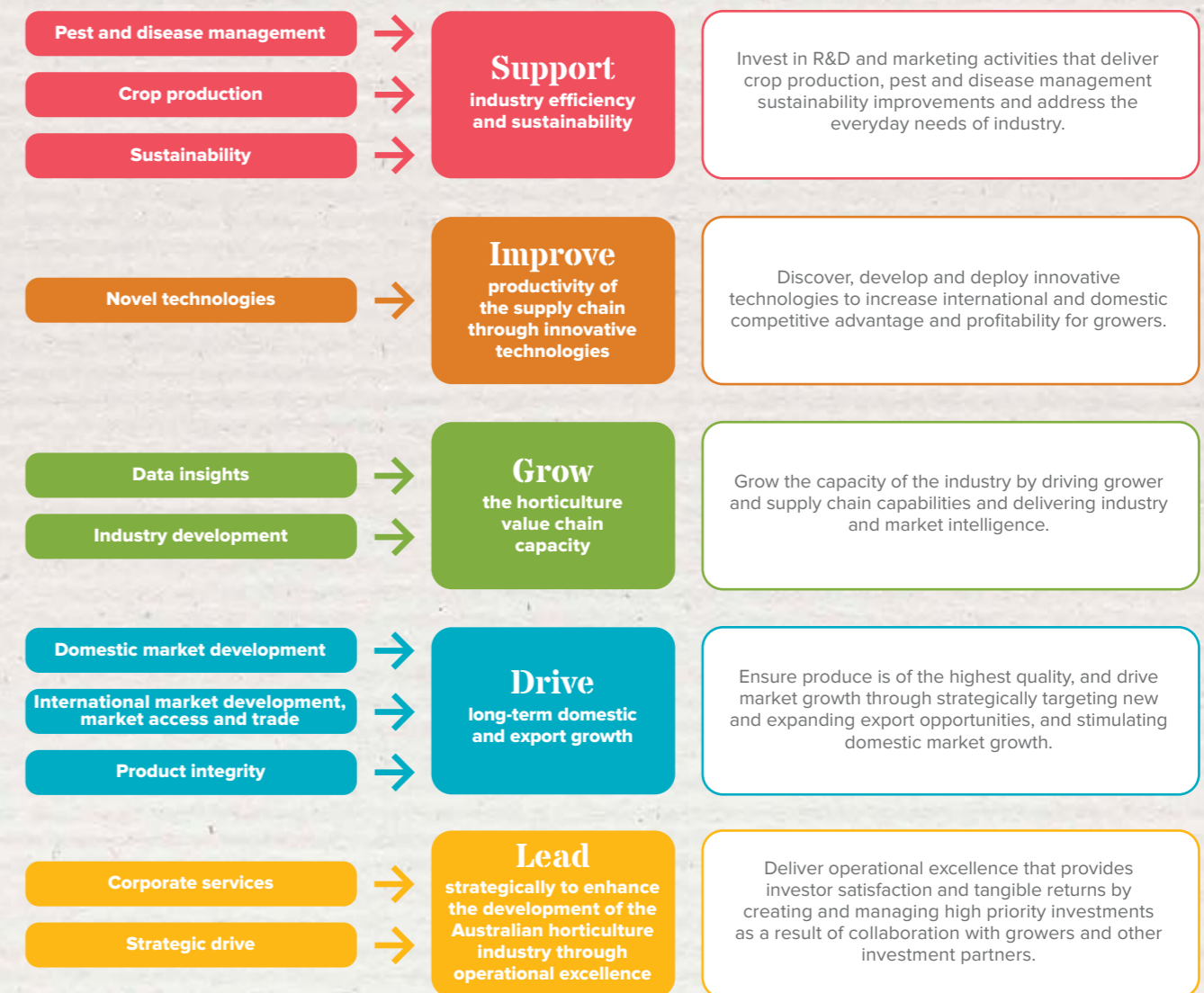
In establishing investment priorities, Hort Innovation analysed both historical and current levy and co-investment portfolios and priorities. From this analysis, 11 cross-sectoral investment themes were identified.

These themes were consolidated further and their alignment considered with the Australian Government's Rural RD&E Priorities and National Science and Research Priorities to arrive at the five investment priorities outlined in the diagram below. The diagram also shows how each cross-sectoral investment theme relates to the five investment priorities.

Hort Innovation's program framework



Hort Innovation's investment priorities



Attracting, investigating and developing new concepts for industry

Hort Innovation is committed to ensuring it invests, manages and participates in a balanced portfolio of R&D and marketing activities with an appropriate mix of low- to high-risk and short- to long-term investments that are appropriate to the industry, whilst providing the best possible return on investment.

Innovation process

Hort Innovation has developed and implemented an innovation process to attract new concepts from many sources including growers, the research community and existing project partners, in order to develop ideas in partnership with a variety of stakeholders and then work with advisory panels to select the best concepts. The SIAPs and EAPs assist Hort Innovation to review and evaluate ideas that align with the fund priorities and the SIPs.

Procurement process

The selected concepts are then developed into investment proposals, approved and sourced through Hort Innovation's new procurement process. The procurement process aims to increase innovation, probity and value for money through a competitive proposal process. Once evaluated, successful proposals are selected for funding to support short- and long-term initiatives and address both specific fund/industry, and whole of horticulture needs.

Project proposals that deliver the best return on investment, increase innovation and focus on industry impact, benefit and adoption will be chosen.

Monitoring and evaluation process

Payment and ongoing project performance is managed through Hort Innovation's contract management function and monitoring and evaluation (M&E) framework. The Hort Innovation Organisational Evaluation Framework was finalised in November 2015. With the release of our Strategic Plan, this evaluation framework is currently being updated and will reflect key deliverables highlighted in the Plan. Further, M&E toolkits are in development for service providers to ensure appropriate and consistent M&E across all projects.

All R&D projects have regular milestone reporting requirements, with any project with life of project (LOP) value greater than \$500,000 requiring a mid-term review. These reviews, as well as other project reviews commissioned by Hort Innovation, assess the efficiency and effectiveness of investments made, with any reviews undertaken by independent reviewers internally assessed and actioned by the Hort Innovation R&D team.

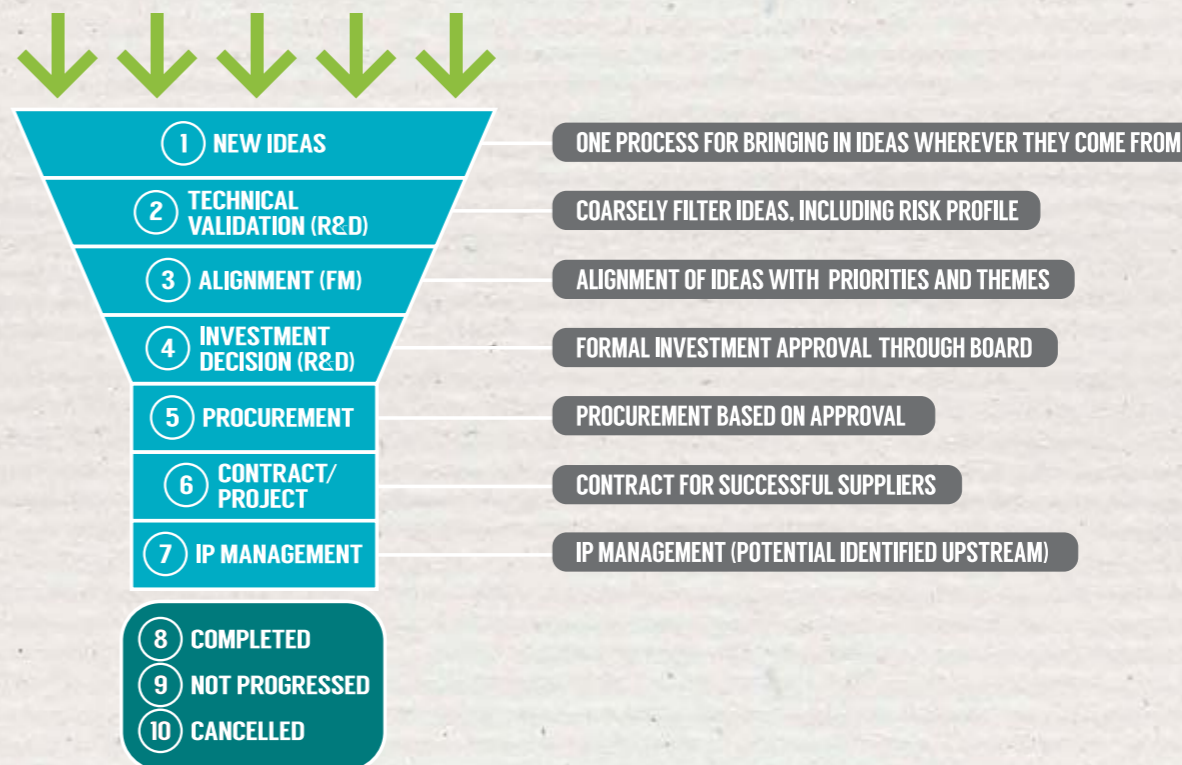
Further, Hort Innovation is working closely with the Council of Rural RDCs on a cross-RDC impact assessment and evaluation. A project was initiated to update the aggregated analysis of recent evaluations, and appointed a consortium involving Agrtrans Research, AgEconPlus and EconSearch to undertake the work.

The second component of this project is an update of the impact assessment and evaluation framework to use in the future. The aim of this work is to ensure we have agreement around a common platform, approach and schedule for collective reporting of the results of our evaluations from 2016 onwards.

In developing campaigns and putting programs in place, Hort Innovation's marketing function consults with and seeks advice from SIAPs to ensure priorities are in line with industry requirements. Monitoring requirements differ based on the size of the program, however all delivery partners operate to strict KPIs and further to this, the Hort Innovation marketing team works with external trackers for more multi-faceted, larger-scale campaigns. Nielsen Homescan reports are used by the marketing team to track the brand health of their categories.



Hort Innovation's innovation process



Hort Innovation's management of IP

- » An Intellectual Property Policy and Management Framework has been developed and implemented to facilitate identification, use and management of intellectual property (IP) that Hort Innovation acquires, creates, licenses, disseminates and commercialises.
- » When IP is identified as concepts progress through the innovation process, formal registrations and contractual arrangements ensure Hort Innovation can secure the right to operate and protect the commercial value of this IP for the benefit of members and the Australian horticulture industry.
- » Hort Innovation acts to maximise the dissemination of its R&D outputs and other materials in which IP subsists, and to facilitate the adoption of these developments and materials by the industry.

Three pillars of strategic intent

1 Communicate and listen to stakeholders

2 Deliver on investments

3 Develop our culture and leadership

1. Communicate and listen to stakeholders

Communication is a key function of our operations. Our audiences include our direct stakeholders – growers, the Australian Government, co-investors, the horticulture supply chain, the wider horticulture industry and our delivery partners. They also include the wider agricultural sector, and the Australian public.

To reach them – with different messages of different complexity – we use a wide range of communication channels. We are believers in the traditional power of face-to-face communication, so the cornerstone of our connection with growers will always be meeting growers in key growing districts, on their turf. We are also modern communicators, working in an industry that straddles tradition and innovation, so we will use newly available tools and mediums to better understand the needs of our audiences and to reach them where they are, at the most suitable times and in ways that best fit the purpose.

We are collaborative and consultative with our stakeholders, particularly in relation to setting the priorities for investments and the operations of the company. We are progressing advisory panels for our levy investments and co-investments, and rely heavily on the rich guidance they provide.

The innovation and procurement processes that are essential in making investment decisions are underpinned by the input that we seek out from growers and other experts within our stakeholder environment.

We are committed to building stakeholder confidence and trust through transparency. We will continually improve our reporting framework so that information on our investments (what they are and their outcomes) is available with the regularity and accessibility that suits stakeholders – especially growers.

2. Deliver on investments

Hort Innovation strives to deliver value in all of the investments we make by delivering R&D that meets growers' needs and increases adoption. By understanding industries' needs and by having appropriate operational structures and resources that allow us to invest with good governance and efficiency, Hort Innovation has the ability to invest in R&D that meets the day-to-day realities of growers, thereby increasing the degree to which R&D is adopted.

Commercial interests will often limit access to R&D through prohibitive pricing structures, or withholding to gain competitive advantage. We make our R&D available to the entire growing community across horticulture, spreading the benefits of R&D to all growers and industries. We are helping innovations happen sooner because we have the capacity to work directly with our delivery partners and growers to solve critical issues and challenges that would otherwise be delayed because of commercial interests and considerations.

Hort Innovation works in collaboration with industries to strategically invest in marketing campaigns and other activities that aim to encourage people to buy, eat, grow and enjoy more horticulture products, helping growers maximise their returns. Hort Innovation helps industries to develop export opportunities by investing in key R&D to gain or maintain market access to build overseas demand.



3. Develop our culture and leadership

We aim to support the development of leadership in horticulture through our investments, through our actions, and through our relationships. We want to set the highest standards in agriculture in the delivery and adoption of R&D and marketing. We want to support leadership in the industry through our investments in capacity building, succession planning and education. We see leadership as an outcome that all of our stakeholders are invested in.

Excited by our new role as a grower-owned company, we are reinvigorating our internal culture to produce a 'can do' culture that is accountable, collaborative and high performing. Our people work with our stakeholders and each other through cooperative relationships so that they both develop to their full potential and deliver the required results.



Levy receipts by industry

Levy receipts by industry 2015/16

Industry	R&D	Marketing
Almond	\$1,542,450	-
Apple and Pear	\$2,108,001	\$3,241,061
Avocado	\$2,064,967	\$3,078,002
Banana	\$2,137,710	\$4,551,435
Chestnut	\$45,283	\$47,342
Citrus	\$1,455,643	\$396,688
Custard Apple	\$57,269	\$27,564
Cherry	\$620,724	\$469,061
Dried Grape	\$164,891	\$145,354
Dried Prune	\$51,557	-
Dried Tree Fruit	\$6,339	-
Lychee	\$117,967	\$52,332
Macadamia	\$1,377,021	\$2,572,476
Mango	\$495,249	\$640,636
Mushroom	\$1,204,854	\$3,614,563
Nursery	\$1,333,231	\$955,487
Olive	\$332,171	-
Onion	\$754,717	\$251,845
Passionfruit	\$125,704	\$125,704
Pineapple	\$172,313	\$86,262
Papaya	\$166,684	\$166,611
Persimmon	\$60,566	\$40,378
Potato – Fresh	\$599,947	-
Potato – Processing	\$405,194	-
Raspberry and Blackberry	\$370,326	\$74,065
Strawberry	\$754,145	-
Sweetpotato	\$81,006	\$162,024
Summerfruit	\$546,910	\$437,316
Table Grape	\$891,956	\$891,955
Turf	\$469,861	\$117,465
Vegetables	\$9,159,231	-
Total	\$29,673,888	\$22,145,626

Total R&D and marketing program expenditure

Program expenditure 2015/16

Industry	R&D	Marketing
Across Industry	\$1,484,923	
Transformational Fund	\$2,178,833	
Almond	\$2,947,843	
Apple and Pear	\$4,114,280	\$880,802
Avocado	\$2,410,482	\$2,104,083
Banana	\$3,714,682	\$4,819,714
Blueberry*	\$755,369	
Canning Fruit*	\$69,321	
Cherry	\$742,450	\$89,773
Chestnut	\$78,771	\$38,906
Citrus	\$3,024,275	\$166,385
Custard Apple	\$350,977	\$25,716
Cut Flower*	\$187,698	
Dried Grape	\$493,940	\$103,366
Dried Prune	\$114,753	
Dried Tree Fruit	\$32,338	
Hazelnut *	\$13,700	
Lychee	\$116,933	\$33,583
Macadamia	\$2,302,734	\$2,678,638
Mango	\$2,023,363	\$484,248
Melon*	\$132,132	
Mushroom	\$1,456,556	\$3,168,309
Nursery	\$1,968,608	\$809,952
Nuts for Life*	\$318,726	\$109,605
Nuts General*	\$114,359	
Olive	\$398,753	
Onion	\$733,368	\$217,096
Papaya	\$115,373	\$129,330
Passionfruit	\$49,830	\$78,300
Pecan*	\$184,143	
Persimmon	\$136,390	\$37,339
Pineapple	\$470,259	\$75,980

Program expenditure 2015/16 (continued)

Industry	R&D	Marketing
Pistachio*	\$192,975	
Potato – Fresh	\$589,109	
Potato – Processing	\$483,352	
Processing Tomato*	\$279,025	
Pyrethrum*	\$176,312	
Raspberry and Blackberry	\$165,411	\$52,386
Strawberry	\$1,786,316	
Summerfruit	\$906,878	\$148,612
Sweetpotato	\$2,494	\$4,990
Table Grape	\$1,299,917	\$302,845
Turf	\$1,039,874	\$79,115
Vegetable	\$15,610,951	
Walnut*	\$170,526	
General VC and other*	\$13,776,361	
Levy Collection Cost	\$890,179	\$347,461
Co-investment (Pool 2)	R&D	Marketing
Asian Markets	\$369,174	
Fruit Fly	\$1,376,615	
Green Cities	\$1,213,778	
Health, Nutrition & Food Safety	\$2,694,538	
Leadership	\$225,043	
Pollination	\$1,687,790	
Total	\$78,172,778	\$16,986,536

* Legacy projects contracted under Horticulture Australia Limited (HAL) using the voluntary contribution (VC) framework of funding.

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Aligning with priorities

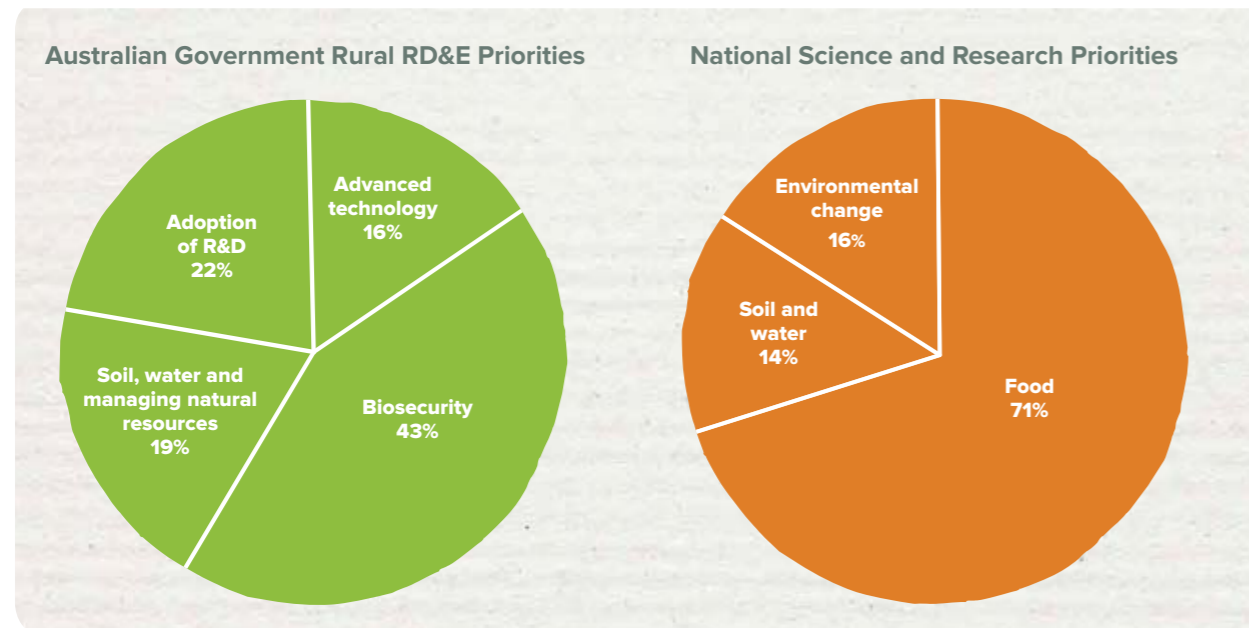
Aligning with Australian Government priorities

Hort Innovation's priority areas for R&D and marketing investment reflect both the needs of individual industries (with each setting their own priorities through their individual Strategic Investment Plans), and the necessity for research that addresses cross-industry challenges and opportunities of strategic and long-term importance to the industry. Therefore, industry-wide strategic planning must express priorities and actions at a broader level, rather than just at a commodity-specific level. In addition, priority areas are framed and guided by the Australian Government's Rural RD&E Priorities, outlined in the Agricultural Competitiveness White Paper, and its National Science and Research Priorities.

Following extensive consultation in July 2015, the Australian Government announced new Rural RD&E Priorities: advanced technology; biosecurity; soil, water and managing natural resources; and adoption of R&D.

The priorities are consistent with the overarching National Science and Research Priorities, which were announced in May 2015. Those that are relevant to horticulture include food, soil and water, and environmental change.

Hort Innovation considered both sets of priorities closely during the development of our own Strategic Plan. As part of our Funding Agreement with the Australian Government, we will report on our expenditure and achievements in relation to both the new Rural RD&E Priorities, and the overarching National Science and Research Priorities through our Annual Operating Plan.



Aligning with Australian Government Rural RD&E Priorities

Rural RD&E Priorities	Hort Innovation investment priorities	Specific investment areas
Advanced technology	Improve productivity of the supply chain through innovative technologies	Novel technology including plant genetics, breeding, biotechnology, mechanisation, robotics and precision agriculture among others
Biosecurity	Support industry efficiency and sustainability Drive long-term domestic and export growth	Biosecurity, pest and disease management, and market access
Soil, water and managing natural resources	Support industry efficiency and sustainability	Plant nutrition, pollination, water use, natural resource management, soil management, pest and disease management, climate, etc
Adoption of R&D	Grow the horticulture value chain capacity	Extension, capacity building, industry data, leadership and people development among others

Aligning with National Science and Research Priorities

National Science and Research Priorities	Hort Innovation investment priorities
Food	Support industry efficiency and sustainability Improve productivity of the supply chain through innovative technologies Grow the horticulture value chain capacity Drive long term-domestic and export growth
Soil and water	Support industry efficiency and sustainability
Environmental change	Support industry efficiency and sustainability Improve productivity of the supply chain through innovative technologies

Working with other RDCs

Hort Innovation currently works with other RDCs and organisations on cross-sectoral strategies and will continue to do this.

Part of this includes the horticulture component of the National Climate Change Research Strategy for Primary Industries (CCRSPI), the National Soil Research, Development & Extension Strategy, Plant Biosecurity strategies and the National Water Use in Agriculture RD&E Strategy. Hort Innovation will work closely with horticulture industries to consider how each strategy provides opportunity for cross-sectoral investment that aligns with industry priorities.

Two projects to be led by Hort Innovation were approved for funding in June 2016 (approximately \$23 million over the lifespan of the projects) as part of the second round of the Australian Government's Rural R&D for Profit program. Additionally, another four projects (approximately \$33 million over the lifespan of the projects) led by other RDCs and being supported by Hort Innovation (through levy funding, in-kind and participation in steering committees) were also successful in this round.

Lead RDC	Project name
Hort Innovation	National centre for post-harvest disinfestation research on Mediterranean fruit fly (Australian Medfly R&D Centre)
Hort Innovation	Advanced production systems for the temperate nut crop industries
Cotton Research and Development Corporation	Accelerating precision agriculture to decision agriculture
Wine Australia	Digital technologies for dynamic management of disease, stress and yield
Cotton Research and Development Corporation	More profit from nitrogen: enhancing the nutrient use efficiency of intensive cropping and pasture systems
Rural Industries Research and Development Corporation	Securing pollination for more productive agriculture

\$5 million investment to bolster Australian nut production

Hort Innovation was successful in securing a \$5 million Australian Government Rural R&D for Profit program grant. The funding, which complements a further \$9.8 million from Hort Innovation, the Almond Board of Australian and the South Australian, Victorian and New South Wales governments, will facilitate a four-year program that will result in higher density, shorter nut trees with high-quality yields.

Hort Innovation is committed to Rural RDC collaboration and supports all the opportunities to do so by being part of a number of business meetings and collaboration forums including...

CEO and Chairs

The CEO and Chairs meet at least four times a year to discuss across-RDC collaboration, joint projects and investigation of further system efficiencies.

Communications Managers

The Communications Managers network through quarterly meetings, across the invited 15 RDC organisation members. These communication professionals come together to discuss and work collectively on important cross-communication issues. This includes a dialogue on collaboration across the RDC model, and opportunities to create consistent, shared narratives and best-practice principles.

Monitoring and evaluation representatives

The Rural RDCs are collaborating on performance monitoring and evaluation. An Impact Assessment Working Group was convened in March this year to progress a project to update the published impact assessment work across the Rural RDCs. This group will meet at least twice in the coming year. Additionally, the project will develop a framework for future impact assessment and reporting. The Working Group provides the Rural RDCs with the opportunity to share their approaches to evaluation and lessons learnt.

Business Managers

Business Managers meet three times a year. The purpose is to collaborate and discuss issues of common interest. By sharing information, the duplication of effort is lessened as the experiences of other RDCs are built upon.

IT Managers

IT Managers now have meetings that occur the day before each of the Business Managers' meetings, provided they have a sufficient agenda of items to discuss.

Additionally, Hort Innovation is a participant sponsor of the National Plant Biosecurity RD&E Strategy Implementation Committee. This mechanism aims to improve the R&D and extension underpinning the plant biosecurity system in Australia through the identification of R&D and extension system gaps and inefficiencies. This committee provides areas for improvement and recommendations to Hort Innovation as to cross-sectoral investment opportunities and works to provide R&D and marketing services in a more efficient and effective manner.

\$1 million in assistance grants secured for industry

In May 2016, Hort Innovation secured more than \$1 million in assistance grants under the Australian Government's Access to Industry Uses of Agvet Chemicals program, providing opportunities for growers to better manage pests, weeds and disease, ensuring the sustainability and profitability of the industry, and quality products for consumers.

New R&D projects contracted

July 1, 2015 –
June 30, 2016

Project code	Project name	Service provider	2015/16 spend
AH15001	Horticulture Statistics Handbook 2015-2018	Freshlogic Pty Ltd	\$240,371.00
AH15002	National Fruit Fly Strategy Council – phase 2	Plant Health Australia Limited	\$378,812.16
AL14005	Identifying factors that influence spur productivity in almond	The Dept of Economic Development Jobs, Transport & Resources	\$219,120.00
AL15004	Management of Carpophilus beetle in almonds	The Dept of Economic Development Jobs, Transport & Resources	\$220,652.00
AM15010	Australian Fresh Collaborative Market Development Program – Nuts	Australian Nut Industry Council Inc	\$130,046.00
AP14023	Improved tree and fruit nutrition for the Australian apple industry	University of Tasmania	\$160,000.00
AP15001	Integrated pest and disease management – phase 2	The Dept of Economic Development Jobs, Transport & Resources	\$175,000.00
AP15002	Physiological, metabolic and molecular basis of biennial bearing in apple	University of Hohenheim	\$164,515.56
AP15003	Review of the Biosecurity Plan for the Apple and Pear Industry	Plant Health Australia Limited	\$16,000.00
AP15004	Australian apple and pear industry innovation and adoption program	Apple & Pear Australia Limited (APAL)	\$653,501.20
AP15005	Delivery of apple and pear Future Orchards extension program	AgFirst HB Ltd	\$193,155.04

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New R&D projects contracted July 1, 2015 – June 30, 2016 (continued)

Project code	Project name	Service provider	2015/16 spend
AP15007	National apple and pear grower communications program	Apple & Pear Australia Limited (APAL)	\$430,170.92
AP15008	InfoPome 3	Apple & Pear Australia Limited (APAL)	\$18,252.00
AP15009	Australian apple and pear industry market development program	Apple & Pear Australia Limited (APAL)	\$397,405.40
AP15010	Review on the health benefits and nutritional properties of pear	CSIRO Food and Nutrition Flagship	\$35,313.00
AP15013	Physiological, metabolic and molecular basis of biennial bearing in apple	The Dept of Economic Development Jobs, Transport & Resources	\$64,170.32
AP15014	A needs analysis for IPM R&D in the apple and pear industry	RMCG	\$37,956.00
AP15016	APAL contribution to AP15015 – industry leadership initiative	Apple & Pear Australia Limited (APAL)	\$1,591.47
AV15000	Avocado health professional education and research program	Lisa Gay Yates T/As Lisa Yates Consultant Dietitian	\$150,813.86
AV15001	Avocado chef training and education program	Whiteworks	\$155,143.95
AV15002	National avocado industry communications program	Avocados Australia Limited (AAL)	\$313,324.00
AV15004	Avocado data management and quality innovation extension program	Avocados Australia Limited (AAL)	\$115,750.00
AV15005	Avocado rootstock SHSR-04 commercialisation	TechMac Pty Ltd	\$31,196.00
AV15008	Avocado food service benchmark	Stollznow	\$27,882.88
AV15010	Supply chain quality improvement – cool chain best practice guidelines	Applied Horticultural Research Pty Ltd	\$104,860.00
AV15702	World Avocado Congress 2015 – building research knowledge and capacity for the Australian avocado industry	The University of Queensland	\$7,750.00
BA14012	Coordination of banana industry R&D (Panama TR4)	Australian Banana Growers Council Inc	\$177,541.00
BA15002	Australian banana industry communications review*	GHD Pty Ltd	\$29,820.00
BA15003	Integrated management of yellow Sigatoka	Australian Banana Growers Council Inc	\$101,509.06
BA15004	Horticulture Nuffield Scholarships 2016/2017/2018	Nuffield Australia Farming Scholars	\$31,400.00
BA15006	National banana bunchy top virus program – phase 3 – QLD	Barry Sullivan	\$58,569.61
BB15003	Disinfestation of blueberries against Mediterranean fruit fly (Medfly) for market access to Japan	Kalang Consultancy Services Pty Limited	\$512,873.06
BS15002	Facilitating the development of the Australian strawberry industry – national oversight and communications	RMCG	\$117,286.00
BS15003	Facilitating the development of the Australian strawberry industry – sub-tropical regional delivery	Qld Strawberry Industry Promotions Council	\$71,560.00

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New R&D projects contracted July 1, 2015 – June 30, 2016 (continued)

Project code	Project name	Service provider	2015/16 spend
BS15004	Facilitating the development of the Australian strawberry industry – temperate regional delivery	Victorian Strawberry Industry Development Committee	\$65,000.00
CT15005	Protecting Australia's citrus genetic material	Auscitrus	\$5,000.00
CT15006	Development of national strategies to manage citrus gall wasp	NSW Dept of Primary Industries, an office of Dept of Industry	\$135,897.00
CT15008	Development of phenology models and a timing guide for the management of California red scale in Australian citrus	NSW Dept of Primary Industries, an office of Dept of Industry	\$88,245.00
CT15009	Citrus industry communications	Currie Communications Pty Ltd	\$166,037.00
CT15011	Data packages to support market access for additional citrus varieties to Japan	South Australian Research and Development Institute (SARDI)	\$56,000.00
CT15012	Australian citrus industry innovation and market development program	Citrus Australia Limited	\$320,000.00
CT15013	Citrus Quality Standards – stage 3	Citrus Australia Limited	\$117,950.86
CT15015	Citrus Australia Limited – communication support on CT15009	Citrus Australia Limited	\$44,795.45
CT15016	Agrichemical residue monitoring program for Australian citrus exports – stage 2	Citrus Australia Limited	\$45,949.43
CU15000	Custard Apple Despatch System 2 (CADS 2)	GFAP Pty Ltd	\$20,570.00
CU15700	Custard Apple Road Show 2016	Custard Apples Australia Inc	\$19,500.00
DG15001	Objective colour assessment options for the dried grape industry	Applied Horticultural Research Pty Ltd	\$40,920.00
DG15002	Evaluating a visible imaging and near-infrared spectroscopy technique for dried grape colour assessment	The University of Adelaide	\$20,703.20
DG15700	International Dried Grape Conference participation and FoodNews	Dried Fruits Australia Inc	\$52,194.00
FF15000	SITplus: Port Augusta Qfly SIT factory pilot operation	Primary Industries and Regions South Australia (PIRSA)	\$1,376,614.70
GC15002	Which plant where when and why database	Macquarie University	\$941,052.50
HN15000	Innovative cold plasma for horticultural industries	NSW Dept of Primary Industries, an office of Dept of Industry	\$1,088,763.00
HN15001	Naturally Nutritious and Simply Red	The University of Queensland	\$1,601,999.65
LP15001	Masterclass in Global Horticultural Business	University of Tasmania / Wageningen University	\$119,239.95
LP15006	Attracting new entrants into Australian horticulture	Rimfire Resources Pty Ltd	\$1,000.00
LP15007	National PhD scholarship coordinator	University of Tasmania	\$95,267.50
LY15001	US market access project	Australian Lychee Growers Association	\$41,598.40
MC15003	National macadamia grower communications program	Australian Macadamia Society Limited	\$119,186.73
MC15004	Australian macadamia industry innovation and adoption program	Australian Macadamia Society Limited	\$397,304.06
MC15005	Benchmarking the macadamia industry 2015-2018	Department of Agriculture & Fisheries (DAF)	\$100,430.00

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New R&D projects contracted July 1, 2015 – June 30, 2016 (continued)

Project code	Project name	Service provider	2015/16 spend
MC15007	Still wild about macadamias – conserving a national icon	SEQ Catchments Limited	\$94,673.61
MC15008	Establishing an open-source platform for unravelling the genetics of macadamia: integration of linkage and genome maps	Southern Cross Plant Science	\$20,000.00
MC15009	Macadamia crop forecasting 2015-2018	The Department of Agriculture and Fisheries (DAF)	\$13,102.00
MC15010	Ecology and management of Sigastus weevil in macadamias	NSW Dept of Primary Industries, an office of Dept of Industry	\$58,091.00
MC15011	Determining the extent and causes of abnormal vertical growth	The University of Queensland	\$50,000.00
MC15012	Review of macadamia orchard nutrition	The Department of Agriculture and Fisheries (DAF)	\$15,000.00
MC15013	Consultancy services for crop forecasting project MC15009	Australian Macadamia Society Limited	\$3,820.00
MG15002	Quality standards, refinement and testing	The Department of Agriculture and Fisheries (DAF)	\$113,147.70
MG15003	Data collection to facilitate supply chain transparency – stage 3	Australian Mango Industry Association Ltd	\$125,000.00
MG15004	Monitoring mango fruit quality through the supply chain to the US	Department of Primary Industry & Fisheries, NT	\$30,948.00
MG15005	Understanding and mitigating the aggregative response of the magpie goose to mango orchards in the Northern Territory	Charles Darwin University	\$26,000.00
MG15006	Mango industry communication program 2016-2017	Australian Mango Industry Association Ltd	\$160,947.20
MT14052	Essential market access data packages	The Department of Agriculture and Fisheries (DAF)	\$997,120.80
MT15019	Vegetable and potato industry communication review*	Key-Link Solutions Pty Ltd	\$30,369.99
MT15024	Fruit tracking study	Eidentify	\$24,091.00
MT15025	Linking market development projects to the HIA Horticulture Trade Development Strategy*	David McKinna et al Pty Ltd	\$154,864.49
MT15026	Evaluation of dried and table grape varieties	CSIRO	\$116,689.00
MT15028	Continuation of pilot systems to validate Pest Free Place of Production for Queensland fruit fly in the Yarra Valley	The Dept of Economic Development Jobs, Transport & Resources	\$64,027.59
MT15032	Update Industry Strategic Investment Plan with M&E framework and Program Logic*	Clear Horizon Consulting Pty Ltd	\$5,000.00
MU15000	Mushroom consumer research	Fifty Five 5 Pty Ltd	\$116,305.45
MU15001	Communication program for the Australian mushroom industry 2016-2019	Team Rowley Pty Ltd	\$70,560.00
MU15700	2016 National Mushroom Conference	Australian Mushroom Growers Association Ltd (AMGA)	\$48,000.00
NY15000	Nursery industry communications review*	RMCG	\$26,486.00
NY15001	Evaluation of nursery tree stock balance parameters	University of Western Sydney	\$140,000.00

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New R&D projects contracted July 1, 2015 – June 30, 2016 (continued)

Project code	Project name	Service provider	2015/16 spend
NY15002	Building the resilience and on-farm biosecurity capacity of the Australian production nursery industry	The Department of Agriculture and Fisheries (DAF)	\$131,132.00
NY15004	National Nursery Industry Biosecurity Program	Nursery & Garden Industry Australia Ltd (NGIA)	\$434,781.34
NY15006	Communication program for the Australian nursery industry 2015-2018	Cox Inall Communications	\$156,400.00
NY15007	Capacity Building Workshop for the 202020	Republic of Everyone Pty Ltd	\$20,000.00
NY15008	Extension of barriers to adoption of 202020 Vision Goals	Republic of Everyone Pty Ltd	\$40,000.00
NY15009	NGIA – communication support on NY15006 – nursery industry communications	Nursery & Garden Industry Australia Ltd (NGIA)	\$62,726.00
OL15000	Determination of a derived smoke point for olive oil	NSW Dept of Primary Industries, an office of Dept of Industry	\$62,412.00
OL15001	Australian Olive Industry Strategic Investment Plan 2015-2020	Scott Williams Consulting Pty Ltd	\$15,708.19
OL15002	International Olive Council Committee	BOUNDARY BEND OLIVES PTY LTD - T/A Modern Olives	\$2,700.00
PH15000	Strengthening and enabling effective pollination for Australia	The New Zealand Institute for Plant and Food Research Ltd	\$456,828.45
PH15001	Healthy bee populations for sustainable pollination in horticulture	University of Western Sydney	\$1,230,961.81
PI15000	Facilitating the development of the Australian pineapple industry – stage 3	Growcom Australia	\$95,458.96
PP15000	New genetic targets to improve quality in papaya	Griffith University	\$44,665.96
PR15700	Persimmon Field Day 2016	Persimmon Industry Australia Incorporated	\$14,524.55
PT15002	Extension program for the Australian potato industry 2016-2019	ARRIS Pty Ltd	\$50,082.70
PT15003	An independent review of the potato industry extension program*	Clear Horizon Consulting Pty Ltd	\$17,130.00
PT15004	Review and update of the National Standard for Certification of Australian Seed Potatoes	Miracle Dog Pty Ltd	\$40,016.69
PT15005	National governance framework for Australian seed potato certification: an options paper	RMCG	\$56,074.85
PT15007	Potato industry communication program 2016-2019	AUSVEG Ltd	\$235,924.23
SF15001	Comparing stonefruit ripening, quality and volatile composition	The Dept of Economic Development Jobs, Transport & Resources	\$30,000.00
SF15003	Australian Stonefruit Grower Magazine 2016	Applied Horticultural Research Pty Ltd	\$23,000.00
ST15002	Child 1 – UNE – Multi-scale monitoring tools for managing Australian tree crops: Industry meets innovation (Child of ST15016)	University of New England	\$515,325.32
ST15003	Child 2 – UQ – Multi-scale monitoring tools for managing Australian tree crops: Industry meets innovation	The University of Queensland	\$300,000.00

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New R&D projects contracted July 1, 2015 – June 30, 2016 (continued)

Project code	Project name	Service provider	2015/16 spend
ST15004	Child 3 – USyd – Multi-scale monitoring tools for managing Australian tree crops: Industry meets innovation	The University of Sydney	\$240,000.00
ST15005	Child 4 – CQU – Multi-scale monitoring tools for managing Australian tree crops: Industry meets innovation	Central Queensland University (CQU)	\$230,000.00
ST15006	Child 5 – Agtrix – Multi-scale monitoring tools for managing Australian tree crops: Industry meets innovation	Agtrix Pty Ltd	\$120,000.00
ST15011	Child 10 – DAF – Multi-scale monitoring tools for managing Australian tree crops: Industry meets innovation	The Department of Agriculture and Fisheries (DAF)	\$170,000.00
ST15014	Adaptive AWM of Qfly using SIT: Guidelines for efficient and effective pest suppression and stakeholder adoption	CSIRO	\$1,769,676.76
ST15018	Market and consumer insights to drive food value chain innovation and growth: Horticulture sub-project	The Dept of Economic Development Jobs, Transport & Resources	\$228,203.14
TG15003	Effect of sulphur dioxide and cold on survival of insects during storage of table grapes	Agriculture Victoria Services Pty Ltd	\$205,100.00
TG15004	Australian table grapes industry communications review	Currie Communications Pty Ltd	\$16,000.00
TU15001	An independent review of the turf industry development program*	Scott Williams Consulting Pty Ltd	\$16,380.00
TU15002	NxGen 2016 to 2018	Turf Australia Limited	\$16,000.00
TU15700	National R&D Conference 2016 and 2017	Turf Australia Limited	\$20,000.00
VG14047	Landscape diversity and field margin management	CSIRO	\$15,094.80
VG14065	Nuffield Scholarship	Nuffield Australia Farming Scholars	\$41,600.00
VG15002	Advanced stable fly management for vegetable producers	Western Australian Agriculture Authority (WAAA)	\$153,101.76
VG15003	Using autonomous systems to guide vegetable decision making on-farm	The University of Sydney	\$1,057,226.51
VG15004	Regional capacity building to grow vegetable businesses – Bowen Gumlu and FNQ	Bowen Gumlu Growers Association Inc	\$106,382.48
VG15005	Implementation plan for increasing children's vegetable intake	CSIRO Food and Nutrition Flagship	\$110,071.36
VG15008	Viruses of national importance to the vegetable industry	The Department of Agriculture and Fisheries (DAF)	\$48,800.00
VG15009	Improved soilborne disease diagnostic capacity for the Australian vegetable industry	South Australian Research and Development Institute (SARDI)	\$230,200.00
VG15010	A multi-faceted approach to soilborne disease management	AHR Environmental Pty Ltd	\$438,832.00
VG15013	Improved management options for cucumber green mottle mosaic virus	Department of Primary Industry & Fisheries, NT	\$185,000.00
VG15016	Crisis management awareness for the Australian vegetable industry	Control Risks Group Pty Ltd	\$23,400.00

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New R&D projects contracted July 1, 2015 – June 30, 2016 (continued)

Project code	Project name	Service provider	2015/16 spend
VG15018	Independent review of the EnviroVeg program VG12008*	RJ Sully	\$22,500.00
VG15019	Demographic research for the vegetable industry – phase 2	The Nielsen Company	\$460,000.00
VG15020	Strengthened biosecurity for the vegetable industry – phase 2	AUSVEG Ltd	\$15,849.28
VG15021	Sowing success through transformational technologies	The University of Queensland	\$249,000.00
VG15022	Vegetable consumer alignment and market and value chain review and strategy*	Clear Horizon Consulting Pty Ltd	\$39,865.00
VG15023	Consultancy services for strengthened biosecurity for the vegetable industry – phase 2	Kevin Clayton-Greene	\$70,059.55
VG15024	Vision systems, sensing and sensor networks to manage risks and increase productivity in vegetable production systems	The Department of Agriculture and Fisheries (DAF)	\$204,174.00
VG15025	Investigating labour supply options across the Australian vegetable industry	The University of Adelaide	\$196,981.60
VG15026	Landscape diversity and field margin management	RMCG	\$7,795.82
VG15027	Vegetable industry communication program 2016-2019	AUSVEG Ltd	\$766,079.19
VG15028	Vegetable industry education and training initiative	RMCG	\$198,303.60
VG15030	Growing leaders 2015	Rural Training Initiatives	\$86,964.80
VG15031	Economic modelling of impact of vegetable consumption on health costs and grower returns	Deloitte Access Economics Pty Ltd	\$79,905.00
VG15032	2016 Global Innovations in Horticulture Seminar	AUSVEG Ltd	\$310,429.95
VG15034	Facilitating adoption of IPM through a participatory approach with local advisors and industry – training component	IPM Technologies Pty Ltd	\$59,174.27
VG15035	Facilitating adoption of IPM through a participatory approach with local advisors and industry – coordination component	AUSVEG SA	\$48,963.76
VG15036	Facilitating adoption of IPM through a participatory approach with local advisors and industry – evaluation component*	Clear Horizon Consulting Pty Ltd	\$14,365.20
VG15037	Optimising the benefits of vermiculture in commercial-scale vegetable farms	Blue Environment Pty Ltd	\$187,188.00
VG15040	Regional capacity building to grow vegetable businesses – Wide Bay Burnett (Bundaberg Fruit and Vegetable Growers)	Bundaberg Fruit & Vegetable Growers	\$69,624.00
VG15041	Regional capacity building to grow vegetable businesses – Lockyer Valley and SE Queensland (Lockyer Valley Growers Inc)	LOCKYER VALLEY GROWERS INC	\$83,387.00
VG15043	Regional capacity building to grow vegetable businesses – WA (vegetablesWA)	West Aust Vegetable Growers Assoc Inc T/As Vegetables WA	\$67,025.59

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New R&D projects contracted July 1, 2015 – June 30, 2016 (continued)

Project code	Project name	Service provider	2015/16 spend
VG15045	Regional capacity building to grow vegetable businesses – SA	AUSVEG SA	\$67,972.97
VG15046	Regional capacity building to grow vegetable businesses – Tasmania	RMCG	\$93,625.66
VG15047	Regional capacity building to grow vegetable businesses – East Gippsland (East Gippsland Food Cluster)	East Gippsland Food Cluster Incorporated	\$80,962.73
VG15048	Regional capacity building to grow vegetable businesses – Victoria (South-East, West and Northern regions)	RMCG	\$123,113.20
VG15049	Regional capacity building to grow vegetable businesses – national coordination and linkage project	AHR Environmental Pty Ltd	\$84,360.00
VG15050	Regional capacity building to grow vegetable businesses – training and evaluation*	Coutts J & R Pty Ltd	\$52,560.00
VG15051	Investigating on farm HACCP programs for managing plant pests of biosecurity concern – an options paper	BIOSECURITY SOLUTIONS AUSTRALIA PTY LTD	\$9,750.00
VG15052	Vegetable industry export strategy	MCKINNA ET AL - Insight Outlook Consulting Pty Ltd	\$76,000.00
VG15057	Feasibility study to collect and report wholesale market price information for the Australian vegetable industry	GHD Pty Ltd	\$41,018.40
VG15059	Evaluating and testing autonomous systems developed in VG15003 in Australian vegetable production systems	The University of Sydney	\$1,000,000.00
VG15060	Vegetable snacking options market research – stage 2	Freshlogic Pty Ltd	\$42,500.00
VG15075	Vegetable industry participation in the South Australian Government trade mission to SE Asia 2016	AUSVEG SA	\$23,128.00
VG15700	SA Government South East Asia trade missions	AUSVEG SA	\$18,212.39
VG15701	2016-18 European industry leadership and development mission – Berlin Fruit Logistica	AUSVEG Ltd	\$89,113.89
VG15702	USA industry leadership and development mission 2016-2018	AUSVEG Ltd	\$98,940.46
VG15703	Vegetable young grower development mission 2016-2018	AUSVEG Ltd	\$97,042.91
VG15704	Grower study tour of New Zealand: Precision vegetable production	The Department of Agriculture and Fisheries (DAF)	\$57,654.40
VN14001	Development of an onion white rot forecast model for Tasmania	Tasmanian Institute of Agriculture (TIA) - University of Tas	\$70,000.00
VN15000	Onion industry scoping study	Workshop Australia Pty Limited	\$25,570.00
VN15002	Australian onion industry communications	Cox Inall Communications	\$73,354.02
VN15003	Communication support on VN15002 – Australian onion industry	Onions Australia	\$130,795.80

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New R&D projects contracted July 1, 2015 – June 30, 2016 (continued)

The following projects were also contracted in the 2015/16 year but had no spend during this period.

Project code	Project name	Service provider
AV15009	Supply chain quality improvement – technologies and practices to reduce bruising	The Department of Agriculture and Fisheries (DAF)
AM15000	Now! In Season	The Dept of Economic Development Jobs, Transport & Resources
AP15015	Apple and pear industry leadership initiative – 2016/17	Marcus Oldham College
BA15005	The Australian banana industry communications program	Australian Banana Growers Council Inc
CF15000	Canning peach breeding and evaluation program – stage 7b	SPC Ardmona Operations Limited
MT15031	Australian dried fruit communications program	Dried Fruits Australia Inc
TG15008	Australian table grape industry communications	Australian Table Grape Association
VG15038	Investigating novel glass technologies and photovoltaics in protected cropping	Swinburne University of Technology
VG15039	Precision seeding benefits for processing pea production	University of Tasmania
VG15042	Regional capacity building to grow vegetable businesses – NSW (Local Land Services)	Greater Sydney Local Land Services
VG15061	Sensitivity study – impact of increasing exports on the domestic vegetable market	Deloitte Access Economics Pty Ltd
VG15062	The effects of using anhydrous ammonia to supply nitrogen to vegetable crops	Applied Horticultural Research Pty Ltd

* New R&D projects marked with an asterisk represent projects supporting the review and evaluation of investment activities.

Minor use permits 2015/16

Project code	Minor use permit	Amount
AL12006	Almond industry minor-use allocation	\$2,050.00
CH15002	Generation of Residue & Efficacy Data for Pesticide Minor-Use Permit Applications in Chestnuts in 2016	\$6,622.00
OL14006	Generation of Residue Data for a Pesticide Minor-Use Permit Applications in Olives 2014/15	\$44,391.86
ST15028	Generation of Residue Data for Pesticide Minor Use Permit Applications in Horticulture Crops 2015/16	\$12,492.00
ST15027	Generation of Residue Data for Pesticide Minor Use Permit Applications in Horticulture Crops 2015/16 - Eurofins	\$138,504.20
ST15026	Generation of Residue Data for Pesticide Minor Use Permit Applications in Horticulture Crops 2015/16 - Peracto	\$91,449.00
MC15002	Generation of Residue Data for Pesticide Minor Use Permit Applications in Macadamias 2015/16	\$16,964.60
MG14014	Generation of Residue Data for Pesticide Minor-Use Application in Mangoes - Peracto	\$15,182.00
VG13028	Generation of Residue Data for Pesticide Minor-Use Permit Applications in Vegetable Crops 2013 - CPR	\$6,809.48
VG14039	Generation of Residue Data for Pesticide Minor-Use Permit Applications in Vegetable Crops 2014 - Eurofins	\$32,757.60
VG14038	Generation of Residue Data for Pesticide Minor-use Permit Applications in Vegetable Crops 2014 - Peracto	\$121,224.40
PI12006	Improved management of Phytophthora root-rot and heart-rot in pineapples	\$12,282.40
VG12112	Improving grower access to new chemistry to control downy mildew disease	\$83,355.05
VG12109	Management of insecticide resistance in the green peach aphid	\$109,639.80
MT10029	Managing pesticide access in horticulture (cont from AH04009 and MT07029)	\$92,030.35
VG13096	Minor Use and Agronomy Coordinator - Minor Use Priorities and Awareness Program	\$185,226.36
VG12114	Minor use permit management for the vegetable industry	\$97,690.00
AV13017	Minor Use permits and Strategic Agrichemical Review Process for the avocado industry	\$1,350.00
AP11035	Minor Use Permits for the Apple and Pear Industry	\$750.00
BA12015	Minor use permits for the banana industry	\$350.00
BB13004	Minor use permits for the blueberry industry	\$3,300.00
CY14011	Minor use permits for the cherry industry	\$600.00
CH14004	Minor use permits for the chestnut industry	\$1,700.00
CT15004	Minor use permits for the citrus industry	\$4,200.00
CU12002	Minor use permits for the custard apple industry	\$537.50
LY12004	Minor use permits for the lychee industry	\$1,187.50
MC12013	Minor use permits for the macadamia industry	\$2,550.00
MG14018	Minor use permits for the mango industry	\$537.50
OL13003	Minor use permits for the olive industry	\$1,350.00
VN12008	Minor use permits for the onion industry	\$350.00
PI13011	Minor use permits for the pineapple industry	\$6,550.00
PT15009	Minor use permits for the potato industry	\$850.00

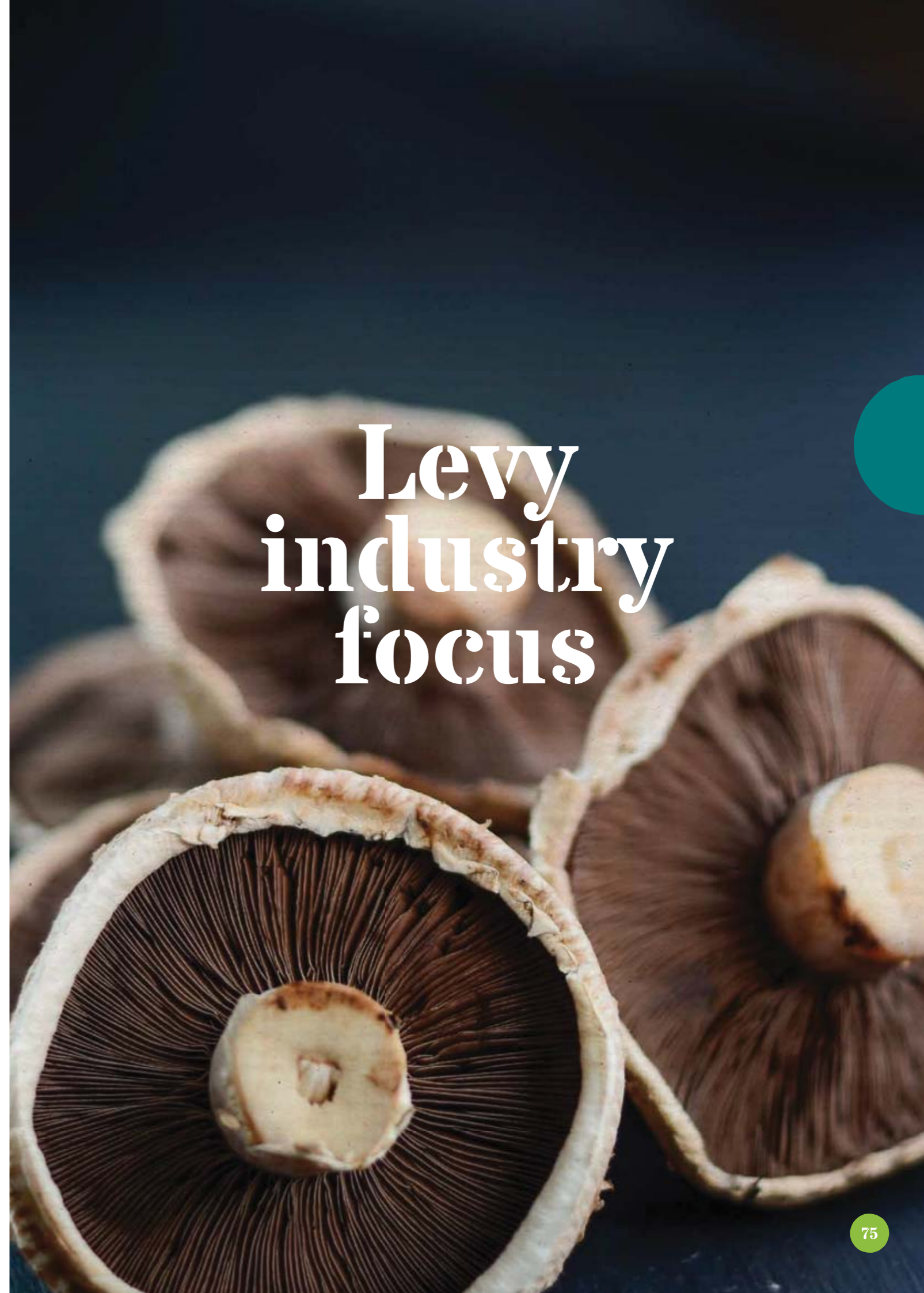
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Minor use permits 2015/16 (continued)

Project code	Minor use permit	Amount
RB13011	Minor use permits for the rubus industry	\$1,700.00
BS12018	Minor use permits for the strawberry industry	\$4,500.00
SF10024	Minor use permits for the summerfruit industry	\$700.00
TG15002	Minor use permits for the table grape industry	\$700.00
TG11011	Minor use permits for the table grapes industry	\$1,350.00
PR13001	Minor Use Permits Renewals for the Persimmon Industry	\$1,537.50
AH13027	Plant protection: Regulatory support and co-ordination - Continuation of AH09003	\$197,554.40
AH11029	Provision of independent technical and secretarial services to the National Working Party for Pesticide Application	\$88,740.91
VG11033	Vegetable minor use allocation	\$18,150.00

Top 25 marketing suppliers 2015/16

Supplier	Total
Ikon Communication Pty Ltd.	\$7,891,777
Havas Worldwide Japan KK Formerly Euro RSCG	\$1,461,912
Eleven Communications Pty Ltd	\$1,048,721
Republic of Everyone	\$670,500
Aust Macadamia Society Ltd	\$609,732
Bite Communications	\$556,794
Direct 2 Consumer	\$428,656
The Hallway	\$254,150
Crossman Communications	\$211,818
WORKSHOP AUSTRALIA PTY LIMITED	\$199,470
Society Communication	\$162,395
Treena Welch Pty Ltd	\$157,881
Team Rowley Pty Ltd	\$126,426
Go Future Media	\$125,214
MY FOOD BOOK	\$115,750
Notimetolose Print Management	\$99,645
AMGA (management fee only)	\$95,342
A.C. Nielsen GmbH	\$82,131
FRESH FINESSE	\$78,520
The Trustee for JKPR Trust	\$78,376
Apple and Pear Australia Limited	\$75,674
The Food Studio	\$71,170
FELICITY CROCKER	\$70,516
Altios Australia Pty Ltd	\$62,750
McCann Worldgroup Pty Ltd	\$51,157



Levy
industry
focus

Levy industry focus

This section provides information on the R&D and marketing programs for each levy paying industry in 2015/16.

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Almond

R&D program investment \$2,947,843

PROJECTS CONTRACTED

AL15004	Management of Carpophilus beetle in almonds
AL14005	Identifying factors that influence spur productivity in almond

PROJECTS IN PROGRESS

AL11009	Food safety in almonds – stage 2
AL12001	Research and education of health professionals relating to the health benefits of almond consumption
AL12015	Australian almond variety evaluation and commercialisation program
AL13008	Molecular mapping, nutrition, and value adding of almonds
AL13009	Better tree performance and water use efficiency through root system resilience
AL14004	Pollination as a controlling factor in almond yield
AL14006	Managing almond production in a variable and changing climate
AL14007	Almond productivity: tree architecture and development of new growing systems

FINAL REPORTS ISSUED

AL11005	Australian almond industry communications
AL12000	Australian almond industry – liaison and extension project
AL12701	Almond international networking
AL12011	Monash remediation

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

AL11012	Evaluation of potential prunus rootstocks for almond production
AL12003	Advanced processing of almonds
AL12004	Managing Carob Moth in almonds
AL12702	Australian almond industry conferences 2013 to 2015
AL12016	Developing export markets for Australian almonds

The inaugural almond Strategic Investment Advisory Panel meeting was held on June 14, 2016 in Mildura. The panel discussed priority areas for R&D across supply chain, communications and international networking as well as next steps in the Strategic Investment Plan process.

R&D PROJECT SNAPSHOT

Management of Carpophilus beetle in almonds (AL15004)



This project was established in response to industry concern about the impact and management of Carpophilus beetles in almond production, after confirmation that the beetles were present in almost 70 per cent of almond plantings, and that four species may be associated with almonds.

The project aims to develop a cost-effective management system to control the pest without increasing secondary pest issues. To do this the research team is investigating the potential, for use in almonds, of the Carpophilus Attract & Kill system used in stone fruit orchards; the biology and ecology of Carpophilus in almonds, including timing of infestation of almonds to understand the species complex operating in almonds; and laboratory screening of candidate pesticides.

So far, the research has involved the intensive sampling of nuts from trees in the Robinvale district. Over 99.9 per cent of beetles found in or on nuts were identified as *Carpophilus nr dimidiatus*.

Carpophilus beetle colonies have also been successfully established in the laboratory. These will be used to develop morphological diagnostic tools for key Carpophilus species. Laboratory cultured beetles will also be used to conduct a laboratory bioassay for screening likely candidate pesticides for their control. The project continues.

Apple and Pear

R&D program investment \$4,114,280

PROJECTS CONTRACTED

AP14023	Improved tree and fruit nutrition for the Australian apple industry
AP15003	Review of the Biosecurity Plan for the apple and pear industry
AP15015	Apple and pear industry leadership initiative 2016/17
AP15016	APAL contribution to AP15015 – industry leadership initiative
AP15014	A needs analysis for IPM R&D in the apple and pear industry
AP15010	Review of the health benefits and nutritional properties of pear
AP15008	InfoPome 3
AP15013	Physiological, metabolic and molecular basis of biennial bearing in apple – Australian component of AP15002
AP15001	Integrated pest and disease management – phase 2
AP15002	Physiological, metabolic and molecular basis of biennial bearing in apple
AP15007	National apple and pear grower communication program
AP15009	Australian apple and pear industry market development program
AP15005	Delivery of apple and pear Future Orchards extension program
AP15004	Australian apple and pear industry innovation and adoption program

PROJECTS IN PROGRESS

AP11006	Climate change program
AP11008	Market access and biosecurity program
AP12002	Profitable pears: maximising productivity and quality of new pear varieties
AP12029	Understanding apple and pear production systems in a changing climate
AP14014	Productivity program for the Australian apple and pear industry
AP14022	Independent program coordination for apple and pear productivity program
AP14030	Consultancy services for Prevar project AP14025

FINAL REPORTS ISSUED

AP11014	Apple and Pear Technical Manager
AP11016	Market development for the apple industry
AP11017	Future Orchards 3
AP12006	Precision fertigation for improved apple orchard productivity
AP12013	Apple and pear industry communications
AP12037	Australian apple and pear industry development initiative
AP13035	Apple and pear industry data collection
AP13036	Industry roundtable forum
AP14002	MRL risk analyses for major export markets of the pome fruit industry
AP14003	Research speed updating program
AP14701	Asian market access study tours 2014

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

AP12034	Apple and Pear Industry Leadership Initiative
AP12036	Bridging the knowledge-gap to breed high-value, flavonoid-rich apples
AP12038	Developing sustainability through extension of best practice in the South Australian apple and pear industry
AP13027	Orchard action – co-production of knowledge to Victorian pome fruit orchardists
AP13034	Apple and Pear Nuffield Scholarship 2014/2015
AP14025	Prevar 3: New pome fruit products

The apple and pear Strategic Investment Advisory Panel met for the first time on May 16, 2016 in Melbourne. Key topics of discussion included financials, marketing and new strategic marketing pillars for apples and pears, the Australia Fresh trade program, R&D projects and new concepts, as well as the Strategic Investment Plan (SIP) process.

A SIP workshop for the industry was held on June 24, 2016, at the National Apple and Pear Conference on the Gold Coast. As part of the workshop a SIP industry consultation process was agreed on, which included integrating where possible into the APAL Grower Engagement Roadshows throughout July and August.

R&D PROJECT SNAPSHOTS

Profitable pears: maximising productivity and quality of new pear varieties (AP12002)

This ongoing project is investigating management techniques and physiological mechanisms to increase profitability in growing pears, using an experimental orchard (the Pear Field Laboratory) with new red-blush pear varieties. It continues to produce results that will impact on orchard irrigation, rootstock and cultivar selection, planting arrangement and tree training.

Data collection to validate and parameterise the model for tree-crop monitoring tool SPASMO has commenced, and the researchers report that new remote sensing techniques to measure leaf nitrogen status look promising. Experiments into irrigation resulted in a 67 per cent increase in yield with 35 per cent less water applied. The project continues.

Physiological, metabolic and molecular basis of biennial bearing in apple (AP15002) and Physiological, metabolic and molecular basis of biennial bearing in apple – Australian component of AP15002 (AP15013)



Nicoter (marketed as Kanzi®) open Tatura trees in the experiment. Ribbons indicate measurement shoots

A major constraint to apple flowering and production is biennial bearing – the annual cyclical changes in cropping that are characterised by 'on' years with heavy fruit loads and 'off' years with light loads. This cropping irregularity is usually managed by chemical, mechanical or manual thinning methods, but the underlying physiological, metabolic and molecular plant processes are largely unknown. These two related projects aim to increase understanding of the mechanisms involved in flowering time control of apple crops.

For the international project (AP15002), field trials have been set up using a biennial versus non-biennial apple cultivar at the Centre of Competence for Fruit Cultivation near Lake Constance in the Alps, and the Spencer Seedless cultivar at the Horticultural Research Centre of the University of Hohenheim in Germany.

The Australian-component project (AP15013), is also underway, with field trials being conducted in a commercial orchard setting in the Yarra Valley on the biennial bearing cultivar Nicoter (Kanzi) and the non-biennial bearing cultivar Cripps Pink (Pink Lady). Both projects continue.

Marketing program investment \$880,802

MARKETING CAMPAIGN SNAPSHOT

Hailstorm Heroes and more

For the pear industry, the Hailstorm Heroes campaign ran from May 1 to June 30, 2016 to support growers affected by the hailstorms in Goulburn Valley at the end of 2015.

The supporting above-the-line campaign promoted the hail-affected fruit to consumers by highlighting that despite some superficial damage, the fruit itself was still perfectly good to eat. The campaign ran across the following media:

- » **Radio** The radio campaign ran across the 2DAY FM, FOX FM and Triple M stations in Sydney and Melbourne, including during high-rating shows such as Hamish and Andy, Fifi and Dave, Eddie McGuire, and the Grill Team. A total of 547 placements were delivered.
- » **Newspapers** Hailstorm Heroes ads were placed in the *Sydney Morning Herald* (New South Wales), *Courier Mail* (Queensland) and *The Age* (Victoria), with prominent page-three space secured in all three publications.
- » **Westfield Smart Screens** From May 2-31, Westfield Smart Screens in New South Wales (15 centres), Queensland (six) and Victoria (eight) were activated, primarily located within proximity to Woolworths stores.

A **PR campaign** in May and June supported Hailstorm Heroes, targeting key news, short-lead magazines, online lifestyle sites and foodie and lifestyle/health influencers. A total of 62 clips with a combined reach of over 6.45 million people were generated from this activity.

Meanwhile for apples, 2015/16 activity involved an extensive Facebook advertising campaign and investment in events targeting the key audience of families, including the Royal Easter Show, Brisbane EKKA, other state-based shows and Melbourne's Run for the Kids.

Avocado

R&D program investment \$2,410,482

PROJECTS CONTRACTED

AV15000	Avocado health professional education and research program
AV15001	Avocado chef training and education program
AV15002	National avocado industry communications program
AV15004	Avocado data management and quality innovation extension program
AV15005	Avocado rootstock SHSR-04 commercialisation
AV15008	Avocado food service benchmark
AV15009	Supply chain quality improvement – technologies and practices to reduce bruising
AV15010	Supply chain quality improvement – cool chain best practice guidelines
AV15702	World Avocado Congress 2015 – building research knowledge and capacity for the Australian avocado industry

PROJECTS IN PROGRESS

AV13000	RNA silencing based Phytophthora root rot resistant avocado rootstocks – phase 2
AV13003	Australian avocado benchmarking program development rounds II and III
AV14000	Achieving more consistent yields of quality fruit in the Australian avocado industry
AV14007	Continuation of foodservice chef training program
AV14012	Investigating tree mortality during early field establishment

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AV10001	Improving yield and quality in avocado through disease management, phase 2
AV10008	Avocado industry communications
AV11015	Avocado industry fruit quality benchmarking
AV11021	An analysis of fruitspotting bug activity in avocado crops from fruit-set to harvest
AV12007	Data collection to facilitate supply chain transparency
AV12012	Coordination of data management and avocado quality improvement and extension program
AV12013	Implementing improvements in the avocado supply chain
AV12700	International networking
AV13018	Avocado rootstock assessment and improvement – interim

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

AV13021	Exploring alternatives for managing Phytophthora root rot in avocado
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Hort Innovation completed interviews for the avocado Strategic Investment Advisory Panel (SIAP) over two days in June 2016. Almost 30 applications were received and the short-listed telephone interviews with applicants were very competitive.

R&D PROJECT SNAPSHOT

Avocado industry fruit quality benchmarking (AV11015)



Physical damage from abrasion, impact or compression during harvesting, grading, packing and transport

The profitability of the avocado industry in Australia is adversely affected by variability in fruit quality, which introduces inefficiencies into the supply chain, increasing costs and dampening demand for the product.

The objectives of this project were to use the ongoing retail quality survey results as one of the tools to monitor the quality improvement program being rolled out through other projects; to monitor fruit quality over time to measure improvements as a result of specific projects aimed at improving quality; to provide time-series data to illustrate fruit quality by growing season, store type and city; and to report back to members of the supply chain on a regular basis as to the level of quality of assessed fruit with an up-to-date analysis of current quality.

The data reported has been used to inform sectors of the supply chain of the main quality defects and the levels that are being observed at retail level as well as the incidence of immature fruit in the market.

All Australian avocado industry supply chain participants were able to access regional dry matter maturity reports a week after sampling occurred to educate them on the need to closely monitor dry matter at the beginning of harvest. Further, findings have been used as the foundation for the quality improvement program Qualicado, run by Avocados Australia Limited.

Marketing program investment \$2,104,083

MARKETING CAMPAIGN SNAPSHOT

Mexican stand-off on social media

An extensive media campaign, including significant television activity, was rolled out for the avocado industry. From a social media perspective, during winter the focus of activity was on changing consumers' attitudes about using avocados in the colder months – a season where they may struggle to find ideas about how to use the product. It involved the development of key winter favourites recipes with avocado as the hero including Avocado, Potato and Parsnip Mash with Roasted Salmon, a healthy Avocado Eggs Benedict with Leg Ham and Wilted Spinach and Avocado Pasta Spaghetti. Existing content was also repurposed including Ben's Menu, Perfect Match, Chefs Love Avocados Café series and Mash Up, to extend the Australian Avocados online presence and keep avocados at the top of people's minds.

Mexican Month was launched in May, to tap into Australians' love of Mexican food and the growing popularity of the cuisine. The campaign was developed in line with the overall content strategy of creating more moments and occasions throughout the year to demonstrate the versatility of the product and inspire people to try something new. The campaign centred on the avocado challenging other key Mexican ingredients in a wrestling-type match to create delicious dishes. Short animations were able to develop characters and reveal recipes in an interesting and entertaining way, with recipes developed including Avocado and Grilled Chicken Tacos, Avocado and Jalapeno Poppers, Avocado and Black Bean Quesadillas and an Avocado Nacho Salad.

The campaign reached over 550,000 people in May with more than 250,000 consumers engaging with the content. Overall, the video content series saw engagement rates hit 27 per cent – well above the benchmark of five per cent and demonstrating the value of creating entertaining social media content for the audience.

Banana

R&D program investment **\$3,714,682**

PROJECTS CONTRACTED

BA14012	Coordination of banana industry R&D (Panama TR4)
BA15002	Australian banana industry communications review
BA15003	Integrated management of Yellow Sigatoka
BA15004	Horticulture Nuffield Scholarships 2016/2017/2018
BA15005	The Australian banana industry communications program
BA15006	National banana bunchy top virus program - phase 3 - Qld

PROJECTS IN PROGRESS

BA10020	Banana Plant Protection Program
BA13002	Scoping herbicide impacts on banana production and soil health
BA13003	Communications project for the banana industry
BA13004	National banana development and extension project
BA13011	The cause and management of crown rot of banana
BA13023	Banana strategic industry development
BA14002	Horticulture Nuffield Scholarships 2014/2015
BA14011	National banana bunchy top virus program - phase 3
BA14013	Fusarium wilt Tropical Race 4 - biosecurity and sustainable solutions

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BA11027	Banana industry extension and R&D management
BA12006	Banana Bunchy Top Virus - phase 2
BA12007	Integrated management of Yellow Sigatoka and other banana diseases in Far North Qld
BA13019	Project extension: carton management in the banana industry
BA15002	Australian banana industry communications review

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

BA13025	New South Wales Banana Industry Development Officer
BA13702	11th Banana Industry Congress, June 2015
BA14014	Fusarium Wilt Tropical Race 4 Research Program

The inaugural banana R&D Strategic Investment Advisory Panel (SIAP) meeting was held on May 11, 2016. The key focus for the panel was future investment in the Banana Plant Protection Program.

The banana marketing SIAP meeting was held on May 6, 2016, with a follow-up teleconference held on June 30, 2016. Topics of discussion included progress and evaluation of the 2015/16 year, Nielsen Deep Dive data analysis and the proposed campaign for 2016/17 against KPIs and objectives.

R&D PROJECT SNAPSHOT

The cause and management of crown rot of banana (BA13011)

Crown end rot (CER) of banana has re-emerged as an important problem in the supply chain, with management dependent on in-field crop hygiene, shed sanitation and the use of registered post-harvest fungicides. This project aims to develop a greater understanding of the factors contributing to CER, improve pre- and post-harvest disease control and provide growers with a reduction in losses in the supply chain due to this disease.

To date, the first round of assessments have been completed for partner supply chains, pathogenicity testing for recovered organisms has been undertaken, and project results reported to key industry sectors. The project continues.



Crown end rot symptoms observed after ripening

Marketing program investment **\$4,819,714**

MARKETING CAMPAIGN SNAPSHOT

Nature's Non-stop Energy Snack

A television advertising campaign for bananas had its second burst on March 6, 2016 and ran across networks Seven and Ten as well as regional networks and subscription television, reaching 35 to 40 per cent of the target audience at least three times. Further, the target audience saw the television commercial between four and five times across the campaign period.

This was supported by an out of home campaign which ran across March and April and incorporated bus advertising, office media (in elevators) and shopping centres (rotating digital panels), with the majority outside supermarkets. Digital activity commenced in March and ran through to May, built around driving the new creative message 'Keep Going' and 'Nature's Non-stop Energy Snack' across key times of the day. It utilised both desktop, tablets and smartphones to deliver on three main objectives of awareness, reach and engagement.

Social media and publicity, as well as sponsorship and events, continued to be a focus. Social media is 'always on' for bananas, with the focus for Facebook on 'Apeeling Snacks', 'Energy Refuel' and bananas as the 'Fun Fruit'.

Instagram has been supported by short videos to further enhance engagement and sharing, while driving the energy food key message.





Cherry

R&D program investment **\$742,450**

PROJECTS IN PROGRESS

CY12002	Improving fruit quality and consistency in cherries through maximised nutrient availability
CY12023	National cherry development program

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CY11026	Maintenance and ongoing development of communications across the Australian cherry industry
CY12007	Export development for Australian cherries
CY14009	Evaluating the sugar flotation method for testing cherries for Queensland fruit fly (Qfly)
CY12024	Australian cherry evaluation utilising precocious rootstocks
CY13001	Optimal management of pre-harvest rot in sweet cherry

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

CY12000	Reducing the impact of late season rainfall
CY12010	Comparing the performance of new cherry rootstocks soon to be available to industry

The inaugural cherry Strategic Investment Advisory Panel was held at the beginning of the 2016/17 period, with topics of discussion including financial levy updates, new R&D concepts, trade events and the 2016/17 strategic marketing plan. A cherry industry Strategic Investment Plan development workshop was also held.

R&D PROJECT SNAPSHOT

Reducing the impact of late season rainfall (CY12000)

This now-completed Tasmanian project has generated important results regarding cherry cracking that are directly applicable within current orchard management practises. The project shifts the thinking of cracking management from a reactive approach when rain is imminent to a holistic year-round approach, providing information with which to improve fruit integrity, and consequently fruit quality.

The broad aims of the project were to reduce crop damage, and the impact of late-season rainfall specifically, by preventing rapid and excess water uptake to fruit following rainfall events, and building fruit resilience before a rainfall event.

A number of trials were undertaken, building on results of earlier project *Improving marketable yield of premium quality cherries* (CY09002). The results show building resilience in fruit early in the season helps reduce the impact of rainfall late in the season when fruit is most susceptible to cracking. However, no practical options to reduce the rapid uptake of rainfall late in the season were revealed – ground covers will slow uptake but are not suited to current systems, vascular tissue stays connected and functional throughout fruit maturation, and root pruning late in the season is not viable.

Methods shown for building early resilience included maintaining cuticular and skin integrity and strength, enhanced by a comprehensive calcium program to allow calcium uptake early in fruit development. Maintaining irrigation was key to reduce excessive diurnal shrinking and swelling of fruit during development, and to avoid trees being water stressed coming into a rainfall event. Managing crop load, and considering the growth rate of fruit early in fruit development, is also a recommendation of the project. The work is to be presented as part of an upcoming user-friendly manual about cherry cracking.

Marketing program investment **\$89,773**

MARKETING PROJECT SNAPSHOT

Cherish the Moment

Marketing for the industry has had a successful focus on growing interest and demand in export markets. In 2015/16 marketing also involved 465 point-of-sale kits – including posters, bunting and cherry bags – being delivered across Queensland, South Australia, Western Australia and Tasmania. There were also state-based promotions including competitions, in-store sampling, media, PR and farm-gate activities.



Chestnut

R&D program investment **\$78,771**

PROJECTS IN PROGRESS

CH12000	Facilitating development of the Australian chestnut industry – Communications Officer
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CH13003	Facilitating development of the Australian chestnut industry – Industry Development Officer
CH14005	Improved postharvest management of chestnuts – phase 2

The inaugural chestnut Strategic Investment Advisory Panel meeting was held in Myrtleford on May 20, 2016. The panel discussed requirements for the upcoming strategic investment planning process, which is expected to begin in the third quarter of 2016. Emphasis was made on the need for broad industry input from the whole supply chain in addition to growers.

Discussion was held on marketing campaigns, including a refresh of the website.

R&D PROJECT SNAPSHOT

Improved post-harvest management of chestnuts (CH14005)

This project examined temperatures through a number of supply chains, from farm to wholesale and retail, as well as during shipping to China for processing. A survey was also conducted of chestnut retail displays, price and quality.

The project revealed that chestnuts that warmed during packing could take hours or days to cool below 3°C, particularly if they were packed inside a polypropylene bag at the centre of a pallet. Warming also commonly occurred during transport, with chestnut temperatures increasing during transport in five of the six domestic supply chains examined. Temperatures were over 5°C during transport to Brisbane, and averaged 7.5-8.5°C over four days' transport to Perth. Chestnut temperatures were held close to 0°C in the long-term cool room at the markets wholesaler. However, product that was displayed during market hours then returned to the cool room each day showed wide temperature fluctuations.

Temperature control was very effective inside a shipping container during transport to China. While temperature varied between different parts of the container, none of the monitored fruit fell below -1°C and temperatures generally varied by only 1°C.

Quality and price of chestnuts was consistent among supermarkets, but variable among independent grocers. While supermarket displays were generally refrigerated, they tended to be small with little visual impact. In contrast, some of the independent stores were using chestnuts as a prominent seasonal feature. One store in particular had an excellent display at the front of the store and were offering hot roasted chestnuts as well as easy-peel and non-easy-peel varieties.



Data loggers inserted into chestnuts

Marketing program investment **\$38,906**

MARKETING CAMPAIGN SNAPSHOT

The marketing program for Australian Chestnuts has focused on media outreach. After the initial campaign, a second round of outreach occurred in April 2016 to maximise coverage during the season. A wide scope of media received a chestnut season update and accompanying fact sheet and recipes, while 20 key media influencers also received a gift hamper with 2kg of beautifully presented chestnuts along with the 2016 chestnut recipe and information brochure. The media campaign had a wide reach across the foodservice industry, rural and horticulture publications and consumer media (including press, online and radio), with high impact media coverage.

Citrus

R&D program investment \$3,024,275

PROJECTS CONTRACTED

CT15005	Protecting Australia's citrus genetic material
CT15006	Development of national strategies to manage citrus gall wasp
CT15008	Development of phenology models and a timing guide for the management of California red scale in Australian citrus
CT15009	Citrus industry communications
CT15011	Data packages to support market access for additional citrus varieties to Japan
CT15012	Australian citrus industry innovation and market development program
CT15013	Citrus quality standards – stage 3
CT15015	Citrus Australia Limited – consultation on CT15009
CT15016	Agrichemical residue monitoring program for Australian citrus exports – stage 2

PROJECTS IN PROGRESS

CT12026	Evaluating new citrus varieties 2013 - 2017
CT13020	Increasing market access, profitability and sustainability through integrated approaches to fungal disease control
CT13042	Evaluation and commercialisation of new citrus rootstocks
CT14003	MRL risk analyses and risk management options for major citrus export markets
CT14009	Protecting Australian citrus germplasm through improved diagnostic tools

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CT10006	National citrus postharvest science program
CT10008	Protecting Australia's citrus genetic material
CT11000	National citrus triploid breeding
CT11011	Agrichemical residue monitoring program for Australian citrus exports
CT12004	Australian citrus quality standards program – stage 2
CT12005	Driving citrus exports through improved market access
CT12010	Riverina Fruit Fly Campaign Coordinator
CT12022	Protecting Australia's citrus industry from biosecurity threats
CT13024	Driving awareness and adoption of the citrus industry R&D program through targeted communications
CT13037	Delivering robust citrus market information for a more competitive industry
CT14010	Delivering a national citrus plantings database – 2014

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

CT10030	Extension of citrus practices to maximise marketable fruit size and economic returns through on-farm trials
CT11005	An industry, markets and business development program for the Western Australian citrus value chain
CT12021	Evaluation of advanced citrus hybrids
CT13004	Qld citrus improvement scheme: finding better rootstocks for Australia
CT13010	In-line approaches to control surface pests of concern from export citrus
CT13021	Joint Florida and Australia citrus black spot research initiative
CT13022	Driving citrus industry success through a coordinated market development program – stage 2
CT14024	Strategic partnership – DO for citrus in the Riverina

The inaugural citrus Strategic Investment Advisory Panel meeting was held on May 5, 2016, in Mildura. The panel discussed the industry's short-term investment priorities, with a number of areas identified for near-term investment. These included the agrichemical residue monitoring program for Australian citrus exports; the industry's citrus breeding program; and the national post-harvest science program.

R&D PROJECT SNAPSHOT

Extension of citrus practices to maximise marketable fruit size and economic returns through on-farm trials (CT10030)

The key aim of this now-completed project was to extend to industry production practices that increase the yield of marketable fruit and to identify non-profitable practices. The ultimate goal was to help improve the profitability, knowledge and skills of growers, and to give growers confidence to evaluate and adopt improved technologies. The secondary aim was to investigate and develop a suitable and efficient methodology to evaluate new technologies through on-farm trials.

Numerous on-farm trials were conducted on properties in the Sunraysia region that examined various products and practices. Products and practices trialled included potassium (ground and foliar applied), 2,4-D fruit sizing spray (Corasil®), winter gibberellic acid (GA, Ralex®), hand thinning, hand pruning, summer urea fruit sizing spray, GA flower fruit setting spray, young tree growth biostimulant enhancing sprays, kaolin clay foliar sprays and wind blemish assessment.

The results of these trials were extended to industry through annual field days, seminars and conference presentations.



Ground-applied potassium trial site trees

Marketing program investment \$166,385

MARKETING CAMPAIGN SNAPSHOT

Australian citrus 'Now! In Season'

With exports currently representing the best return for Australian citrus growers, this year the marketing focused on export promotions. Investment in the 'Now! In Season' program was set to build on the previous year's in-market promotional activities in priority international markets (China, Japan, The Philippines).

There was a focus on in-store retailer activities such as merchandising, sampling, point-of-sale material and consumer-focused promotions to drive awareness of Australian citrus and to encourage consumers to taste and purchase it.

International trade shows also represent a key strategy for boosting the export and consumption of Australian citrus overseas. 'Australia Fresh' (which is the industry export market development program for fruits, nuts and vegetables) will exhibit at key international trade shows during the year.

Custard Apple

R&D program investment **\$350,977**

PROJECTS CONTRACTED

CU15000	Custard Apple Dispatch System 2 (CADS 2)
CU15700	Custard Apple Roadshow 2016

FINAL REPORTS ISSUED

CU12001	Custard Apple Dispatch System (CADS)
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VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

CU12003	DArT markers for red skin and high productivity traits in custard apple
CU13001	Accelerating development of the Australian custard apple industry, new variety development and commercialisation – phase 2

The custard apple Strategic Investment Advisory Panel was held at the beginning of the 2016/17 period to prioritise future investment with the industry, provide an update on the marketing program, and discuss the latest Strategic Investment Plan.

R&D PROJECT SNAPSHOT

Custard Apple Roadshow 2016 (CU15700)

Three successful Custard Apple Roadshows in North Queensland (Mareeba), Bundaberg (Gin Gin) and South East Queensland (Glasshouse Mountains) were held in early 2016. In total, 52 growers attended, representing about 50 per cent of custard apple growers and about 70 per cent of production of custard apples in Queensland.

In Mareeba and Glasshouse Mountains, presentations by experts were on fruitspotting bug, fruit fly, integrated pest management, postharvest cool chain in custard apples, the Custard Apple Dispatch System (CADS) and the custard apple breeding program. Tours of orchards were also conducted.

In Bundaberg, a different approach was taken. Seven growers participated in a real 'roadshow' by travelling to seven different orchards in the Bundaberg/Gin Gin region. They were accompanied by Department of Agriculture and Fisheries experts and Custard Apple Australia representatives. Each grower was able to present their orchard and answer questions from the other growers.



Custard Apple Roadshow

Marketing program investment **\$25,716**

MARKETING CAMPAIGN SNAPSHOT

Media campaign and briefings

Five media targets (*WHO, News Local, That's Life, The Carousel* and *New Idea*) attended briefings, with grower Patti Stacey participating in media interviews. Four out of the five media from the briefings have now featured custard apples, resulting in an 80 per cent achievement. Custard apples were also featured in seven metropolitan magazines, 24 regionals, 15 radio programs, 18 online/social media posts and 10 television appearances. Over eight million people were reached.

Dried Grape

R&D program investment **\$493,940**

PROJECTS CONTRACTED

DG15001	Objective colour assessment options for the dried grape industry
DG15002	Evaluating a visible imaging and near-infrared spectroscopy technique for dried grape colour assessment
DG15700	International Dried Grape Conference participation and FoodNews

PROJECTS IN PROGRESS

DG12006	New rootstocks to improve production and water use efficiency, sustainability and reduce risks of dried grape production
DG13006	Producing high value dried grapes – stage 2

FINAL REPORTS ISSUED

DG12004	Evaluating dried grapes types for the Australian industry
DG13005	Dried fruits knowledge management project

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

DG13001	Dried grape industry development project – stage 2
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The inaugural meeting of the dried grape Strategic Investment Advisory Panel was held early in the 2016/17 period in conjunction with a strategic planning workshop.

R&D PROJECT SNAPSHOT

Objective colour assessment options for the dried grape industry (DG15001) and Evaluating a visible imaging and near-infrared spectroscopy technique for dried grape colour assessment (DG15002)

High-quality dried grapes should be golden, plump and uniform throughout the batch. The relatively light and even colour of Australian dried grapes, due to our drying techniques, is one of the key quality attributes that differentiates them in domestic and international markets. Light-coloured fruit are worth significantly more than dark fruit, particularly in export markets. The colour grade of fruit therefore directly affects how much growers are paid.

Fruit needs to be assessed on receipt so that growers can be paid appropriately – and with large volumes of fruit being delivered during a relatively short harvest season, assessment needs to be fast and consistent. Experienced assessors currently evaluate dried grape colour subjectively on delivery. However, as colour and consistency determine grade, and grade determines price, differences in judgment almost inevitably lead to disputes between growers and processors. Objective colour measurement has therefore long been an industry priority. Research nearly 15 years ago proposed the use of near infrared (NIR) spectroscopy to measure dried grape colour. However, advances in technology mean that a range of different techniques are now available, and could be suitable for measuring dried grape colour.



Colour grades of dried grapes



Dried Prune

R&D program investment \$114,753

PROJECTS IN PROGRESS

DP14000 Innovation and adoption program for the Australian prune industry

FINAL REPORTS ISSUED

DP12001 Ultrasonic drying of horticultural food products

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

DP14700 International Prune Association Conference 2015

The dried prune Strategic Investment Advisory Panel has been appointed and will meet for the first time in the 2016/17 period.

R&D PROJECT SNAPSHOT

Innovation and adoption program for the Australian prune industry (DP14000)

The objective of this project is to drive technology adoption and communication programs that engage industry stakeholders and provide growers with access to information they need on R&D, new technologies and best practice management.

As part of the project, Australian and international research information has been reviewed and delivered to growers through extension activities such as field days, forums and individual liaison.

A Quality Assurance (QA) program has been developed to assist growers and processors to enhance the quality and standard of Australian prunes. In a future investment, to continue on from DP14000, this QA program will be rolled out to growers and processors to ensure it is taken up by the industry.

Variety evaluation will be a further key element of the new project, with trial plantings located on a commercial prune orchard to be managed by grower co-operators in consultation with the project lead. Variety evaluation data will be compiled and analysed on tree growth and vigour, blossom and harvest dates, and of fruit maturity parameters, including both scion and rootstock variety evaluations. A Project Reference Group will be established to work with industry to provide input on the varieties.

The project will also work closely with processors to evaluate the performance of varieties at the processing stage to ensure industry can make informed decisions about what varieties to plant. Commercial viability of prune varieties will be critically assessed, as will the quality parameters of varieties as determined by industry.

Project DP14000 has also delivered several on-farm trials including solar drying tunnels and ultrasonic pre-treatment through the solar tunnels and commercial dehydrator.



Dried Tree Fruit

R&D program investment \$32,338

All investments were made via multi-industry projects.

Project DG15001 has reviewed different ways of measuring the colour of dried grapes, and tested some of these methods using graded samples supplied by the major processors. The objective has been to determine a test and set of criteria that correlate with subjective assessment. Methods and criteria have been assessed manually, using existing image analysis software. If effective, this could later be developed into a fast, automated system using appropriate equipment and software.

In additional project DG15002, the research team conducted an initial assessment of the use of NIR technology to measure moisture content in dried grapes. This method could potentially provide a much faster measurement of internal moisture than current, manual techniques. As dried grapes must be supplied within a relatively small moisture content range, a method that allows both growers and processors to quickly assess drying rates and suitability for storage and processing would be of great value to the industry.

Marketing program investment \$103,366

MARKETING CAMPAIGN SNAPSHOT

Marketing dried grapes to Europe

Marketing activity for the industry continues to focus on the marketing of dried grapes in Europe, including the development of recipes utilising Sunbeam sultanas in Italy to drive purchase and consumption. Trade show activity is another major focus in Italy, with Australian fruit represented by importer Ser Fruit.

In Germany, trade show activity has been working to increase demand in the foodservice space via the Internorga trade show. Consumer marketing across the Poland region is through the well-known Helio brand and centred on raisins, promoting the premium character of Australian Sunmuscats and their ideal usability as a healthy snack and in bakery products. Key messaging focuses on the fleshy texture, natural fruity taste, no use of sulphur, dried on the vine and naturally light colour of the fruit.



Trade show activity in Italy

Lychee

R&D program investment \$116,933

PROJECTS CONTRACTED

LY15001	US market access project
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PROJECTS IN PROGRESS

LY14000	Industry communication through Living Lychee
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FINAL REPORTS ISSUED

LY10000	Improving fruit yields in lychee
LY13003	Export market scoping study for the lychee industry

The inaugural lychee industry Strategic Investment Advisory Panel meeting was held on June 21, 2016 in Brisbane and included Hort Innovation updates from Sam Lawrence, Trade Manager, and Angus Street, Asian Markets Relationship Manager. Opportunities to work across industries were explored with a priority being analysis of Maximum Residue Limits (MRLs) against countries Australia is seeking access to with domestic requirements. The marketing campaign was presented and discussed along with robust discussion on the Strategic Investment Plan process.



R&D PROJECT SNAPSHOT

US market access project (LY15001)

In 2013 Australian lychees were given the green light to export into the mainland United States (US) with the exception of the state of Florida. An Operational Work Plan was developed for a three-year pilot program and defined the requirements for the irradiation treatment protocol for lychees as well as mangoes to assure biological security against designated pests.

In the first year of the program, a number of milestones have occurred with initially two export agents, 10 growers and two US importers nominated. Grower guides, including US and Australian chemical, pest monitor and training guides, have also been compiled by Australian Lychee Growers Association (ALGA), approved by the Australian Government Department of Agriculture and Water Resources and the US Department of Agriculture and forwarded to growers and agents.

Growers submitted details of their orchards and packhouses, and nominated US block/s to ALGA and advised of their nominated pest monitors. Pest monitor training was undertaken in the four key growing areas of Mareeba, Rockhampton, Bundaberg and Sunshine Coast. Further, as part of the program US importers visited Australia to view a number of lychee orchards.

ALGA reports that while fruit was not exported to the US in this first year, it has further highlighted the known issue of allowed Australian chemicals and allowed US chemicals that do not align. Ensuring sufficient chemicals are approved for use in lychee and are compatible both in Australia and the US is a focus for the program, with the aim that year two of the program will deliver fruit to the US.



Marketing program investment \$33,583

MARKETING CAMPAIGN SNAPSHOT

'Me-time Moments' with lychees

The lychee Facebook page is used as an educational and information-led content platform to provide advice for consumers that are unfamiliar with the fruit. Facebook results demonstrated that the campaign reached over 800,000 people, an increase of 51 per cent from the previous year's campaign. The fan base increased to over 21,000 and over 61,000 people engaged with the page during the four-month campaign.

The lychee Instagram page served as a platform to inspire consumers, showcase growers and inform about season updates. This year the page increased by 50 per cent with 563 fans now following the page. The average engagement on the page was around 29.5 likes per post, achieving an overall engagement rate of three per cent, well in the range of standard industry engagement which is between two and four per cent.

Both Facebook and Instagram results were enhanced by engaging with top Australian food, lifestyle and health and wellbeing bloggers with a combined reach of over two million monthly page views.

The #metimemoment competition was a major focus for social media, with the aim of the competition to promote lychees as the ultimate self-indulgence by encouraging the social audiences to share their 'Me-Time Moments' with lychees in order to win a prize. Facebook users and Instagrammers were required to share a 'Me-Time Moment' to their respective account using the #metimemoment hashtag. The winners received an Ella Bache gift voucher and a box of 10 lychees.

Macadamia

R&D program investment \$2,302,734

PROJECTS CONTRACTED

MC15003	National macadamia grower communications program
MC15004	Australian macadamia industry innovation and adoption program
MC15005	Benchmarking the macadamia industry 2015-2018
MC15007	Still wild about macadamias – conserving a national icon
MC15009	Macadamia crop forecasting 2015-2018
MC15010	Ecology and management of <i>Sigastus</i> weevil in macadamias
MC15008	Establishing an open-source platform for unravelling the genetics of macadamia: integration of linkage and genome maps
MC15011	Determining the extent and causes of abnormal vertical growth
MC15012	Review of macadamia orchard nutrition
MC15013	Consultancy services for crop forecasting project MC15009

PROJECTS IN PROGRESS

MC11001	Macadamia regional variety trials series 3 – phase 2
MC12007	Disease management in macadamia industry
MC12008	Biological husk spot research
MC12011	Time of flowering and pollination relevant to orchard weather conditions in Northern NSW – a growers trial group
MC13008	Biology, species and genetic diversity of macadamia lace bugs
MC14000	Macadamia second generation breeding and conservation

FINAL REPORTS ISSUED

MC09001	Improving farm productivity and competitiveness in the Australian macadamia industry
MC10003	Improving on-farm productivity and sustainability of the Australian macadamia industry
MC11005	Improving industry awareness and understanding of industry programs for Australian macadamias

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

MC09017	Supplementary grower trial of elite macadamia selections
MC12002	Developing a commercial shelf life test for macadamias
MC12016	Commercialisation of mini-grafting of macadamia
MC13009	Total non structural carbohydrate testing in macadamias
MC13014	Macadamia – propagation and precocity
MC13015	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

The inaugural meeting for the macadamia industry Strategic Investment Advisory Panel was held on April 12, 2016 in Brisbane. A discussion was held on the integrated pest management project, which was highlighted as a priority and also discussed in detail the following day at the Integrated Pest and Disease Forum facilitated by Hort Innovation. The panel also discussed requirements for the Strategic Investment Planning process.

R&D PROJECT SNAPSHOT

Disease management in macadamia industry (MC12007)

In the 2015/16 production season the prevailing weather conditions were very conducive for husk spot development. Reports from growers and industry consultants showed that macadamia growers who followed the guidelines for husk spot control (two fungicide spray applications starting at match-head stage of fruit development and timing of harvest based on kernel maturity), had no significant yield losses.

Significant yield losses due to husk rot were reported in older orchards at Bundaberg. Anecdotal reports put the losses at approximately 20 per cent. The project revealed that multiple fungal species belonging to the genus *Diaporthe* caused *Phomopsis* husk rot in macadamia. The characteristic soft or spongy black lesions of husk rot symptoms were observed in diseased husks. Injury to the husk predisposes it to pathogen infection, thus is a prerequisite for infection. Designs of field trials to manage the disease are currently underway.

As part of the diagnostic services in the project, the majority of the samples that were received from growers and industry consultants were branch dieback on twigs and branches. Field observations showed that the disease also caused complete tree death. Members of the fungal family *Botryosphaeriaceae* were identified from diseased samples.

The project continues.



An older dried husk with visible shiny husk spot lesion

Marketing program investment \$2,678,638

MARKETING PROJECT SNAPSHOT

South Korean promotional tour

This highly anticipated and successful event saw Korean celebrity chef Kim Poong and two high-profile Korean bloggers visit Byron Bay for four days to experience all things macadamia. The Korean guests participated enthusiastically in every aspect of the event and generated a host of Australian macadamia-themed blog and social media posts that reached their enormous Korean fan bases, enabling Australian Macadamias to leverage these broad and engaged audiences.

Local media coverage on NBN and in *Northern Star* and *Rural Weekly* was achieved and professional footage and images from the tour were used for Korean public relations and content on the Australian Macadamias Korean Facebook page. The event exceeded all expectations, reaching a total audience of over six million South Korean consumers and generating 17 stories in Korean media.



The South Korean promotional tour

Mango

R&D program investment **\$2,023,363**

PROJECTS CONTRACTED

MG15002	Quality standards, refinement and testing
MG15004	Monitoring mango fruit quality through the supply chain to the US
MG15005	Understanding and mitigating the aggregative response of the Magpie goose to mango orchards in the Northern Territory
MG15003	Data collection to facilitate supply chain transparency – stage 3
MG15006	Mango industry communication program 2016-2017

PROJECTS IN PROGRESS

MG13017	Capacity building, information, technology and extension for the Australian mango industry
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VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

MG12005	Building capacity in the NT mango industry using small-group extension
MG12012	Manipulating mango flowering to extend harvest window
MG12015	Integrating genomics into an applied mango breeding program
MG12016	In-transit ripening and prediction of outturn quality for mango
MG12017	New fruit fly systems for mangoes and market access
MG12020	Sequencing mango genome
MG13016	Improving consumer appeal of Honey Gold mango by reducing under skin browning and red lenticels discolouration
MG13700	The 10th Australian Mango Conference – Northern Territory
MG14004	Reducing mango industry losses from resin canal discolouration
MG14019	Parent – integrating genomics into an applied mango breeding program

The inaugural mango industry Strategic Investment Advisory Panel meeting was held on June 15, 2016 in Brisbane, with an update on the marketing and R&D programs as well as a workshop to review the industry's Strategic Investment Plan. Key discussion points from the meeting included the increase in mango production and value over the past couple of years, and the importance of communication and engagement with all growers and supply chain stakeholders.

R&D PROJECT SNAPSHOT

Data collection to facilitate supply chain transparency – stage 3 (MG15003)

This project provides growers and other industry participants timely information on two factors that influence grower profitability: wholesale prices and eating quality. In regards to wholesale prices and information, most production regions are a significant distance from Australia's major markets. Regular reporting from the wholesale markets with independently collected wholesale prices provides growers with clear signals on market conditions. This information is important to allow growers to make sound business decisions, especially as distance to market and the relatively short but busy harvest window mean that growers have little opportunity to undertake further analysis of markets during their harvest window.

In regards to mango quality, this is a critical factor for consumers. Mangoes harvested before they reach the correct maturity will not reach their optimum flavour as they ripen. The impact of poor flavour (as measured by Brix) is a loss of consumer appeal. There are a range of factors that may influence the harvest of mangoes prior to the optimum maturity, such as market pressures, the likelihood of weather events and the lack of skilled mango pickers who have difficulty in selecting mature mangoes compared with immature fruit.

During the 2015/16 mango harvest season, this project delivered wholesale prices on a daily and weekly basis to growers through the mango industry website. It also provided information to growers on the eating quality of mangoes (by using a refractometer to measure Brix) on randomly selected mangoes through the season.

The project also delivered daily and weekly prices reports from the Sydney, Brisbane, Melbourne and Adelaide wholesale markets. Information included in these reports included variety, origin, package size, fruit size (tray count), quality and price range.

It also included observations on supply, demand, carryover and quality (visual external aspects of quality). These reports were loaded daily onto the Australian Mango Industry Association (AMIA) website. Accessing this information enables growers and others to monitor prices and price movements in the major Australian wholesale markets.

The project continues.

Marketing program investment **\$484,248**

MARKETING CAMPAIGN SNAPSHOT

Mango Mess-tival

Sunday, December 6, 2015, saw mango madness descend on North Bondi for the fourth annual Mess-tival – and this one was bigger and messier than ever. The event even had a visit from the Prime Minister, the Hon. Malcolm Turnbull.

Designed to celebrate the peak of the mango season and the official start of summer, Mess-tival is a one-day festival held in partnership with the North Bondi Surf Club. Its purpose is to keep mangoes top-of-mind for consumers throughout the long summer season, reminding them why mangoes are their favourite summer fruit, and to keep demand consistently high.



Mango Mess-tival event

Mushroom

R&D program investment \$1,456,556

PROJECTS CONTRACTED

MU15700	2016 National Mushroom Conference
MU15000	Mushroom consumer research
MU15001	Communication program for the Australian Mushroom Industry 2016-2019

PROJECTS IN PROGRESS

MU12007	Development of a pilot mushroom farm disease monitoring scheme
MU13014	Implementing industry risk management systems and capability
MU14000	Communication and education of mushroom nutrition research to health professionals – phase 2

FINAL REPORTS ISSUED

MU10021	Improving consistency of mushroom compost through control of biotic and abiotic parameters
MU12001	Mushroom industry knowledge training project
MU12005	Analytics for mushrooms
MU12006	Opportunities for mushrooms in food service
MU12014	Mushroom industry communication plan

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

MU11003	Facilitation of information transfer to mushroom industry through the AMGA Journal
MU12003	Mushrooms, vitamin D and cognition – human studies
MU12009	Identification and characterization of white button mushroom strains with high anti-aromatase activity
MU12011	AMGA research scholarship
MU12015	Mushrooms and health global initiative
MU12700	Mushroom Industry Annual Conference
MU13018	International mushroom industry collaboration

The inaugural mushroom industry Strategic Investment Advisory Panel meeting was held on June 23, 2016 in Sydney. Key focus areas included the industry's marketing program, R&D project and concept review updates, and the Strategic Investment Plan process.

R&D PROJECT SNAPSHOT

Mushroom industry communication plan (MU12014) and Communication program for the Australian mushroom industry 2016-2019 (MU15001)

The objective of the *Mushroom industry communication plan* project was to provide support for a wide range of communication activities used to inform government, industry and consumer stakeholders of ongoing developments and outcomes achieved through joint industry and government investments. The project delivered a strong focus on electronic and online communication channels, including e-newsletters and websites (including www.emushrooms.org and www.mushrooms.net.au).

Work undertaken allowed the development of sites designed to provide information to specific target audiences. This approach maximised the dissemination of relevant information and helped to ensure industry participants were aware of matters concerning industry investment and the outcomes and benefits of those investments.

The communication program extended the information from current research projects and integrated this communication through a range of different channels.

The project was delivered by the Australian Mushroom Growers' Association and a range of external consultants with specialised skills and experience in website management and in scientific management and report preparation.

The project *Communication program for the Australian mushroom industry 2016-2019* builds on the framework of the *Mushroom industry communication plan* and project MU11003, which funded the production of the quarterly *Australian Mushroom Growers' Association Journal*. This new project, which encompasses elements of the previous projects, has been developed to further improve the way in which information is communicated with the wider mushroom industry.



Marketing program investment \$3,168,309

MARKETING CAMPAIGN SNAPSHOT

Much healthier. Much tastier

The biggest marketing campaign in the Australian mushroom industry's history was launched in May 2016, running across television, out of home and digital media with the aim of encouraging home cooks to add mushrooms to their everyday dishes. The focus has been on showing how adding mushrooms makes meals healthier and tastier.

To take advantage of the cooler weather, the initial television advertising consisted of three bursts over a two-and-a-half month period, with the campaign successfully delivered across all capital city markets during May and June. Grocery buyers between the ages of 25 and 54 were targeted via programs such as *MasterChef* and *Better Homes and Gardens* to not only deliver audience reach but also provide the demographic for the campaign.

This above-the-line investment was delivered in conjunction with PR and media outreach activity, as well as social media, a national events and in-store campaign, and engagement with retailers.



'Much healthier. Much tastier' marketing campaign

Nursery

R&D program investment **\$1,968,608**

PROJECTS CONTRACTED

NY15000	Nursery industry communications review
NY15001	Evaluation of nursery tree stock balance parameters
NY15002	Building the resilience and on-farm biosecurity capacity of the Australian production nursery industry
NY15004	National nursery industry biosecurity program
NY15006	Communication program for the Australian nursery industry 2015-18
NY15007	Capacity building workshop for the 202020
NY15008	Extension of barriers to adoption of 202020 Vision goals
NY15009	NGIA – Communication support on NY15006 – nursery industry communications

PROJECTS IN PROGRESS

NY13024	202020 Vision: Goods Line monitoring and evaluation research proposal
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FINAL REPORTS ISSUED

NY11001	Plant health biosecurity, risk management and capacity building for the nursery industry
NY12011	Nursery and garden industry communications 2013-2015
NY12012	Technical communications and policy development for the Australian nursery industry
NY12014	Management of technical, research and market development projects for the nursery industry 2013-2016
NY12018	Greening neighbourhoods – mitigating heat stress with vegetation
NY13002	Market development through the National Urban Forest Alliance
NY13017	Nursery Industry Young Leader Development Program 2014-2015
NY13030	Developing water efficiency in the horticultural market – identifying best practice and leveraging marketing advantage
NY14007	Identification of barriers to adoption of 202020 Vision goals

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

NY12006	Industry development network for the nursery industry
NY13029	Research and development program 2014/2015 for the production nursery industry
NY13702	Nursery Industry National Conference and Regional Technical Conferences

The nursery industry Strategic Investment Advisory Panel met for the first time over two days in May, and again in June 2016. Topics of discussion included marketing (202020 Vision), the Strategic Investment Plan and R&D investment. From an R&D perspective there were a number of areas of focus, ranging from leadership programs and a national 202020 Vision training program, to attracting new growers to the industry.

R&D PROJECT SNAPSHOT

Extension of barriers to adoption of 202020 Vision goals (NY15008)

Through engagement with stakeholders, this project has seen the production of the *202020 Vision Policy Guide*, which provides a roadmap for navigating the policies and regulations that impact planning decisions around creating urban green space. It includes three individual guides: *The Playing Field*, *Rules & Regulations* and *Top Ten Opportunities*, available on the 202020 Vision website.

The project was designed to interpret and extend the information gleaned through the project *Identification of barriers to the adoption of 202020 Vision goals* (NY14007), with the aim of producing resources that could be understood and used by the 202020 Vision Living Network and nursery-industry levy payers – many of whom are working within state and local government to increase and improve green space policies. The completed guides contain information of current planning policies, regulations and legislation in Australia.

Marketing program investment **\$809,952**

MARKETING CAMPAIGN SNAPSHOT

202020 Vision media partnerships

The 202020 Vision has achieved great results to date. In 2015/16, media and PR activity generated more than 280 articles and interviews, representing 32 million in circulation through unpaid activity.

The strategy behind media partnerships (paid media) was to work with *The Australian* and the *Australian Financial Review* to publish a number of special reports and resources. These included special report *Green movement needs a human face* and e-mags such as 202020 Vision projects the *Directory of Good Design* and *The Black Book of Green People*. There was also work with a range of smaller trade publications including *ArchitectureAU* (online), *The Fifth Estate* and *Government News*.

The 'My Park Rules' competition also generated significant media activity. The competition saw more than 40,000 votes and more than 90 articles and stories promoting the benefits of green space to the public.



202020 Vision Policy Guide documents



My Park Rules campaign material

Olive

R&D program investment \$398,753

PROJECTS CONTRACTED

OL15000	Determination of a derived smoke point for olive oil
OL15001	Australian Olive Industry Strategic Investment Plan 2015-2020
OL15002	International Olive Council Committee

PROJECTS IN PROGRESS

OL13007	Australian Olive Industry Code of Practice implementation
OL14003	Essential work to facilitate increased exports to China, removing roadblocks and enhancing competitive advantage

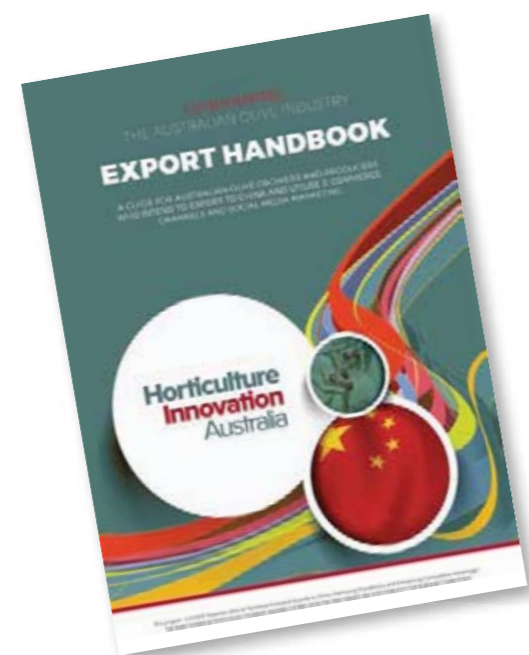
FINAL REPORTS ISSUED

OL14008	Review and development of Olive Industry Biosecurity Plan (IBP)
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VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

OL13700	2014, 2015 and 2016 National Olive Industry Conference and Trade Exhibition
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The inaugural olive industry Strategic Investment Advisory Panel meeting was held on April 8, 2016 in Melbourne. The panel discussed the industry's short-term investment priorities, with a number of areas identified for near-term investment including consumer research and pest and disease management.



R&D PROJECT SNAPSHOT

Australian Olive Oil Code of Practice implementation (OL13007)

This project aims to enhance consumer confidence in Australian olive products by improving the rate of adoption of existing technology, and to provide an enabling environment for industry. The project also links to the project *Essential work to facilitate increased exports to China, removing roadblocks and enhancing competitive advantage* (OL14003) – which produced *The Olive Industry Export Handbook* – by supporting a training program and providing a mechanism for extra virgin olive oil exporter certification.

By providing a formal mechanism for certification of Australian olive products, the project sets out to support and monitor industry compliance with the Australian Standard for olive oil (AS5264–2011), the ANZ Food Standards Code, and Australian Consumer Law. It also aims to build olive industry skills and capacity through training olive industry enterprise trainers and through the development and delivery of competency based training units. This project will be completed in 2017.

Onion

R&D program investment \$733,368

PROJECTS CONTRACTED

VN14001	Development of an onion white rot forecast model for Tasmania
VN15000	Onion industry scoping study
VN15002	Australian onion industry communications
VN15003	Consultation on VN15002 - Australian onion industry

PROJECTS IN PROGRESS

VN13001	Classification of the onion rust complex and development of rapid diagnostic assays
VN13003	Managing soil borne diseases of onions
VN13005	Detection and management of bacterial diseases in Australian allium crops

FINAL REPORTS ISSUED

VN12000	Physiology of onion bulbs destined for export markets
VN12003	Communications plan for the Australian onion industry extension

The onion Strategic Investment Advisory Panel met for the first time in April 2016 to review the existing Strategic Investment Plan and to begin to develop the industry's research and marketing investment priorities for the next five years. Minor use permit priorities, the 2016/17 onion marketing program and an update of the onion industry biosecurity plan were among the topics discussed.

R&D PROJECT SNAPSHOT

Development of an onion white rot forecast model for Tasmania (VN14001)

Onion white rot is a serious fungal disease. This project aims to develop a forecasting model for its infection periods in Tasmania, and to better understand optimum timings of fungicide applications for control of the disease. Pilot studies have now been completed and will be used to guide the project as it gets into full swing. The initial small-scale trials included looking at onion root growth rate; the effect of timing of initial white rot infection; and the effect of inoculum depth on infection.

The project continues.

Marketing program investment \$217,096

MARKETING CAMPAIGN SNAPSHOT

Secret Serve

The first-ever marketing campaign for the Australian onion industry has been launched. The Australian Onions 'Secret Serve' campaign aims to drive onion consumption by three to five per cent by promoting onions as a versatile, reliable, nutritious and delicious food. The campaign has a specific focus on parents with young children and will be encouraging these consumers to include onions in more meals. The opportunity for the Secret Serve campaign is huge, as research shows almost 95 per cent of kids aged two to 18 aren't getting the recommended daily serves of vegetables.

In conjunction with in-store activity, the Secret Serve website (www.secretserve.com.au) was launched, acting as an information hub with inspiring recipes and must-know onion information for consumers.



Inoculated soil bag above ground that looked apparently healthy (left) and white mycelia visible on roots after planter bag was removed

Papaya

R&D program investment \$115,373

PROJECTS CONTRACTED

PP15000	New genetic targets to improve quality in papaya
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FINAL REPORTS ISSUED

PP11000	Papaya communications
PP13000	Effect of curative and protectant pre-harvest fungicide applications on post-harvest decay of papaya

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

PP13007	Industry development and research in the papaya industry
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The inaugural papaya industry Strategic Investment Advisory Panel meeting was held early in the 2016/17 period, with an update on the marketing and R&D programs as well as a workshop to review the industry's Strategic Investment Plan.

R&D PROJECT SNAPSHOTS

Effect of curative and protectant pre-harvest fungicide applications on post-harvest decay of papaya (PP13000)

Post-harvest decay of papaya, caused by a number of fungal diseases, continues to be a major constraint to growers, with losses of 20 to 40 per cent being common during the summer wet season. Post-harvest disease control in papaya is traditionally dependent on regular foliar applications with pre-harvest protectant fungicides permitted for the control of leaf diseases, as well as the use of registered post-harvest fungicide prochloraz. However there has been no information as to the efficacy of these pre-harvest chemicals in controlling post-harvest rots and, according to growers, the control achieved both during and following prolonged wet weather is most disappointing.

This project investigated hot water treatments on a commercial scale on north Queensland fruit for their potential as a viable alternative to the currently registered post-harvest fungicide prochloraz.

Field experiments were conducted in Mareeba and in Innisfail to assess the efficacy of pre-harvest applications of difenoconazole in spray programs with protectant fungicides.

The significance of regularly removing senescent leaves and disease-infected fruit in the management of post-harvest rots of papaya was assessed. Postharvest hot water trials were also conducted on a farm in Innisfail with fruit sent through a commercial supply chain and assessed in a simulated supermarket-shelf environment at the Queensland Department of Agriculture and Fisheries Maroochy Research Station.

In the field spray trials, results from the post-harvest disease assessments showed that in the Mareeba trial site, 70 per cent of fruit were affected with stem-end rot (*Lasiodiplodia theobromae*), eight per cent with anthracnose (*Colletotrichum gloeosporioides*), eight per cent with chocolate spot (*Colletotrichum gloeosporioides*), 40 per cent with diplodia rot (*Lasiodipolodia theobromae*) and 38 per cent with fusarium rot (*Fusarium solani*). In the Innisfail trial site, 83 per cent of fruit was affected with stem-end rot, 17 per cent with anthracnose, nine per cent with chocolate spot, 28 per cent with diplodia rot and 14 per cent with fusarium rot.

The research also showed that the current fungicide spray schedules used by Mareeba and Innisfail growers for the control of foliar diseases during the warm and wet summer months provide a level of control of many of the post-harvest rots of papaya, and that there was no benefit in including the curative fungicide difenoconazole in the spray program. In the post-harvest trials, results from disease assessments showed that hot water temperature treatments between 50 to 52°C for both cultivars in the study provided the optimal treatment range for controlling disease.

Adequate control of post-harvest diseases of papaya can therefore be achieved by combining field sprays with post-harvest treatments of hot water. These results are consistent with overseas research suggesting that the use of hot water is beneficial in managing post-harvest decay of papaya.



Stem-end rot (*Lasiodiplodia theobromae*)

Marketing program investment \$129,330

MARKETING CAMPAIGN SNAPSHOT

Educating consumers about papaya

In a total of 109 in-store demonstrations across Coles, Woolworths and independents, consumers were given samples of freshly cut papaya pieces with lime. They were also provided information on the key benefits and selling messages of papaya by trained brand ambassadors.

The objectives of the sampling were to increase awareness of papaya, encourage trial, communicate the differences between papaya and papaw, communicate usage options and key selling messages, encourage consumers to purchase on the spot and, importantly, to leave consumers with a positive papaya experience.

Over 11,000 samples were provided, averaging 105 per session. Whole papaya sales totalled 923 or 8.5 per session on average and half papaya sales totalled 433 with an average of three per session. Sales were highest in independents, where more stock, particularly pre-cut, was available.

The sampling found 73 per cent of shoppers had either tried or purchased papaya previously. Most consumers who had never tried papaya were surprised by its taste and benefits and said they would consider buying in the future, with health benefits the most popular reason to purchase.



Passionfruit

R&D program investment \$49,830

PROJECTS IN PROGRESS

PF13004	Communications program for the passionfruit industry
PF14005	Leadership program for passionfruit growers

The inaugural passionfruit industry Strategic Investment Advisory Panel was held at the beginning of the 2016/17 period. Key items on the agenda included prioritising concepts around the continuation of the supply chain analysis already completed, continuing with minor use permit and data generation, and finalising export market applications. A review of the existing Strategic Investment Plan with a workshop session was also to be undertaken.

R&D PROJECT SNAPSHOT

Communication program for the passionfruit industry (PF13004)

Through production of the quarterly *Passion Vine* magazine and through the Passionfruit Australia website, this ongoing project keeps growers and other stakeholders up to date with industry news, including the latest project outcomes, marketing information, chemical updates and more, to assist in making better business decisions and following industry best practice.

Marketing program investment \$78,300

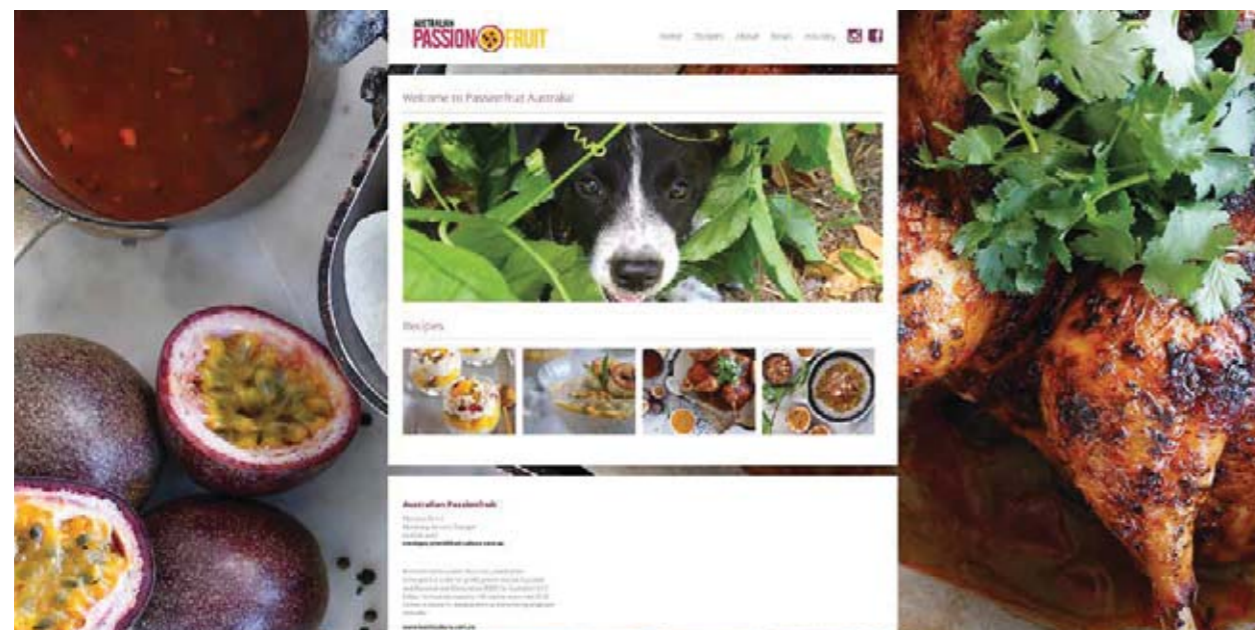
MARKETING CAMPAIGN SNAPSHOT

Everybody needs passion(fruit)

Designed to drive consumption via education and awareness, the aspirational website www.aussiepassionfruit.com.au was successfully launched in January 2016. The site provides recipes across all eating occasions, as well as information on varieties, nutrition, production and seasonality. The site also includes grower updates and industry links to the industry website, www.passionfruitaustralia.org.au. The site provides consumers with a one-stop-shop for all things passionfruit. Analysis of the site will be ongoing.

Prior to the end of the 2015/16 period, the passionfruit Facebook and Instagram campaigns had already achieved the key performance indicators (KPIs) set for the end of June 2016 – Facebook with 25,690 followers (KPI 25,000) and Instagram with 531 followers (KPI 500).

With an industry benchmark of three per cent for Facebook engagement, the Aussie Passionfruit page has tripled with engagement at a staggering nine per cent. This means that people not only 'like' the Facebook page, but are active on the page with comments and shares.



Persimmon

R&D program investment \$136,390

PROJECTS CONTRACTED

PR15700	Persimmon Field Day 2016
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PROJECTS IN PROGRESS

PR13007	Australian sweet persimmon industry development project – phase 4
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The inaugural persimmon industry Strategic Investment Advisory Panel meeting was held early in the 2016/17 period, with key items on the agenda including prioritising concepts around the continuation of communication and extension with growers, continuing investment with minor use permits and data generation, and a review of the existing Strategic Investment Plan via a workshop session. A marketing update on the season campaign and prioritisation for next year was also discussed.

R&D PROJECT SNAPSHOT

Australian sweet persimmon industry development project – phase 4 (PR13007)

This ongoing project has several areas of investigation, including pre- and post-harvest management approaches for key pests and diseases in persimmon, work into clonal propagation of persimmon rootstock, and performance evaluation for new varieties. It also aims to finalise post-harvest management protocols.

In late 2015, clonal propagation of five rootstock selections was carried out, with further work refining the clonal propagation technique to come.

In relation to monitoring and control of mealybug, visual inspections, sticky bands and pheromone traps were evaluated as methods for monitoring the pest populations in orchards. While sticky bands were unreliable due to a range of issues, citrus mealybug pheromone traps have proven effective in predicting mealybug infestation levels at harvest.

Chemical trials were also conducted to evaluate different timing and application rates of clothianidin (Samurai®) on Fuyu and Jiro persimmons. Results indicate early application at the full permitted rate provides the best control of citrus and longtail mealybug.

In relation to persimmon varieties, new varieties currently grown at Maroochy Research Facility have so far been evaluated for yield, growth habit, maturity dates and, in some cases, response to astringency removal with carbon dioxide.

The project continues.

Marketing program investment \$37,339

MARKETING CAMPAIGN SNAPSHOT

Persimmons pack a punch

With a short autumnal season, Hort Innovation needed to be decisive and targeted in order to generate enough of a groundswell to create demand for persimmons.

In a strategic move away from the traditional outputs of publicity, sampling, social media and point of sale, the marketing program centred on two key audiences sectors, being 'Foodie' and 'Health', and focused on engagement via one specific output: educational events with key influencers across these two areas. This was done in order to get more bang for a limited buck and use the influence and reach of food and health industry leaders to drive the persimmon message, create demand and deliver strong return on investment.

In April and May 2016, two events were held. The first aimed to drive an online presence among leaders with influence in the foodie world with a combined social following of 75,685. It provided insights into harvest and tips to educate on the best way to use persimmons.

The second event was targeted to Australia's top nutrition writers and bloggers – key influencers who collectively have direct access to over 262,500 Australians and actively drive behavioural change in their audiences.

With a target of 80 media hits, the campaign generated 165 pieces of coverage across print, online and social media, effectively more than doubling the KPI. The reach was upwards of 10.7 million. The Australian Persimmons Facebook page doubled in fans during the campaign, to 13,334. The target of Facebook likes of 2000 for the campaign saw more than quadruple achieved at 8321. Instagram followers increased by close to double to 760, well surpassing the target of 500. The total social media reach of the campaign was over 1.8 million.

Pineapple

R&D program investment **\$470,259**

PROJECTS CONTRACTED

PI15000	Facilitating the development of the Australian pineapple industry – stage 3
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PROJECTS IN PROGRESS

PI12008	Integrated pest, disease and weed management systems for pineapple (Pineapple Industry Technical Officer)
PI13006	Study groups enabling industry adaption to pineapple market changes

FINAL REPORTS ISSUED

PI12002	Facilitating the development of the Queensland pineapple industry – stage 2
PI14002	Development of Pineapple Industry Biosecurity Plan (IBP)

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

PI09004	New generation pineapple breeding project
PI12006	Improved management of Phytophthora root-rot and heart-rot in pineapples
PI13000	Multiplication and testing of new pineapple selections
PI13012	DArT Markers for resistance to natural initiation of flowering in pineapple

The inaugural pineapple Strategic Investment Advisory Panel meeting was held early in the 2016/17 period, in conjunction with the annual pineapple field day in Yeppoon. The key focus was to update the industry on the investment program and start discussions on the new Strategic Investment Plan.

R&D PROJECT SNAPSHOT

Study groups enabling industry adaption to pineapple market changes (PI13006)

Towards the end of the 2015/16 period, each of the four regional grower study groups in this project had met for between four and five workshops. A total of 17 separate study group meetings were held, of which two were combined workshops shared by two regional groups.

A comprehensive survey of pineapple growers was also conducted to gather information on production in 2015 and forecasts for 2016. Production data was collected for the processing and fresh market, on planting numbers of Smooth Cayenne and Gold varieties, planting densities, areas planted and future planting intentions. A total of 73 of the estimated 78 growers in the industry supplied data for the survey, and these 73 growers grow 99.6 per cent of the crop. Data was also obtained from main pineapple processor, The Kraft Heinz Company (Golden Circle). This data has been provided to industry leaders and will be made available to all who contributed.

A study of nutrient rates used by a sample of growers across the industry was carried out using data collected as part of the study of production costs and practices. There may be scope for reducing rates and expenditure by some growers.

The project continues.

Marketing program investment **\$75,980**

MARKETING PROJECT SNAPSHOT

Pineapples sweeten the media

Media and social media activity for pineapples peaked over the months of October and November 2015. Activity focused on media engagement, partnership with Dr Joanne McMillan as ambassador of the program, targeting of key influential food bloggers and social media activity across Facebook and Instagram, including three successful competitions.

During summer, social activity continued to drive pineapple messaging to help steer consumers in store. Some campaign results included 20,314 Facebook fans, reaching the yearly KPI of 20,000, and 385 followers on Instagram – on track to achieve the yearly KPI of 500.

Potato

R&D program investment **\$589,109 (fresh)**
\$483,352 (processing)

PROJECTS CONTRACTED

PT15005	National governance frame work for Australians seed potato certification: an option paper
PT15002	Potato industry extension program
PT15003	An independent review of the potato industry extension program
PT15004	Review and update of the National Standard for Certification of Australian Seed Potatoes
PT15007	Potato industry communication program 2016-2019

FINAL REPORTS ISSUED

PT11004	Potato industry extension program
PT12004	Potato Industry Communication Strategy (PICS): management and implementation
PT12019	Potatoes Australia (continuation of PT09014)
PT13009	Heritage Potato Collection
PT13015	Potato Tracker – consumer and market research for the fresh potato industry
PT14701	Potato leadership and development mission 2015 – China
PT14702	International Potato Group Meeting China 2015

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

PT13000	Understanding spatial variability in potato cropping to improve yield and production efficiency
PT14001	Monitoring psyllids and psyllid predators in Australian potato crops
PT14002	Spongospora infection of potato roots – ecology epidemiology and control

The Strategic Investment Advisory Panels for both the fresh and processing potato industries have been appointed, with the inaugural meetings in the 2016/17 period.

R&D PROJECT SNAPSHOTS

Potato industry communication program 2016-2019 (PT15007)

The communications delivered via this ongoing project aim to grow awareness and on-farm adoption of the results of the levy-funded projects for the fresh and processing potato industries, inspiring Australian growers to take advantage of R&D results and innovate in their businesses.

The project, which began in early 2016, brings together into one program the outputs of previous potato-industry communication projects, to deliver strategic and focused communications for the Australian potato industry. The previous projects now rolled into this cohesive program include *Potatoes Australia* (PT12019), involving production of the bi-monthly *Potatoes Australia* magazine, and *Potato industry communication strategy – management and implementation* (PT12004). This involves several outputs including the industry's weekly e-newsletter, social media updates, a yearly R&D summary, an annual levy brochure, a national industry contact database, and media relations (including the production of media releases and contributions to external publications). This project was, and PT15007 now is, responsible for *Potato Grower Success Stories*, an annual publication that profiles potato growers across the country who are incorporating potato levy-funded R&D into their growing operations.



Cover of *Grower Success Stories* publication

Raspberry and Blackberry

R&D program investment \$165,411

PROJECTS IN PROGRESS

RB14003	Building resilience to drupelet disorder in rubus
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FINAL REPORTS ISSUED

RB09002	Rubus varietal improvement international development
RB12011	Investigating management of green stink bugs in raspberry crops

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

RB10003	Importation and evaluation of new elite raspberry varieties
RB12021	Commercialisation of new varieties of raspberries and blackberries – concept proposal
RB13013	Furthering the development of the Australian rubus industry

Prior to the appointment of the raspberry and blackberry industry Strategic Investment Advisory Panel, an interim advisory panel meeting was held in Melbourne on April 19, 2016. Key agenda items were biosecurity preparedness for spotted wing drosophila, minor use permit priorities, the 2016/17 marketing program, and future industry development and communication needs.

R&D PROJECT SNAPSHOT

Building resilience to drupelet disorder in rubus (RB14003)

Preliminary field trials have been undertaken for this project, which aims to identify contributing causes to red drupelet disorder in blackberries and to highlight the pre- and post-harvest management techniques that might reduce its incidence.

The initial field trials were set up in partnership with commercial growers and have looked at the role of nitrogen fertigation in the expression of red drupelet disorder and the impact of bruising in the expression of the disorder under a range of storage conditions. The project has also investigated the anthocyanin pigment profile and other key quality characteristics in reverted red drupelets versus unaffected blackberry drupelets. The resulting fruit was to be analysed, with results used to help inform design of the next season's field trials. The project continues.



Induced red drupelet disorder under magnification

Marketing program investment \$52,386

MARKETING CAMPAIGN SNAPSHOT

Fresh not frozen

This year during the season for raspberries and blackberries, the annual marketing program encouraged consumers to choose fresh berries over frozen by promoting some simple 'top tips' for consumers. The program involved media outreach, including a media familiarisation tour to build media relationships to be leveraged for ongoing coverage of raspberries and blackberries across digital, print and social media. There was also a focus on Facebook engagement with consumers via the Fresh Berries page (www.facebook.com/lovefreshberries), and health-centric messages were communicated to health professionals to help build the value of berries.

Results of the 2015/16 campaign included 128 pieces of media coverage on berries spanning magazines, newspapers, online news and blog sites, as well as social media; 34 pieces of media coverage directly from the media tour, reaching 3.7 million people; and a 39 per cent growth in fans of the Facebook page.



Strawberry

R&D program investment \$1,786,316

PROJECTS CONTRACTED

BS15002	Facilitating the development of the Australian strawberry industry – national oversight and communications
BS15003	Facilitating the development of the Australian strawberry industry – sub-tropical regional delivery
BS15004	Facilitating the development of the Australian strawberry industry – temperate regional delivery

PROJECTS IN PROGRESS

BS12021	National strawberry varietal improvement program
BS13000	Development of soil disinfestation systems for production of certified strawberry runners
BS13004	Integrated approach for control of foliar diseases in strawberry runner nurseries and management of chemical resistance

FINAL REPORTS ISSUED

BS11003	The protected culture of strawberry plants growing under plastic tunnels
BS12006	DNA-marker development for flavour compounds in strawberry
BS12016	Facilitating the development of the Victorian strawberry industry
BS13003	Identification and management strategies for true bugs in Tasmanian strawberries

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

BS12007	Biological control agent for Botrytis in strawberries
BS12009	Developing virus molecular diagnostics for post-entry quarantine and certification of strawberry runners
BS12015	Assisting the ongoing development of the Queensland strawberry industry
BS13002	Earlier yields and better establishment of strawberry runners

The strawberry Strategic Investment Advisory Panel (SIAP) was appointed early in the 2016/17 period, with the SIAP's first meeting scheduled towards the end of 2016.



R&D PROJECT SNAPSHOT

National strawberry varietal improvement program (BS12021)

To ensure the Australian strawberry industry has access to improved, locally-adapted varieties into the future, Hort Innovation is continuing to undertake breeding for targeted environments under the national breeding project with the Queensland Department of Agriculture and Fisheries. This project aims to boost consumer satisfaction; expand the application of quantitative genetics to estimate breeding values and selection of parents (with an emphasis on increasing fruit size and early yield); identify and incorporate resistance to wilt diseases; and to integrate and extend analysis of the economic significance of traits to ensure the most economically beneficial traits are the focus.

To date the national project has delivered cultivar Red Rhapsody, along with two others that are in the final stages of commercialisation for subtropical environments. Plants of a further three genotypes have been entered into test production in collaboration with four accredited runner growers (two in Victoria, two in Queensland) for temperate environments. Trials have also been established in Western Australia. Likely high levels of resistance to *Macrophomina* and *Colletotrichum* have been identified to combine with *Fusarium* resistance, with further trials required.

An independent mid-term review of the project has been completed, providing feedback on the robust breeding program and noting the opportunity for Australian breeding with imported market-leading cultivars.

The project continues.

Summerfruit

R&D program investment **\$906,878**

PROJECTS CONTRACTED

SF15001	Comparing stonefruit ripening, quality and volatile composition
SF15003	Australian Stonefruit Grower Magazine 2016

PROJECTS IN PROGRESS

SF12003	Increased stonefruit profitability by consistently meeting market expectations
SF13001	Rootstock and training system to optimise early stone fruit bearing and growth. Linkage to SF12003

FINAL REPORTS ISSUED

SF12001	Summerfruit market development program
SF12009	Stonefruit communications project (SF09017 continuation)
SF12013	Fruit fly IPM for summerfruit, with a focus on developing an effective female lure-and-kill device
SF12016	Low dose methyl bromide against fruit flies to improve market access for summerfruit
SF14000	Improving market access to China for Australian summerfruit

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

SF13004	Tropical stonefruit breeding and evaluation
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The summerfruit Strategic Investment Advisory Panel met for the first time early in the 2016/17 period, with key topics including priorities for new R&D projects and discussion on the Strategic Investment Plan update.

R&D PROJECT SNAPSHOT

Low dose methyl bromide against fruit flies to improve market access for summerfruit (SF12016)

The presence of Queensland fruit fly (Qfly) is a key barrier to trade for Australian summerfruit. But this now-completed project has made great gains for the export of Australian peaches and nectarines, with a new market-access protocol concerning Qfly having been negotiated with China based on the research. This represents the first time any country has had access to export nectarines to China.

The new protocol involves low-dose methyl bromide fumigation, which will facilitate trade using both air-freight and sea-freight transport. This is the first international protocol that uses the low-dose methyl bromide concept, which sees lower concentrations of fumigant applied for longer treatment times to ensure efficacy against Qfly without compromising fruit quality. The treatment is easy and relatively inexpensive to apply.

As well as securing new market access, the methyl-bromide approach addresses shortcomings of existing protocols. Current protocols approved for Taiwan, Thailand and Indonesia are based on cold treatment disinfestation of summerfruit, requiring the core temperature of the fruit be maintained at between 0 and 2°C for durations of 13 to 22 days. Growers and exporters have indicated that the costs of land-based cold treatment in Australia, and the need to keep treated fruit separate in designated cold rooms, makes pre-shipment treatments economically unfeasible and so the treatments are usually conducted in-transit during the sea voyage to market. The current treatments are also only suitable for nectarines, as peaches are sensitive to cold and unable to withstand these long treatments.

While methyl bromide is a very old method of disinfestation and currently used extensively around the world for phytosanitary purposes, low-dose methyl bromide is a new concept.



Fruit placed into cages of Qfly as part of project SF12016



A Qfly egg collection cup

Marketing program investment **\$148,612**

MARKETING PROJECT SNAPSHOT

Turning up the heat on summerfruit

With a focus on driving awareness of availability and enticing Australian consumers to eat more summerfruit more often, the 2015/16 summerfruit marketing campaign had strong results. The previous year's summerfruit marketing had been focused on export markets, so for 2015/16 the challenge was to re-energise the PR strategy, re-engage key media and influencers, and re-enter the social media realm to increase cut-through and repeat purchases for peaches, nectarines, plums and apricots domestically.

Media outreach involved the development of a media kit with a fact sheet, summerfruit recipes and images targeted to major metro, regional and community newspapers, television and radio outlets, food and health publications, and online news, trade, horticulture and lifestyle outlets. Fresh product was also sent to top food publications and bloggers to prompt recipe development, features and social media engagement.

Over 240 summerfruit stories were generated from this outreach, with a combined audience reach of 15 million (a whole seven million over the campaign's target). There were high-impact stories in leading newspapers including *The Sydney Morning Herald*, *Sunday Telegraph* and *Canberra Times*, and coverage in national magazines including *Australian Women's Weekly*, *Coles Magazine*, *Delicious*, *Good Health*, *Taste*, *New Idea* and *Woman's Day*. There was also strong social media support.



Table Grape

R&D program investment **\$1,299,917**

PROJECTS CONTRACTED

TG15004	Australian table grape industry communications review
TG15003	Effect of sulphur dioxide and cold on survival of insects during storage of table grapes
TG15008	Australian table grape industry communications

PROJECTS IN PROGRESS

TG14000	Export market access, maintenance, biosecurity and developing export markets for the Australian table grape industry
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FINAL REPORTS ISSUED

TG11000	Communicating with the Australian table grape industry
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VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

TG13001	Evaluation of CSIRO table grape breeding material in the Murray Valley, Queensland, Western Australia and the NT
TG13002	Red blue beetle table grape disinfestation research
TG14700	An insight to the Chinese table grape industry part 3

The table grape industry Strategic Investment Advisory Panel members have been appointed, with the panel's first meeting held at the beginning of the 2016/17 period.

R&D PROJECT SNAPSHOT

Effect of sulphur dioxide and cold on survival of insects during the storage of table grapes (TG15003)

With Australian table grape exports increasing rapidly in recent years, this vital project for the industry aims to help strengthen the relationship with the Chinese market, specifically. Off the back of the initial project *Red blue beetle table grape disinfestation research* (TG13002) this new research is looking at six key insect pests of concern. It will produce science-based data to demonstrate that these pests in table grape consignments set for China will not survive treatment with cold and sulphur dioxide – information that can be used to inform Chinese regulatory authorities.

Marketing program investment **\$302,845**

MARKETING CAMPAIGN SNAPSHOT

Which grape are you?

Social media was a central component to the domestic marketing plan for the 2015/16 season. Based on a review of the 2014/15 social media activities and results, a decision was made to go to market to appoint a social media provider, with the new provider bringing to the table messaging that would resonate with the audience.

The approach was to keep table grapes top of mind as a healthy snacking option for the family through targeted social conversations that would inspire 'sharing' on Facebook. To ensure the content was going to be shared it had to be interesting, relatable, engaging and humorous – supported with a paid media approach. A paid media strategy meant that not only did the table grape Facebook page target its direct fans, but also the broader Facebook audience. The posts delivered some great results, with some of the table grape 'gifs' (mini-movies) being seen by almost 40,000 people and quirky little grape puns performing well – a 'Share this grape for no raisin' post reached over 177,000 people, of which more than 3000 shared the post and 7300 liked it.

Another stand out result was a 'Which grape are you' video post, which reached 221,043 and had a strong engagement rate of just under 60 per cent.



A comparison of grape quality after six weeks storage at 1°C, both with (left) and without (right) an Uvasys® green dual-release sulphur-dioxide generating sheet

Turf

R&D program investment **\$1,039,874**

PROJECTS CONTRACTED

TU15001	An independent review of the turf industry development program
TU15002	NxGen 2016 to 2018
TU15700	National R&D Conference 2016 and 2017

PROJECTS IN PROGRESS

TU11015	WA turf industry development
TU12014	Turf industry communications 2012-2017
TU13004	Business and industry development for the turf industry 2013-2017
TU13028	Development of the Victorian turf industry
TU13034	Developing a national standard for turf as an erosion control measure

FINAL REPORTS ISSUED

TU13005	National turf industry cost of production calculator development and extension program
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VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

TU11012	Effectively utilising water allocations for managing turfgrass in open spaces
TU12020	Next Generation leadership workshops for the turf industry 2012-2015
TU12024	Industry development for the NSW turf industry 2013-2015
TU12703	Turf Industry Conference program 2013-15
TU13000	Application of soil amendments to maintain turf quality on sandy soils under reduced irrigation
TU13021	Full identification of Phytophagous turfgrass mite species
TU13026	State of the art hydro-sprigging technology to expand the Australian turfgrass industry
TU13029	Industry development services for the Queensland turf industry

The turf Strategic Investment Advisory Panel (SIAP) met for the first time over two days on June 9 and 10, 2016 in Sydney. The panel discussed the process for developing and consulting on the turf Strategic Investment Plan, which is due for completion by the end of the calendar year, as well as the turf industry marketing plan, with endorsement of that plan given unanimously by panel members. The SIAP members also discussed R&D priorities within the scope of levy funds, and also within the scope of strategic co-investment funds.

R&D PROJECT SNAPSHOT

Full identification of Phytophagous turfgrass mite species (TU13021)

Phytophagous mites were first identified as a problem in warm-season turfgrasses in Australia more than 80 years ago. Their infestation distorts the shoots and leads to slower turfgrass growth and a subsequent lack of turf strength. In the case of turf production, this can result in sod breaking up or tearing on harvest conveyers – and anecdotally the loss of harvested product can reach 30 per cent or more.

Despite the significance of the damage that can be caused by mites, their presence is often not recognised, which leads to ineffective solutions to other perceived problems being implemented. It also hasn't been clear exactly which mite species and how many different mite species infest the various warm-season turfgrasses.

This now-completed project sought to provide the taxonomic data on the main turf mite species, which will ultimately be needed to facilitate the future registration of chemicals better targeted for their control. It involved identification of mites collected as part of earlier project *Mite damage – a survey of four warm-season turf grasses* (TU10002) and from opportunistic sampling in the subsequent years since that project.

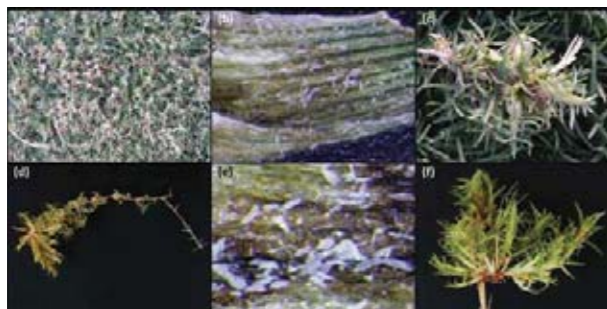
The final report covers two major turfgrass groups, *Cynodon* spp. and *P. clandestinum*, for which detailed taxonomic studies have been completed. The work found two eriophyid mite species (*Aceria cynodontiensis* and *Abacarus cynodontis*) and one tenuipalpid species (*Dolichotetranychus australianus*) in relation to mite



Vegetable

R&D program investment **\$15,610,951**

damage on *Cynodon dactylon* and *C. dactylon X transvaalensis* (bermudagrass). A new tarsonemid mite species, *Steneotarsonemus hippodromus*, was described from *Pennisetum clandestinum* (kikuyugrass) and was found extensively on both turf and pasture plantings of kikuyugrass. Grass-webbing tetranychid mites (*Oligonychus* spp.) also occasionally affect these and a wide range of other warm-season grasses non-selectively.



Aceria cynodoniensis damage to *Cynodon* spp, showing various growth distortions, infested swards and mites and eggs

Marketing program investment **\$79,115**

MARKETING CAMPAIGN SNAPSHOT

Getting inspiration from Lawnspiration

The engaging Lawnspiration Facebook page regularly interacts with the community and in the 2015/16 period its fan base was grown by 100 per cent to more than 22,670 fans, with a total reach of almost 2.7 million people over the period.

The Lawnspiration social media campaign represents a significant part of the turf marketing levy investment, which successfully continues to represent the turf industry nationally.

A national 'Win a New Lawn' competition was also run on the Lawnspiration page during late 2015 and early 2016, generating more than 200 entries nationally, with hundreds of 'likes', comments and shares.



PROJECTS CONTRACTED

VG14047	Landscape diversity and field margin management	VG15030	Growing Leaders 2015
VG14065	Nuffield Scholarship	VG15031	Economic modelling of impact of vegetable consumption on health costs and grower returns
VG15002	Advanced stable fly management for vegetable producers	VG15032	2016 Global Innovations in Horticulture seminar
VG15003	Using autonomous systems to guide vegetable decision making on-farm	VG15034	Facilitating adoption of IPM through a participatory approach with local advisors and industry – training component
VG15004	Regional capacity building to grow vegetable businesses – Bowen Gumlu and FNQ	VG15035	Facilitating adoption of IPM through a participatory approach with local advisors and industry – coordination component
VG15005	Implementation plan for increasing children's vegetable intake	VG15036	Facilitating adoption of IPM through a participatory approach with local advisors and industry – evaluation component
VG15008	Viruses of national importance to the vegetable industry	VG15037	Optimising the benefits of vermiculture in commercial-scale vegetable farms
VG15009	Improved soilborne disease diagnostic capacity for the Australian Vegetable Industry	VG15038	Investigating novel glass technologies and photovoltaics in protected cropping
VG15010	A multi-faceted approach to soilborne disease management	VG15039	Precision seeding benefits for processing pea production
VG15013	Improved management options for cucumber green mottle mosaic virus	VG15040	Regional capacity building to grow vegetable businesses – Wide Bay Burnett (Bundaberg Fruit and Vegetable Growers)
VG15016	Crisis management awareness for the Australian vegetable industry	VG15041	Regional capacity building to grow vegetable businesses – Lockyer Valley and SE Queensland (Lockyer Valley Growers Inc)
VG15018	Independent review of the EnviroVeg Program VG12008	VG15042	Regional capacity building to grow vegetable businesses – NSW (Local Land Services)
VG15019	Demographic research for the vegetable industry – phase 2	VG15043	Regional capacity building to grow vegetable businesses – WA (Vegetables WA)
VG15020	Strengthened biosecurity for the vegetable industry – phase 2	VG15045	Regional capacity building to grow vegetable businesses – SA
VG15022	Vegetable consumer alignment and market and value chain review and strategy	VG15046	Regional capacity building to grow vegetable businesses – Tasmania
VG15021	Sowing success through transformational technologies	VG15047	Regional capacity building to grow vegetable businesses – East Gippsland (East Gippsland Food Cluster)
VG15023	Consultancy services for strengthened biosecurity for the vegetable industry – phase 2	VG15048	Regional capacity building to grow vegetable businesses – Victoria
VG15024	Vision systems, sensing and sensor networks to manage risks and increase productivity in vegetable production systems	VG15049	Regional capacity building to grow vegetable businesses – national coordination and linkage project
VG15025	Investigating labour supply options across the Australian vegetable industry	VG15050	Regional capacity building to grow vegetable businesses – training and evaluation
VG15026	Landscape diversity and field margin management	VG15051	Investigating on farm HACCP programs for managing plant pests of biosecurity concern – an options paper
VG15027	Vegetable industry communication program 2016-2019		
VG15028	Vegetable industry education and training initiative		



VG15052	Vegetable industry export strategy
VG15057	Feasibility study to collect and report wholesale market price information for the Australian vegetable industry
VG15059	Evaluating and testing autonomous systems developed in VG15003 in Australian vegetable production systems
VG15060	Vegetable snacking options market research – stage 2
VG15061	Sensitivity study – impact of increasing exports on the domestic vegetable market
VG15062	The effects of using anhydrous ammonia to supply nitrogen to vegetable crops
VG15075	Vegetable industry participation in the South Australian Government trade missions to SE Asia 2016
VG15701	2016-18 European Industry Leadership and Development Mission – Berlin Fruit Logistica
VG15702	USA Industry Leadership and Development Mission 2016-2018
VG15703	Vegetable Young Grower Development Mission 2016-2018
VG15704	Grower study tour of New Zealand: precision vegetable production

PROJECTS IN PROGRESS

VG14048	Review of current irrigation technologies
VG14010	Management and detection of bacterial leaf spot in capsicum and chilli crops
VG12078	Consumer and market program for the vegetable industry
VG12083	Understanding the nature, origins, volume and values of vegetable imports
VG12096	New vegetable products for personal nutrition
VG12109	Management of insecticide resistance in the green peach aphid
VG13004	Innovating new virus diagnostics and planting bed management in the Australian sweetpotato industry
VG13041	New in-field treatment solutions to control fruit fly (1)
VG13042	New in-field treatment solutions to control fruit fly (2)
VG13043	New end-point treatment solutions to control fruit fly (1)

VG13068	Financial performance of Australian vegetable farms 2013-14 to 2015-16
VG13076	Soil condition management – extension and capacity building
VG13078	Extension of integrated crop protection information
VG13083	Identifying and sharing postharvest best practice on-farm and online
VG13092	Improved skill for regional climate in the ACCESS-based POAMA model
VG13096	Minor Use and Agronomy Coordinator – minor use priorities and awareness program
VG13097	Vegetable industry market access and development program
VG13101	Effective management of parsley summer root rot
VG13111	Manipulation of regulatory microRNAs to suppress insecticide resistance in diamondback moth
VG13113	Evaluation of automation and robotics innovations: developing next generation vegetable production systems
VG14060	Consumer and market program for the vegetable industry (Project Harvest) – stage 2
VG14063	Innovative solutions to management of tospoviruses of vegetable crops

FINAL REPORTS ISSUED

VG11013	Strengthening biosecurity for the Australian vegetable industry
VG12006	Production of Australian vegetable industry Vegnotes series
VG12008	EnviroVeg Program for promoting environmental best practice in the Australian vegetable industry
VG12014	National vegetable industry communication strategy (VICS): management and implementation
VG12033	Vegetables Australia (continuation of VG09095)
VG12049	Understanding and managing impacts of climate change in relation to government policy, regulation and energy efficiency
VG12053	Growing Leaders 2013-2015 inclusive
VG12071	Coordinated knowledge and industry development program

VG12090	Conveying the positive social, economic, environmental and other benefits of Australian vegetables
VG12104	An intelligent farm robot for the vegetable industry
VG13018	Implementation Officer and design team coordination for the vegetable R&D program – stage 2 (AUSVEG)
VG13025	Plant Health Plan implementation for the vegetable industry
VG13036	Graduate Alumni Industry Network (GAIN)
VG13048	Market analysis and strategy: broccoli to Japan
VG13052	Confirmation of ultra filtration as a viable low cost water disinfection and nutrient solution recycling option
VG13053	Develop vegetable industry occupational health and safety resources
VG13062	Improving the efficiency of the carrot export industry – a whole of chain approach scoping study
VG13073	A revolutionary new sensor for in-field measurements of food safety in leafy vegetables
VG13075	An investigation of low-cost protective cropping
VG13081	Prioritisation of vegetable crop commodities and activities for mechanisation
VG13088	Baseline demographic research for the vegetable industry
VG13089	Development of a Vegetable Education Kit
VG13105	Benchmarking and comparing the production and regulatory conditions of Aust vegetable with our competitors producers
VG13116	2015 Global Innovations in Horticulture Seminar
VG14023	Development of a China market access strategy for the Australian vegetable
VG14024	Market research around the opportunity to create more vegetable snacking options to quantify market size
VG14025	Pre-harvest practices that will increase the shelf-life and freshness of vegetables
VG14026	Market research for investigating opportunities for more vegetable meal occasions
VG14027	Identifying and understanding the factors influencing bioactive levels in vegetables

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

VG10105	Transforming tenderness and eating quality in tropical sweetcorn through introgression of tender germplasm
VG12017	Controlling multiple heading and transplant shock in lettuce
VG12022	Managing biting fly in vegetable crop residues
VG12024	Vietnamese Field Extension Officer for the Western Australian vegetable industry
VG12026	Field Extension Officer for Western Australia
VG12108	Improving the management of insect contaminants in processed leafy vegetables
VG12112	Improving grower access to new chemistry to control downy mildew disease
VG12113	Enhancing best practice in vegetable production and business management in the Northern Territory
VG12115	Integrating sustainable soil health practices into a commercial vegetable farming operation
VG12700	USA Growers Tour 2013-2015
VG13039	Remediation of soil contaminated by <i>Salmonella enterica</i> to expedite plant or replant of vegetables
VG13044	New end-point treatment solutions to control fruit fly (2)
VG13115	Field Extension Officer for Tasmania
VG13706	Women's Grower Study Tour 2014-2016
VG14700	ASDS8 – conference support for vegetable specialists
VG14031	New product development information for the vegetable industry
VG14040	Scoping study of a disorder that reduces shelf life and consumption of green beans
VG14061	Vegetable industry education and training gap analysis
VG14062	Process improvements for preserving peak freshness in broccoli – stage 2
VG14708	Southeast Asia & Indonesia Export Symposium
VG15700	SA Government South East Asia Trade Missions
VG13072	Export opportunities for carrots, sweet corn, beans, broccoli and baby leaf – symposia



Hort Innovation is to appoint Strategic Investment Advisory Panels for the vegetable industry in the 2016/17 period. These panels will oversee the implementation of the new Strategic Investment Plan (SIP), which is progressing in 2016/17. The panels, as well as other industry stakeholders, will have an important role in the development of the SIP and will then advise Hort Innovation in its investment of the vegetable levy and Australian Government contributions to address the issues and opportunities facing the vegetable industry.

R&D PROJECT SNAPSHOTS

Remediation of soil contaminated by *Salmonella enterica* to expedite plant or replant of vegetables (VG13039)

This project was the first research study undertaken on survival of *Salmonella enterica* in soil contaminated with chicken manure conducted under Australian conditions. The research investigated the effect of soil type, temperature, moisture and presence/absence of chicken manure on survival of this pathogen. It also examined potential short-term remediation strategies of cover cropping and/or solarisation to reduce levels of the bacteria in soil following contamination to allow a quick return to safe crop production.

The project research indicated that *Salmonella enterica* counts decline over time under natural field conditions after a contamination event. However, the rate of decline is significantly slower in clay loam soils, and is reduced by the presence of chicken manure, by soils temperatures less than 37°C, and by the presence of moisture. In the field trial, the bacteria was detectable up to 100 days after contaminated chicken manure was incorporated into clay loam soil.

In contrast, populations quickly declined within four weeks in sandy soils, at temperatures above 37°C and in soil without chicken manure as a source of energy.

The research also found that solarisation (black plastic covering the soil) may have potential to promote faster die-off of *Salmonella enterica*, providing soil temperatures under the plastic have several hours at 37°C or above. The use and incorporation of the commercially-available cover crops Ethiopian Mustard, Oilseed Radish and Fumig8tor Sorghum significantly enriched the soil microbiome after incorporation into the soil, but were not effective in this experiment in promoting die-off of *Salmonella enterica* in soil. This may have been due to short growing time (one month) and uneven cover of the cover crop which limited the amount of biomass and, consequently, biofumigant incorporated in the soil.

Further research is required to fully explore the value of cover cropping as a remediation strategy for reclaiming soil contaminated with *Salmonella enterica* and to determine the amount of biomass and biofumigant levels required in the soil for die-off of the bacteria and how quickly this could occur.

The *Guideline for Fresh Produce Management (2015)* recommend that untreated manure is not added to soils used for production of short-term crops such as leafy salad greens or herbs. This research will assist growers in assessing the risk and likelihood of food safety outbreaks with *Salmonella enterica* through consideration of on-farm soil characteristics and agronomic practices for remediation to reduce populations of the pathogen in soil after a contamination event using untreated chicken manure.

New in-field treatment solutions to control fruit fly (2) (VG13042)

So far a series of trials have been conducted on the use of netting and repellents to manage Queensland fruit fly (Qfly).

A crop of bird's eye and cayenne chillies was grown at Silverdale in south-west Sydney. This crop was isolated from other potential Qfly hosts, making it possible to conduct augmentative releases of adult Qfly during the trial. Treatments included three types of netting and the application of Surround® sunburn protection (kaolin clay). Effectiveness was evaluated by monitoring traps and examining fruit from each treatment unit for signs of infestation.

A similar trial was conducted in Bundaberg using a crop of unsprayed cayenne chillies. Although augmentative releases were not possible, the local fruit fly population was high enough to provide significant pest pressure to the crop. This trial was cut short due to heavy rain during January and February, and is currently being repeated. Use of netting to exclude fruit fly was also tested on a habanero chilli crop and a capsicum crop, both in Bundaberg. These crops were commercially managed, so insecticides would have been applied as normal practice.

Effectiveness was assessed using trap catches as well as infestation rates in harvested fruit (chillies only). Cage- and laboratory-based trials have also examined the effect of UV-C light on fruit flies by time of day, as well as effects on mating and oviposition. The aim has been to determine whether this could form part of a monitoring or control strategy.

A series of videos on Qfly management for vegetable growers is being produced. These videos will form a key part of the Best Practice information package which will be developed as an outcome of this project. The next stage of the project will focus on compiling and analysing all results, as well as producing extension materials.



Application of chicken manure pellets containing salmonella as part of project VG13039



The trial site for project VG13042 at Silverdale



Multi-industry

Each of Hort Innovation's multi-industry projects represent projects carried out for the benefit of more than one levy industry. As such, the individual projects are funded by a combination of dollars from multiple levy industries, plus Australian Government contributions.

PROJECTS CONTRACTED

MT14052	Essential market access data packages
MT15019	Vegetable and potato industry communication review*
MT15032	Monitoring and evaluation framework for the industry Strategic Investment Plan
MT15024	Fruit tracking study
MT15028	Continuation of pilot systems to validate Pest Free Place of Production for Queensland fruit fly in the Yarra Valley
MT15031	Australian dried fruit communications program
MT15026	Evaluation of dried and table grape varieties

PROJECTS IN PROGRESS

MT12001	SPLAT Cue-Lure based management of Queensland fruit fly
MT12011	National honey bee pest surveillance program
MT13059	SITplus: Developing and optimising production of a male-only, temperature-sensitive-lethal, strain of Qfly, <i>B. tryoni</i>

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MT12004	Improving efficacy of MAT to enhance area-wide management of Queensland fruit fly
MT12005	Development of molecular diagnostic tools to detect endemic and exotic pathogens of Prunus species for Australia
MT12052	Co-management of the Greater Sunraysia Pest Free Area for market access
MT14006	Export-import market intelligence project 2014-2016
MT14041	An objective basis for temperate nut industries expansion
MT14057	Statistical review and re-design of the National Bee Pest Surveillance Program
MT15025	Linking market development projects to the Hort Innovation horticulture trade development strategy*

* These projects support the review and evaluation of investment activities.

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

MT11013	Export market maintenance and development for Tasmanian fruit
MT11025	Dried fruit industry magazine and website communications
MT12000	Development of mass-trapping methods for codling moth females in disrupted orchards
MT12012	Sustainable management of Medfly without cover sprays
MT12015	Selecting and releasing to industry high quality fresh and dried Australian apricots for export and domestic markets
MT12025	Continued facilitation of the development of the Tasmanian apple, pear, cherry and stonefruit industries
MT12047	Impact of improved inter row management on productivity, soils and greenhouse gas emissions in apple and cherry orchards
MT12049	A model for industry planning and preparedness for an incursion of Varroa mite
MT12050	Farm-wide fruit fly management systems for the east coast of Australia
MT12051	Establishment of areas of low pest prevalence of Medfly for market access
MT13002	Protecting pollination for the Australian horticultural industry – stage 3
MT13031	Establishment of systems to validate Pest Free Place of Production for Queensland fruit fly in the Yarra Valley
MT13040	Area-wide integrated pest management using the sterile insect technique to control the Queensland fruit fly – SITplus
MT13041	Advanced greenhouse horticulture research facility designed for research, education and training
MT13046	National Fruit Fly Strategy Implementation Advisory Group
MT13058	Closing the Green City Loop, Phase II: innovative product development for Australian horticulture
MT13060	Optimising pollination of macadamia and avocado in Australia
MT13061	Understanding the purchase behaviour of fresh produce consumers
MT14013	Australia Fresh – core export market development program 2014-2017
MT14055	Driving collaboration in Australian horticultural research
MT14058	Asia Fruit Logistica 2015
MT15019	Vegetable and potato industry communication review

A revolutionary new sensor for in-field measurements of food safety in leafy vegetables (VG13073)

This project aimed to construct a working prototype of a new-generation Raman sensor to detect dangerous microorganisms in leafy vegetables. It was successful in producing a compact Raman sensor and fitting it to a robot to show the potential of real-time testing for dangerous microorganisms on vegetables. Although the Raman technology failed to successfully detect bacteria, the methodology was sound. The sequence of development and testing made significant progress to achieving the successful outcome, however the undertaking was ambitious and the necessary development proved to be beyond the scope of this project.

While no tests were undertaken in the packaging chain, improvements in this technology could offer great potential. Being a real-time sensor, it would be technically feasible that the Raman sensor could operate across clear plastic wrapping and sealed bags, to provide ultimate last point of use assurance.

Regional capacity building to grow vegetable businesses (VG15040–50)

These projects aim to bolster vegetable production in key growing areas throughout the nation and inform growers about current research and development activities, helping in the adoption of industry best practice.

The projects involve the employment of dedicated professional extension/capacity staff in key areas, the delivery of specialised events and distribution of R&D materials, and information gathering on future R&D project requirements. These projects are being rolled out in the following areas through multiple service providers and are supported by a national coordination and linkage project:

- » Queensland (Bowen Gumlu, Bundaberg, Southern Queensland, Lockyer Valley and Far North Queensland)
- » New South Wales (Sydney basin and other key regions)
- » Northern Territory
- » South Australia
- » Victoria (East Gippsland, South East, West and Northern Regions)
- » Western Australia
- » Tasmania.



Testing spinach leaves contaminated with *Salmonella sofia* at The University of Sydney's Faculty of Agriculture and Environment

Across industry

These projects are funded by the across-industry contribution accumulated from every R&D project, as well as contributions from the Australian Government.

PROJECTS CONTRACTED

AH15001	Horticulture Statistics Handbook 2015-2018
AH15002	National Fruit Fly Strategy Council – phase 2

PROJECTS IN PROGRESS

AH09014	Across-industry climate research, development and extension (RD&E) activities
AH10003	Horticulture component of the National Climate Change Research Strategy for Primary Industries
AH11010	Biotechnology awareness in horticulture
AH11011	Horticulture funding of the CRC for Plant Biosecurity
AH11029	Provision of independent technical and secretarial services to the National Working Party for Pesticide Application
AH11032	Core DRT database to support the ground application of pesticides, accommodating nozzles, formulations and adjuvants
AH13027	Plant protection: Regulatory support and coordination – continuation of AH09003
AH14006	Horticulture Nuffield Scholarships 2014/2015
AH14007	Support function for AIC continuation of AH11003
AH14015	QA harmonisation – implementation

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AH11009	Autonomous perception systems for horticulture tree crops
MT10049	A multi-target approach to fruitspotting bug management*

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

MT12028	OHMA Operational Support 2012 to 2015*
MT14027	Horticultural Market Access Manager 2014 - 2015*

*These three projects are funded by multiple levy programs as well as the across-industry contribution.

Transformational fund

Transformational projects are funded by across-industry contributions and other sources.

PROJECTS IN PROGRESS

AI2001	Horticulture Transformational Fund
AI13001	SITplus: Dietary sterilisation of male Queensland fruit fly (QFF)
AI13008	A platform for the continuous genetic improvement of accepted cultivars of vegetatively propagated horticultural crops
AI13013	Direction setting forum for a horticultural education strategy
AI13014	Advancing Post Docs in horticulture – Parent
AI14002	Using classical genetics and epigenetics to make SIT flies fitter
AI14003	Novel nanobionics platform to improve Australian horticulture production and protection from pests

VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED

AI13004	Transforming subtropical/tropical tree crop productivity
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Co-investment focus

This section provides information on the projects for each of the co-investment funds established in 2015/16.

- » Health, Nutrition & Food Safety Fund 126
- » Green Cities Fund 127
- » Leadership Fund 128
- » Fruit Fly Fund 129
- » Asian Markets Fund 130



Health, Nutrition & Food Safety Fund

R&D investment **\$2,694,538**

PROJECTS CONTRACTED

HN15000	Innovative cold plasma for horticultural industries
HN15001	Naturally Nutritious

PROJECT SNAPSHOT

Innovative cold plasma for horticultural industries (HN15000)

Contamination of fruits, vegetables and nuts can be a significant challenge for the horticulture industry and can negatively affect the management and maintenance of a 'clean, green and safe' reputation, both in the domestic and export markets.

Despite the adoption of good on-farm and post-harvest practices, microbial contamination can occur in fresh produce, potentially leading to public health concerns. The use of chemical sanitisers such as chlorine in post-harvest decontamination has several negative impacts such as limited effectiveness, build-up of residues and negative environmental impacts.

Cold plasma, due to its advantages over other technologies such as irradiation, has recently emerged as a non-thermal option for killing or inactivating a broad range of microorganisms such as bacteria, mould, yeast and viruses.

This project, led by NSW Department of Primary Industries, is focusing on the development of a new tool to reduce food safety risks to both consumers and industry. The first phase of the project, working in collaboration with international research partners, commercial partners and others, will assess the use of cold plasma technology to decontaminate fresh horticulture produce and nuts to mitigate the risk of food safety incidents and boost consumer confidence.



The project aims to:

- » Develop cold plasma treatment protocols to achieve food safety and decay control in a range of horticulture products without affecting product quality
- » Design and build a cold plasma treatment prototype to validate laboratory experimental results and to scale up the technology
- » Scale up and commercialise cold plasma technology by collaborating with technology partners and horticulture industries.

Green Cities Fund

R&D investment **\$1,213,788**

PROJECTS CONTRACTED

GC15005	Greener cities – healthier lives
GC15002	Which plant where, when and why database

PROJECT SNAPSHOT

Greener cities – healthier lives (GC15005)

This project will provide the first systemic evidence on the benefits of green space on people, from birth to older age. It will provide industry and policy makers with evidence-based research on the minimum threshold of local green space necessary for favourable health and societal outcomes through an investigation into five key research questions:

- » Does a greener neighbourhood buffer the harms of air pollution to promote better pregnancy health outcomes and give children in urban areas a healthy start in life?
- » Do adults in greener areas stay mentally healthy, keep slim and physically active over time, resulting in a lower risk of developing certain cancers and cardiometabolic diseases such as type 2 diabetes?

- » Do adults living in greener neighbourhoods visit general practitioners less, take fewer medications, stay out of hospital for longer and use fewer health-sector dollars as a consequence?
- » Does more green space translate into better educational outcomes because children are healthier and have spaces to grow socially, interact and be physically active?
- » What types or features of green spaces are preferred by older adults, how do these preferences vary between social and cultural groups, and how do they manifest in terms of outdoor recreation?



Leadership Fund

R&D investment **\$225,043**

PROJECTS CONTRACTED

LP15006	Attracting new entrants into Australian horticulture
LP 15007	National PhD scholarship coordinator
LP15001	Masterclass in Global Horticultural Business

PROJECT SNAPSHOT

Attracting new entrants into Australian horticulture (LP15006)

This project will increase graduate interest in careers across the horticulture sector and build a new pool of industry leaders by drawing on the networks of young professionals to drive innovation across the sector.

The project has a two-phase approach designed to attract the right people, retain them and support their ongoing leadership development. In phase one, industry scholarships will be offered to selected students from a range of disciplines. Scholarship recipients will undertake an internship within the horticulture sector, exposing them to the many and varied career paths.

In phase two, employment of the students following graduation will be encouraged, with Hort Innovation co-investing to support the first year salary and participation in a five-day leadership program.

The program is being led by specialist recruitment company Rimfire Resources, with the Australian Rural Leadership Foundation engaged to provide industry-wide leadership training to successful graduates in their first year of employment.



Fruit Fly Fund

R&D investment **\$1,376,615**

PROJECTS CONTRACTED

AH 15002	National Fruit Fly Strategy Council – phase 2
ST15014	Adaptive AWM of Qfly using SIT: Guidelines for efficient and effective pest suppression and stakeholder adoption
HG14035	Establishment of the Qfly SITplus facility in southern Australia
FF15000	SITplus: Port Augusta QFLY SIT factory pilot operations

PROJECTS IN PROGRESS (INCLUDES VC PROJECTS CARRIED OVER FROM HORTICULTURE AUSTRALIA LIMITED)

AI13001	SITplus: Dietary sterilisation of male Queensland fruit fly (Qfly)
HG13034	SITplus: Improved population management system for Queensland fruit fly
HG13039	Medfly eradication from Carnarvon using AWM and SIT
HG13045	SITplus: Larval diets for high-productivity mass-rearing of Queensland Fruit Fly
HG13047	New and improved fruit fly lures for border security and management
HG14010	Mypolonga fruit fly monitoring – market access program

PROJECT SNAPSHOT

SITplus: Port Augusta QFLY SIT factory pilot operations (FF15000)

Construction of a purpose-built \$3.7 million sterile Queensland fruit fly (Qfly) facility in Port Augusta, South Australia, has been tracking on time and on budget, with sterile flies expected to be available for release in 2018.

Prior to building the centre, joint funders Hort Innovation and the South Australian Government investigated similar facilities around the world, listened to lessons learnt post-construction and applied this knowledge to the design.

Designed to allow production of at least 50 million sterile flies per week, the Port Augusta facility has been engineered with strict environmental control and low energy use targets. Computer controlled environment systems, cool-room type wall insulation (Bondor walls) and a lack of windows all contribute to the ability to manage temperature to within 0.5°C – which is important for consistency in fruit fly batches. The use of Bondor walls allows low-cost expansion of the factory if demand exceeds current plans, and solar power means operating costs will be minimised.

The development of the Qfly facility is just one facet in the more than \$42 million 'SITplus' (Sterile Insect Technique plus) partnership that aims to deliver an integrated solution to the management of Qfly. The program – which is run by a consortium of research organisations and a funding organisation – comprises more than 15 individual projects.



Asian Markets Fund

R&D investment \$369,174

PROJECTS CONTRACTED

AM15000 Now! In Season

PROJECT SNAPSHOT

Now! In Season (AM15000)

'Now! In Season' is a multi-industry, multi-country, integrated promotional program designed to raise awareness of the advantages of quality, safe and healthy Australian horticulture products. The program leverages individual market requirements while maintaining efficiencies gained from consistent messaging, collateral and activities across multiple markets.

A collaboration between Hort Innovation, the Victorian Government and Austrade, 'Now! In Season' aims to build an integrated profile of Australian products in international markets and develop the sector's ability to prioritise and deliver strategic promotions.

The highlight of the program in 2015 included the participation of over 25 international and 15 domestic companies with immediate trade outcomes as a direct result of the program. Such was the 2015 success, 'Now! In Season' received the 2015 Asia Fruit Award for Marketing Campaign of the Year.

'Now! In Season' continues to evolve and build on the success of the pilot promotional program and in 2016 has expanded to include the summerfruit, table grape, citrus and apple and pear industries with delivery across 10 key markets in Asia. The program is looking to further expand to the Middle East and incorporate training on produce handling.



Horticulture Innovation Australia Limited
ACN 602 100 149
(A company limited by guarantee)

Financial Report

for the year ended 30 June 2016

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Directors' report

The Directors of Horticulture Innovation Australia Limited (the Company) present their report for the year ended 30 June 2016.

The Directors of the Company who held office during the year July 1, 2015 to June 30, 2016 and until the date of this report are set out below. Directors were in office for the entire period unless otherwise stated.

- » **Selwyn Snell**
(Chair)
- » **Mark Napper**
(Deputy Chair) (re-appointed November 27, 2015)
- » **Professor Robert Clark AM**
- » **David Cliffe**
- » **Susan Finger**
(re-elected November 27, 2015)
- » **Richard Hamley**
(appointed November 27, 2015)
- » **Stephen Lynch**
(elected November 27, 2015)
- » **David Moon**
- » **Peter Wauchope**
- » **Ridley Bell**
(retired November 27, 2015)
- » **Steve Morrow**
(retired November 27, 2015)

Sally Holmes

Company Secretary and General Counsel

Ms Holmes holds an Honours degree in Law (LLB), Bachelor of Science (Chemistry) (BSc), and a Graduate Diploma of Legal Practice. Ms Holmes is a graduate Member of the Australian Institute of Company Directors and a Member of the Law Society of NSW.

Ms Holmes has previously spent three years as Company Secretary and General Counsel of Australian Wool Innovation Limited, and has spent nearly 20 years in both in-house and private commercial and corporate legal practice.

Directors' meeting attendance

JULY 1, 2015 – JUNE 30, 2016

Directors	The Board of Directors		Audit & Risk Committee (ARC)		Remuneration & Appointments Committee (RAC)		Portfolio Review Committee (PRC), dissolved Dec 2015		Investment Committee (IC), established Jan 2016	
	A	B	A	B	A	B	A	B	A	B
Mr Selwyn Snell Chair of the Board Chair of RAC Member of ARC & PRC	13	13	7	7	3	3	6	6	–	–
Mr Mark Napper Re-appointed Nov 27, 2015 Deputy Chair from Dec 2015 Chair of ARC	11	11	7	7	–	–	–	–	–	–
Prof. Robert Clark AM Deputy Chair until Dec 2015 Member PRC, IC & RAC	13	13	–	–	3	3	6	6	5	5
Mr David Cliffe Chair of PRC & IC	13	13	–	–	–	–	5	6	5	5
Mrs Susan Finger Re-elected Nov 27, 2015 Member of ARC	11	11	6	7	–	–	–	–	–	–
Mr Richard Hamley Appointed Nov 27, 2015 Member of ARC	5	7	3	3	–	–	–	–	–	–
Mr Stephen Lynch Elected Nov 27, 2015 Member of IC	7	7	–	–	–	–	–	–	5	5
Mr David Moon Member of RAC	12	13	–	–	3	3	–	–	–	–
Mr Peter Wauchope	12	13	–	–	–	–	–	–	–	–
Mr Steve Morrow Retired Nov 27, 2015 Member of ARC	4	4	4	4	–	–	–	–	–	–
Mr Ridley Bell Retired Nov 27, 2015	3	4	–	–	–	–	–	–	–	–

A = Number of meetings attended; B = Number of meetings eligible to attend



**MR SELWYN SNELL
CHAIR**

Mr Snell was appointed a Director of the Company at its registration and is currently the Chair. He was a previous Director, and the Chair of Horticulture Australia Limited from November 2009. Mr Snell has an extensive history as a chairman, director and senior executive with leading agribusiness and biotechnology enterprises in Australia and internationally. He is also currently Executive Chairman of Barawyn Pty Ltd, and a former CEO of Single Vision Australia Ltd, IAMA Ltd, BioProspect Ltd, Zeneca/Syngenta KK Ltd Japan and Crop Care Australasia Ltd. Mr Snell is the former Chair of the Council of Rural Research and Development Corporations, the Queensland Government's Horticultural Development Committee, and a former Non-executive Director of Plant Health Australia Limited and the APVMA Advisory Board. Mr Snell has held many directorships with ASX and Not for Profit companies. Mr Snell has a Diploma in Agrochemicals, is a fellow of the Australian Institute of Management and a member of the Australian Institute of Company Directors.



**MR MARK NAPPER
DEPUTY CHAIR**

Mr Napper was appointed a Director of the Company at its registration, was re-appointed as a Director by the Board on November 27, 2015, and elected as Deputy Chair in December 2015. He was a previous Director of Horticulture Australia Limited from 2013. Mr Napper has more than 30 years experience in Australian agribusiness. Mr Napper owns a fruit orchard in Bangalow, NSW, and currently grows peaches, nectarines and custard apples having previously grown avocados, mangoes and mandarins. As well as his farming interests, Mr Napper owns and operates a business sales and consulting firm. Mr Napper is currently President of Low Chill Australia Inc. Previous positions have included Managing Director of the Australian Horticultural Corporation from 1998 to 2001, Director of the Australian Mango Industry Association Ltd from 2008 to 2011, Director of Summerfruit Australia Ltd from 2012 to 2013, independent Director of AUSVEG Ltd from 2009 to 2013, and CEO and Director of Windsor Farm Foods Group Ltd from 2005 to 2011.



PROFESSOR ROBERT CLARK AM

Professor Clark was appointed a Director of the Company at its registration and served as Deputy Chair until December 2015. He was a previous Director and Deputy Chair of Horticulture Australia Limited from November 2008. Professor Clark is an Emeritus Professor at the University of Tasmania. He is also the proprietor and Managing Partner of Lanoma Estate, 500 hectares of intensive agricultural properties in the Derwent Valley, Tasmania. Professor Clark's previous appointments include Non-executive Director of the Geoffrey Gardiner Dairy Foundation, Deputy Chair of Rural Industries Research and Development Corporation, a member of the National Research and Development Council, a member of the Queensland Alliance for Agriculture and Food Innovation Advisory Board, Chair and Head of School Agricultural Science and Director of Tasmanian Institute of Agriculture at the University of Tasmania, and Non-executive Director of Webster Ltd. Professor Clark holds a Bachelor of Agricultural Science with First Class Honours and a Doctor of Philosophy (Horticultural Science).



MR DAVID CLIFFE

Mr Cliffe was appointed a Director of the Company at its registration. He was a previous Director of Horticulture Australia Limited from 2004. Mr Cliffe has broad experience across a number of horticulture industries in his capacity as a nurseryman supplying plant material to the horticulture industry including vegetable, deciduous fruit, nut and citrus industries. He has been involved in the administration of the nursery industry serving as President of the Nursery and Garden Industry Association, and then Independent Chair of the Nursery Industry Advisory Committee, as well as chairman of the International Plant Propagators Society and the Australian Nursery Fruit Improvement Company. Mr Cliffe continues to be active in the facilitation of export market access for the industry including innovative pest management.



MRS SUSAN FINGER

Mrs Finger was appointed a Director of the Company at its registration by the Minister for Agriculture, and was subsequently elected as Director by the members of the Company on November 27, 2015. Mrs Finger is a partner in a family owned business based in the Yarra Valley, VIC, which grows, stores and packs apples. Mrs Finger is committed to the horticulture industry and has had a strong and active involvement in farmer and industry representative organisations and her local community. She previously was a Board member of the Victorian Farmers Federation (VFF) and is a past president of the VFF Horticulture Group. Mrs Finger holds a Bachelor of Business and is a graduate member of Australian Institute of Company Directors.



MR RICHARD HAMLEY

Mr Hamley was appointed a Director of the Company on November 27, 2015. Born and raised in Zimbabwe, Mr Hamley holds a Bachelor of Science (Biological Sciences) from the University of Natal, South Africa. Mr Hamley is Director and Principal Consultant of Nexus Agriculture Pty Ltd, a specialist agribusiness consultancy. With over 30 years in corporate horticulture and fresh produce, Mr Hamley has extensive experience in production environments from broad acre field crops, through large scale intensive orchard and vineyard developments to high-tech glasshouses. His experience, which includes international exposure, comprises agronomy, agricultural research and development, crop production, category management, and operations management. Mr Hamley has previously spent over a decade with the Costa Group, in the position of General Manager for Costa's mushroom, tomato, grape and agribusiness categories; five years with Capespan PLC, an international leader in the fresh produce category out of South Africa; and another five years with Danish agribusiness multinational, United Plantations Africa Ltd. Mr Hamley has also been Chairman of the South Australian Murray Resource Information Centre (SAMRIC), Deputy Chair of the Riverland Ramsar (Convention on Wetlands of International Importance) Steering Committee and a representative on South Australian Murray Irrigators (SAMI), and has previously held industry positions in the South Australian Citrus Growers Association (CGSA), the Australian Mushroom Industry Advisory Committee of Horticulture Australia Limited and director of Potatoes South Australia. Mr Hamley is a member of the Australian Institute of Company Directors.



MR STEPHEN LYNCH

Mr Lynch was elected as a Director of the Company by the members of the Company on November 27, 2015. Mr Lynch has over 35 years' experience in Australian and international agribusiness, with much of the last 20 years working in Australian horticulture. Mr Lynch was previously a director of the Almond Board of Australia (2003-2009), chairman for three of those years, and a board member of the Australian Nut Industry Council (ANIC). He was also involved in the establishment of Pollination Australia. Mr Lynch owns and operates an agribusiness consulting company with a range of horticulture clients. Mr Lynch previously held a number of company directorships and senior management roles, managing horticulture operations and investments from 1999 to 2012, and is currently a non-executive director in a horticulture contracting company. Mr Lynch's horticulture experience covers strategy, investment, project management and business development assessment advice for industries including almonds, citrus, stone fruit, table grapes, avocados, mangoes, olives and some vegetables.



MR DAVID MOON

Mr Moon was appointed a Director of the Company at its registration by the Minister for Agriculture. Mr Moon is a fifth generation Australian farmer with over 30 years of experience in agriculture, specifically horticulture, in the areas of production and management. Mr Moon is a graduate of Dalby Agricultural College where he studied Agricultural Management for two years. He has travelled extensively and has worked in agriculture in both the USA and Europe. He is a member of the Agriculture Industry Advisory Council, set up to advise the Minister for Agriculture on the Agricultural Competitiveness White Paper and agriculture in general. Mr Moon is currently Managing Director of Gillebri Cotton Co and owns this company in partnership. He is a producer of horticultural products and also cotton in St George, Southwest Queensland. Mr Moon has previous Board experience on the interim Board of Local Management Arrangements for Irrigation Channel Schemes, a Queensland Government initiative to transfer Sunwater Distribution from government ownership to farmer owned and managed infrastructure. He is also a member of the Australian Institute of Company Directors.



MR PETER WAUCHOPE

Mr Wauchope was appointed a Director of the Company at its registration by the Minister for Agriculture. Mr Wauchope comes from a horticulture background having grown up in the Manjimup district of Western Australia where his father still grows avocados. Mr Wauchope is currently the Chief Executive Officer of Center West Exports, a large vertically integrated carrot growing, packing and exporting operation that has regular customers in over 16 countries across Asia, the Middle East and Indian Ocean territories. Mr Wauchope has over 30 years experience in marketing Australian fresh produce overseas and in this time has travelled extensively throughout Asia, the Middle East, India, Europe and the USA, visiting customers and opening doors for Australian fresh produce. Mr Wauchope served on the Ministerial Task Force to review the charges of the Horticulture Exports Program and was previously the national vegetable industry's representative on the Federal Office of Horticultural Market Access (OHMA) committee. He is currently Chair of the Horticulture Innovation Australia Limited's Trade Assessments Panel (TAP), and also sits on the Committee of Management for Vegetables WA.

MEMBERS

On November 26, 2015 (the 'Transition Date') the initial member of the Company, Tanoa Pty Ltd, ceased to be a member. In its place, all of the approved applicants for membership as at the Transition Date became the members of the Company and were entered on the member register. This completed the transition of the Company to industry ownership in accordance with Article 6.5 of the Company's Constitution.

WINDING UP

In the event the Company is wound up, each member has undertaken to contribute an amount not exceeding \$2.00.

CORPORATE GOVERNANCE

The Company adopts best corporate governance practice drawing upon the ASX Corporate Governance Principles and Recommendations, as appropriate for its governance structure as a non-listed, not-for-profit corporation.

The Company has in place the following governance documents and practices in respect of the Directors, the Board and its operations:

- » Constitution
- » Board Charter
- » Charter of the Committees of the Board
- » Director Nomination Committee Charter
- » Committee Compensation Guidelines
- » Code of Conduct and Business Ethics
- » Delegations of Authority
- » Board Effectiveness Review Framework
- » Conflicts of Interest Declaration Procedure
- » Risk Management Policy and Framework
- » Risk Appetite Statement
- » Fraud Control Plan.

NATURE OF OPERATIONS AND PRINCIPAL ACTIVITIES

The principal activities of the Company during the period were investment in R&D and marketing programs for the Australian horticulture industry. These activities are expected to continue into the future.

SIGNIFICANT CHANGES IN THE STATE OF AFFAIRS

On November 1, 2015 the Company ceased to act as Industry Export Control Body. Prior to October 1, 2015 citrus exporters were required to hold a licence from Horticulture Innovation Australia Limited (prior to 2015, Horticulture Australia Limited) and to adhere to the conditions on that licence. On October 1, 2015 the legislation that specified citrus to the United States and oranges to all export markets as regulated products and markets sunsetted (ceased to be law). On November 1, 2015 the Secretary of the Department of Agriculture and Water Resources assumed the powers of the horticulture industry export control body from the Company.

There have been no other significant changes in the state of affairs of the Company during the year.

OBJECTIVES AND PERFORMANCE GOALS

The Company's primary objective is to increase the productivity, farm gate profitability and global competitiveness of Australia's horticulture industries.

During the reporting period, the Company released its Strategic Plan setting out the strategic purpose and operations of the Company that will drive the business of the Company for the term of the current Deed of Agreement with the Australian Government (to November 2018). Pursuant to the Strategic Plan, the Company is committed to three pillars of strategic intent:

- » Communicate and listen to stakeholders
- » Deliver on investments
- » Develop the Company's culture and leadership.

Evaluation and monitoring of the Company's progress against each of these pillars at the corporate strategy level will occur by way of annual reviews, with operational progress tracked through a variety of processes.

The Company's strategic pillar of 'Deliver on investments' can be further described in terms of both short-term and long term approaches to increasing the productivity, farm gate profitability and global competitiveness of Australian horticulture industries:

- » The short-term needs of the horticulture industry will principally be served through investment in industry-specific strategic investments, applied R&D and industry maintenance activity carried out through the investment of (Pool 1) levy funds. Pool 1 investments have a timeframe of one to five years

STATEMENT OF COMPREHENSIVE INCOME

for the year ended 30 June 2016

Horticulture Innovation
Australia Limited
ABN 71 602 100 149

	Note	Year ended 30 June 2016	From the date of incorporation to 30 June 2015
		\$	\$
CONTINUING OPERATIONS			
Sale of goods	3a	20,704	105,380
Other income	3b	120,591,333	77,804,300
REVENUE		120,612,037	77,909,680
Occupancy expenses		(696,813)	(440,229)
Administrative expenses		(14,304,600)	(7,394,173)
R&D programs		(78,172,778)	(51,975,192)
Marketing programs		(16,986,536)	(10,998,459)
Other expenses		(1,179,695)	(667,060)
EXPENSES		(111,340,422)	(71,475,113)
NET SURPLUS FOR THE YEAR/PERIOD	12	9,271,615	6,434,567
OTHER COMPREHENSIVE INCOME FOR THE YEAR/PERIOD			
Gain on transfer of assets and liabilities from HAL		-	44,155,255
TOTAL COMPREHENSIVE INCOME FOR THE YEAR/PERIOD		9,271,615	50,589,822

The above Statement of Comprehensive Income should be read in conjunction with the accompanying notes.

- » The long-term needs of the horticulture industry will principally be served through investment of (Pool 2) co-investment funds in issues of national importance for transformational change affecting a range of horticulture industries. Pool 2 investments have longer timeframes, up to 15 years.

The Company's strategic pillars of 'Communicate and listen to stakeholders' and 'Develop the Company's culture and leadership' are ongoing commitments which will play a vital role in informing the investment priorities of the Company and in ensuring delivery on the Company's objectives is driven through effective leadership and a high-performance culture.

ENVIRONMENTAL REGULATION

The Company is not subject to any particular or significant environmental regulations under the law of the Commonwealth or of a State or Territory.

INSURANCE OF OFFICERS

During the period, the Company incurred an insurance premium in respect of a contract insuring Horticulture Innovation Australia Limited Directors and Officers against liabilities arising as a result of work performed in their capacity as Directors and Officers of the Company. Details of the nature of liabilities covered, or the amount of premium paid in respect of the insurance contract, are not detailed here, as the disclosure of the details is prohibited under the terms of the contract.

INDEMNIFICATION OF AUDITORS

To the extent permitted by law, the Company has agreed to indemnify its auditors, Ernst & Young Australia, as part of the terms of its audit engagement agreement against claims by third parties arising from the audit (for an unspecified amount). No payment has been made to indemnify Ernst & Young Australia during or since the financial year 2015/16.

REVIEW OF OPERATING RESULTS

The operating surplus for the year ended June 30, 2016 was \$927,615 (period ended June 30, 2015: \$6,434,567).

EVENTS SUBSEQUENT TO BALANCE SHEET DATE

There have been no material events that occurred subsequent to balance sheet date.

AUDITOR INDEPENDENCE AND NON-AUDIT SERVICES

The Directors received an Independence declaration from the auditors, Ernst & Young Australia. This declaration is included on page 157 of the Financial Report.

No non-audit services were provided by Ernst & Young Australia during the year.

Signed in accordance with a resolution of the Directors



Selwyn Snell
Chair

Dated this fourteenth day of September 2016 in Sydney



Mark Napper
Deputy Chair

Dated this fourteenth day of September 2016 in Sydney

STATEMENT OF FINANCIAL POSITION

as at 30 June 2016

Horticulture Innovation
Australia Limited
ABN 71 602 100 149

	Note	2016 \$	2015 \$
ASSETS			
CURRENT ASSETS			
Cash and cash equivalents	5a	39,459,022	28,757,466
Trade and other receivables	6	22,163,290	22,223,879
Prepayments	7	224,729	127,537
TOTAL CURRENT ASSETS		61,847,041	51,108,882
NON-CURRENT ASSETS			
Plant and equipment	8	1,029,355	1,100,296
Intangibles	9	1,310,361	1,787,042
TOTAL NON-CURRENT ASSETS		2,339,716	2,887,338
TOTAL ASSETS		64,186,757	53,996,220
LIABILITIES			
CURRENT LIABILITIES			
Trade and other payables	10	2,959,188	2,238,509
Provisions	11	992,252	782,509
TOTAL CURRENT LIABILITIES		3,951,440	3,021,018
NON-CURRENT LIABILITIES			
Provisions	11	373,880	385,380
TOTAL NON-CURRENT LIABILITIES		373,880	385,380
TOTAL LIABILITIES		4,325,320	3,406,398
NET ASSETS		59,861,437	50,589,822
FUNDS			
Funds – Corporate		3,246,222	3,456,695
Transitional reserve		32,570	564,439
Systems upgrade		1,541,121	2,392,000
TOTAL CORPORATE FUNDS		4,819,913	6,413,134
Designated funds – Marketing		15,674,952	11,925,764
Designated funds – R&D		39,366,572	32,250,924
TOTAL FUNDS	12	59,861,437	50,589,822

The above Statement of Financial Position should be read in conjunction with the accompanying notes.

STATEMENT OF CASH FLOWS

for the year ended 30 June 2016

Horticulture Innovation
Australia Limited
ABN 71 602 100 149

	Note	Year ended 30 June 2016 \$	From the date of incorporation to 30 June 2015 \$
CASH FLOW FROM OPERATING ACTIVITIES			
Receipts from customers		309,369	(170,677)
Other income		1,933,946	1,103,891
Levies received		55,851,801	30,753,268
Receipts from government grants		47,320,558	24,424,976
Receipts from voluntary contributions		23,167,101	10,908,370
Receipts from co-investment contributions		3,297,941	4,167,486
Payments to suppliers and employees		(18,286,322)	(9,522,318)
Payments to R&D providers		(84,915,453)	(56,569,197)
Marketing program payments		(18,539,741)	(11,768,108)
Interest received		1,295,277	869,741
Net cash flows generated by (used in) operating activities		11,434,477	(5,802,568)
CASH FLOW FROM INVESTING ACTIVITIES			
Purchase of plant and equipment		(334,677)	(41,252)
Purchase of intangibles		(398,244)	-
Net cash flows (used in) investing activities		(732,921)	(41,252)
CASH FLOW FROM FINANCING ACTIVITIES			
Net cash flows (used in) financing activities		-	-
Net increase/(decrease) in cash and cash equivalents		10,701,556	(5,843,820)
Cash and cash equivalents at the beginning of the year/at acquisition		28,757,466	34,601,286
CASH AND CASH EQUIVALENTS AT THE END OF THE YEAR	5(a)	39,459,022	28,757,466

The above Statement of Cash Flows should be read in conjunction with the accompanying notes.

STATEMENT OF CHANGES IN FUNDS

for the year ended 30 June 2016

Horticulture Innovation
Australia Limited
ABN 71 602 100 149

Note	Retained Surplus						Total funds
	R&D	Marketing	Corporate	Systems upgrade	Transitional reserve		
	\$	\$	\$	\$	\$	\$	\$
Balance at 30 September 2014	-	-	-	-	-	-	-
Surplus for the period	4,947,810	1,054,028	432,729	-	-	-	6,434,567
Other comprehensive income							
Gain on assets and liabilities transferred from HAL	27,303,114	10,871,736	2,788,405	2,392,000	800,000		44,155,255
Total comprehensive income for the period	32,250,924	11,925,764	3,221,134	2,392,000	800,000		50,589,822
Transfer from corporate reserve to transitional reserve	-	-	235,561	-	(235,561)		-
Balance at 30 June 2015	12 32,250,924	11,925,764	3,456,695	2,392,000	564,439		50,589,822
Balance as at 1 July 2015	32,250,924	11,925,764	3,456,695	2,392,000	564,439		50,589,822
Surplus/ (Deficit) for the year	7,115,648	3,749,188	(1,593,221)	-	-		9,271,615
Other comprehensive income	-	-	-	-	-		-
Total comprehensive income for the period	7,115,648	3,749,188	(1,593,221)	-	-		9,271,615
Transfer from corporate reserve to systems upgrade and transitional reserve	-	-	1,382,748	(850,879)	(531,869)		-
Balance as at 30 June 2016	12 39,366,572	15,674,952	3,246,222	1,541,121	32,570		59,861,437

The above Statement of Changes in Funds should be read in conjunction with the accompanying notes.

NOTES TO THE FINANCIAL STATEMENTS

for the year ended 30 June 2016

Horticulture Innovation
Australia Limited
ABN 71 602 100 149**NOTE 1: CORPORATE INFORMATION**

The financial report of Horticulture Innovation Australia Limited (the "Company") for the year ended 30 June 2016 was authorised for issue in accordance with a resolution of the Directors on the 14 of September 2016.

The financial report is for the entity Horticulture Innovation Australia Limited as an individual entity. Horticulture Innovation Australia Limited is a not for profit company limited by guarantee and domiciled in Australia. The nature of the operations and principal activities of the Company are described in the Directors' Report.

NOTE 2: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**(a) Basis of preparation**

The financial report is a general purpose financial report for the year 1 July 2015 to 30 June 2016, which has been prepared in accordance with the requirements of the Corporations Act 2001, Australian Accounting Standards – Reduced Disclosure Requirements and other authoritative pronouncements of the Australian Accounting Standards Board. The financial statements provide comparative information in respect of the previous period. The comparative period was from the date of incorporation (30 September 2014) to 30 June 2015. The operations of the comparative period are from 4 November 2014, being the date the trade, assets and liabilities of Horticulture Australia Limited were transferred to the company, to 30 June 2015. The financial report has been prepared on an accrual basis of accounting including the historical cost convention and the going concern assumption. The financial report is presented in Australian Dollars.

(b) Statement of compliance

The financial report is a general purpose financial report for the year 1 July 2015 to 30 June 2016, which has been prepared in accordance with the requirements of the Corporations Act 2001, Australian Accounting Standards – Reduced Disclosure Requirements and other authoritative pronouncements of the Australian Accounting Standards Board. The company is a not-for-profit entity which is not publicly accountable. Therefore the consolidated financial statement for the Group are tier 2 general purpose financial statements which have been prepared in accordance with Australian Accounting Standards – Reduced Disclosure Requirements (AASB – RDRs) (including Australian Interpretations) adopted by the Australian Accounting Standards Board (AASB) and the Corporation Act 2001.

New Accounting Standards and Interpretations

Certain Australian Accounting Standards and Interpretations have recently been issued or amended but are not yet effective and have not been adopted by the company for the annual reporting period ended 30 June 2016. The directors have not early adopted any of these new or amended standards or interpretations. The directors have not yet fully assessed the impact of these new or amended standards and interpretations.

(c) Plant and equipment

Plant and equipment is stated at historical cost, or fair value if the asset is donated to the entity, less accumulated depreciation and any accumulated impairment losses. Such cost includes the cost of replacing parts that are eligible for capitalisation when the cost of replacing parts is incurred. Similarly, when each major inspection is performed, the cost is recognised in the carrying amount of the plant and equipment as a replacement only if it is eligible for capitalisation. All other repairs and maintenance are recognised in the profit and loss as incurred. The assets' residual values, useful lives and amortisation methods are reviewed, and adjusted if appropriate, at each financial year end.

The depreciation rates used for each class of assets are:

Class of fixed asset	Depreciation rates	Depreciation basis
Office equipment	50.00%	Straight line
Leasehold improvements	Based on life of lease	Straight line
Furniture, fixtures and fittings	12.50%	Straight line
Hardware	33.30%	Straight line

Disposal:

An item of plant and equipment is derecognised upon disposal or when no further future economic benefits are expected from its use or disposal.

Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in profit and loss in the year the asset is derecognised.

(d) Intangibles

Intangible assets include software which is being amortised over 3 years and the Company's new program management system which is currently under development and will be amortised over 4 years from the go live date.

Intangible assets acquired are initially measured at cost. Following initial recognition, intangible assets are carried at cost less any accumulated amortisation and any accumulated impairment losses.

The useful lives of intangible assets are assessed to be either finite or indefinite. Intangible assets with finite lives are amortised over the useful life and tested for impairment whenever there is an indication that the intangible asset may be impaired. The amortisation period and the amortisation method for an intangible asset with a finite useful life is reviewed at least at each financial year-end. The amortisation expense on intangible assets with finite lives is recognised in profit or loss in the expense category consistent with the function of the intangible asset.

A summary of the policies applied to the Company's intangible assets is as follows:

Software and program management system

Useful life: Finite

Amortisation method use: Amortised over the period of expected future benefit from the related project on a straight-line basis.

Internally generated or acquired: Acquired

Impairment testing: When an indication of impairment exists. The amortisation method is reviewed at each financial year end.

(e) Impairment of assets

The Company assesses at each reporting date whether there is an indication that an asset may be impaired. If any such indication exists, or when annual impairment testing for an asset is required, the Company makes an estimate of the asset's recoverable amount. An asset's recoverable amount is the higher of its fair value less costs to sell and its value in use and is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets and the asset's value in use cannot be established to be close to its fair value. In such cases the asset is tested for impairment as part of the cash-generating unit to which it belongs. When the carrying amount of an asset or cash-generating unit exceeds its recoverable amount, the asset or cash-generating unit is considered impaired and is written down to its recoverable amount.

Impairment losses relating to continuing operations are recognised in those expense categories consistent with the function of the impaired asset unless the asset is carried at revalued amount (in which case the impairment loss is treated as a revaluation decrease).

(f) Leases

The determination of whether an arrangement is or contains a lease is based on the substance of the arrangement at inception date, whether fulfillment of the arrangement is dependent on the use of a specific asset or the arrangement conveys a right to use the asset, even if that right is not explicitly specified in an arrangement.

The Company has no finance leases.

Operating lease payments are recognised as an expense in the Statement of Comprehensive Income on a straight-line basis over the lease term. Lease incentives are recognised as a liability when received and subsequently reduced by allocating lease payments between rental expense and reduction of the liability.

(g) Other financial assets

Financial assets in the scope of AASB 139 Financial Instruments: Recognition and Measurement are classified as either financial assets at fair value through profit or loss, loans and receivables, held-to-maturity investments, or available-for-sale financial assets. When financial assets are recognised initially, they are measured at fair value, plus, in the case of investments not at fair value through profit or loss, directly attributable transaction costs.

Recognition and derecognition

All regular way purchases and sales of financial assets are recognised on the trade date ie., the date that the Company commits to purchase the asset. Regular way purchases or sales are purchases or sales of financial assets under contracts that require delivery of the assets within the period established generally by regulation or convention in the market place. Financial assets are derecognised when the right to receive cash flows from the financial assets has expired or when the entity transfers substantially all the risks and rewards of the financial assets. If the entity neither retains nor transfers substantially all of the risks and rewards, it derecognises the asset if it has transferred control of the assets.

Subsequent measurement**(i) Loans and receivables**

Loans and receivables including loan notes and loans to key management personnel are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Such assets are carried at amortised cost using the effective interest rate method. Gains and losses on financial assets held for trading are recognised in profit or loss and the related assets are classified as current assets in the Statement of Financial Position.

(h) Employee benefits**(i) Wages and salaries and annual leave**

Liabilities for wages and salaries, including non-monetary benefits and annual leave expected to be settled within 12 months of the reporting date are recognised in respect of employees' service up to the reporting date. They are measured at the amounts expected to be paid when the liabilities are settled.

(ii) Long service leave

The liability for long service leave is recognised and measured as the present value of expected future payments to be made in respect of services provided by employees up to the reporting date using the projected unit credit method. Consideration is given to expected future wage and salary levels, experience of employee departures, and periods of service. Expected future payments are discounted using marketing yields at the reporting date on national government bonds with terms to maturity and currencies that match, as closely as possible, the estimated future cash outflows.

(i) Income tax

The Company is exempt from income taxation under section 50-40 of the Income Tax Assessment Act 1997.

(j) Other taxes

Revenues, expenses and assets are recognised net of the amount of GST except:

- » When the GST incurred on a purchase of goods and services is not recoverable from the taxation authority, in which case the GST is recognised as part of the cost of acquisition of the asset or as part of the expense item as applicable.
- » Receivables and payables, which are stated with the amount of GST included.

The net amount of GST recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the Statement of Financial Position.

Cash flows are included in the cash flow statement on a gross basis and the GST component of cash flows arising from investing and financing activities, which is recoverable from, or payable to, the taxation authority is classified as part of operating cash flows. Commitments and contingencies are disclosed net of the amount of GST recoverable from, or payable to, the taxation authority.

(k) Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at bank and on hand and short term deposits with an original maturity of three months or less.

For the purposes of the Cash Flow Statement, cash and cash equivalents consist of cash and cash equivalents as defined above, net of outstanding bank overdrafts.

Bank overdrafts are carried at the principal amount. Interest is charged as an expense as it accrues.

Short term deposits relate to temporary surplus funds, mainly from levies, voluntary contributions and Commonwealth matching grants which are placed in either a term deposit or cash deposit account. For funds deposited in at call accounts, interest is earned on the daily balance at the prevailing daily rate and is paid at the end of the month. Term deposits are held with the Company's bank with interest payable upon maturity of the deposits.

(l) Revenue and contributions

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Company and the revenue can be reliably measured. The following specific recognition criteria must also be met before revenue is recognised:

Sale of goods

Revenue is recognised when the significant risks and rewards of ownership of the goods have passed to the buyer and can be measured reliably. Risks and rewards are considered passed to the buyer at the time of delivery of the goods to the customer. The nature of the transactions included in sale of goods are sales of final reports, publication sales and export license fees.

Revenue from the rendering of a services

Revenue from the rendering of a service is recognised upon the delivery of the service to customers.

Interest revenue

Interest revenue is recognised on a proportional basis taking into account the interest rates applicable to the financial assets. Other revenue is recognised when the right to receive the revenue has been established.

Voluntary Contributions

Voluntary contributions are recognised as revenue when the entity obtains control of the contribution.

R&D co-investment

R&D co-investment funds are received from interested parties for re-investment into strategic programs. This income is recognised at the time the invoice is issued.

Levy receipts

The Levies and Revenue Service of the Department of Agriculture, Australia collects statutory levies on behalf of the Company. Revenue from levies are recognised as revenue when the levy amount is granted to the entity by the Department of Agriculture.

Commonwealth Government matching funds

The Commonwealth Government matches funding on a dollar by dollar basis on approved R&D projects, up to a level of 0.5% of the gross value of horticultural production. Commonwealth matching funds are recognised as revenue upon incurring the eligible R&D program expenditure.

Corporate cost recovery

A corporate cost recovery is applied to all R&D and Marketing projects. For projects contracted during the 2015/16 year a corporate cost recovery of either 11.5% for industry maintenance projects or 15% for strategic projects was applied. Older projects have been contracted at a different corporate cost recovery rate based on the rate applicable at the contract date. The corporate cost recovery is recognised upon incurring program expenditure.

Industry reserve interest

Interest earned on contributions received in advance from levies to meet future marketing and R&D expenditure is allocated to the respective levy account.

Royalties

Royalty income is recognised upon receipt.

All revenue is stated net of the amount of goods and services tax (GST).

(m) Economic dependency

The Company is economically dependent on levies, voluntary contributions, R&D co-investment and Commonwealth Government contributions.

(n) Trade and other receivables

Trade receivables, which generally have 30 day terms, are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method, less an allowance for any uncollectible amounts.

Collectibility of trade receivables is reviewed on an ongoing basis. Debts that are known to be uncollectible are written off when identified. An allowance for doubtful debts is raised when there is objective evidence that the Company will not be able to collect the debt.

(o) Trade and other payables

Trade payables and other payables are carried at amortised costs and represent liabilities for goods and services provided to the Company prior to the end of the financial year that are unpaid and arise when the Company becomes obliged to make future payments in respect of these goods or services. The amounts are unsecured, interest free and are usually paid within 30 days of recognition.

(p) Significant accounting judgements, estimates and assumptions

The preparation of the financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts in the financial statements. Management continually evaluates its judgements and estimates in relation to assets, liabilities, contingent liabilities, revenues and expenses.

Management bases its judgements and estimates on historical experience and on other factors it believes to be reasonable under the circumstances, the result of which form the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions and conditions.

Management has identified the following critical accounting policies for which significant judgements, estimates and assumptions are made. Actual results may differ from these estimates under different assumptions and conditions and may materially affect financial results or the financial position reported in future periods.

(i) Make good provisions

A provision has been made for the present value of anticipated costs of future restoration of leased premises. The provision includes future cost estimates of restoring the premise to its original state, including removal of workstations and glass panelling. The calculation of this provision requires assumptions such as application of closure dates and cost estimates. The provision recognised for each site is periodically reviewed and updated based on the facts and circumstances available at the time. Changes to the estimated future costs for sites are recognised in the balance sheet by adjusting both the expense or asset, if applicable, and the provision.

(ii) Estimation of useful lives of assets

The Company's management determines the estimated useful lives and related depreciation and amortisation charges for its plant and equipment and definite life of intangible assets. The useful lives could change significantly as a result of technical innovations or some other event. Management will increase the depreciation and amortisation charge where useful lives are less than previously estimated lives, or it will write off or write down technically obsolete or non-strategic assets that have been abandoned or sold.

(q) Business combinations

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred measured at acquisition date fair value and the amount of any non-controlling interests in the acquiree. For each business combination, the Company elects whether to measure the non-controlling interests in the acquiree at fair value or at the proportionate share of the acquiree's identifiable net assets. Acquisition-related costs are expensed as incurred and included in administrative expenses.

When the Company acquires a business, it assesses the financial assets and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as at the acquisition date.

	2016	from the date of incorporation to 30 June 2015
	\$	\$
NOTE 3: REVENUE		
Revenue from Continuing Operations		
(a) Sales of goods		
– Export License Fees	20,000	105,000
– Other	704	380
	20,704	105,380
(b) Other income		
R&D income		
– Proceeds from levies – R&D	29,673,888	15,876,226
– Revenues from Commonwealth matching funds	41,745,028	29,239,867
– Voluntary contributions	20,509,749	13,670,459
– Co-investment	2,725,717	4,167,486
– Royalty income	135,498	98,239
– Interest received	843,419	640,896
– Other income	3,015	32,000
	95,636,314	63,725,173
Marketing income		
– Proceeds from levies – marketing	22,145,626	12,917,418
– Marketing program income	246,067	78,934
– Interest received	393,174	297,356
– Subsidies and grants	113,936	112,825
	22,898,803	13,406,533
Other		
– Corporate interest received	70,063	46,647
– Rental income	25,045	15,503
– Corporate matching income	1,960,299	299,847
– Other corporate income	809	310,597
	2,056,216	672,594
Sub-total other income	120,591,333	77,804,300
Total revenue	120,612,037	77,909,680
Total interest received	1,306,656	984,899

	2016	from the date of incorporation to 30 June 2015
	\$	\$
NOTE 4: EXPENSES		
Included within expenses are the following significant amounts:		
Rental expense on operating leases	15,108	18,359
Wages and salaries	7,897,119	4,401,095
Superannuation	729,431	373,777
DAFF levy collection costs	1,237,640	919,055
Depreciation	405,618	226,646
Amortisation	72,654	28,530
Impairment of intangible assets	802,270	-
NOTE 5: CASH AND CASH EQUIVALENTS		
(a) Reconciliation of Statement of Cash Flows		
Cash and cash equivalents at the end of the year as shown in the Statement of Cash Flows is reconciled to the related items in the Statement of Financial Position as follows:		
Cash on hand	500	800
Cash at bank	13,458,522	9,756,666
Short term deposits	26,000,000	19,000,000
	39,459,022	28,757,466
NOTE 6: TRADE AND OTHER RECEIVABLES		
Current		
Trade receivables	3,981,310	4,887,853
Other receivables	2,372,502	3,442,893
Accrued income	15,809,478	13,893,133
	22,163,290	22,223,879

(a) Allowance for impairment loss

Trade receivables are non-interest bearing and are generally net 30 day terms.

A provision for impairment loss is recognised when there is objective evidence that an individual trade receivable is impaired.

	2016	2015
	\$	\$
NOTE 7: OTHER ASSETS		
Current		
Prepayments	224,729	127,537
	224,729	127,537
NOTE 8: PLANT AND EQUIPMENT		
Office equipment		
At cost	90,958	100,149
Less accumulated depreciation	(80,758)	(63,075)
Carrying amount at the end of the year	10,200	37,074
Leasehold improvements		
At cost	1,160,438	1,109,995
Less accumulated depreciation	(432,358)	(205,827)
Carrying amount at the end of the year	728,080	904,168
Hardware		
At cost	578,097	356,017
Less accumulated depreciation	(323,083)	(237,291)
Carrying amount at the end of the year	255,014	118,726
Furniture, fixtures and fittings		
At cost	114,081	108,350
Less accumulated depreciation	(78,020)	(68,022)
Carrying amount at the end of the year	36,061	40,328
Total carrying amount at the end of the year	1,029,355	1,100,296

a) Movements in carrying amounts

Movement in the carrying amounts for each class of plant and equipment from 1 July 2015 to 30 June 2016.

	Office equipment	Leasehold improvements	Furniture, fixtures and fittings
	\$	\$	\$
2016			
Balance as at 1 July 2015	37,074	904,168	40,328
Additions	8,466	50,443	6,229
Disposals	-	-	-
Depreciation expense	(35,340)	(226,531)	(10,496)
Carrying amount at end of the year	10,200	728,080	36,061
	Hardware	Total	
	\$	\$	
Balance as at 1 July 2015	118,726	1,100,296	
Additions	270,177	335,315	
Disposals	(638)	(638)	
Depreciation expense	(133,251)	(405,618)	
Carrying amount at end of the year	255,014	1,029,355	

In 2016, the impairment loss represented the writedown of certain software systems to the recoverable amount as a result of changed system requirements of the new business model. This was recognised as an Administrative Expense within the Statement of Comprehensive Income and is offset by a reduction in the Systems Upgrade Reserve.

NOTE 9: INTANGIBLES

The intangible assets disclosed below include software which is being amortised over 3 years and the Company's program management system which will be amortised over 4 years.

	Project management system	Software	Assets under construction	Total
	\$	\$	\$	\$
2016				
Software				
At Cost	1,985,079	245,378	157,766	2,388,223
Less accumulated amortisation	(850,879)	(226,983)	-	(1,077,862)
Carrying amount at end of the year	1,134,200	18,395	157,766	1,310,361
Balance at the beginning of the year				
Assets transferred	954,254	-	(954,254)	-
Additions	228,555	11,923	157,766	398,244
Impairment expense	-	-	(802,270)	(802,270)
Amortisation expense	(48,609)	(24,046)	-	(72,655)
Carrying amount at end of the year	1,134,200	18,395	157,766	1,310,361

In 2016, the impairment loss represented the writedown of certain software systems to the recoverable amount as a result of changed system requirements of the new business model. This was recognised as an Administrative Expense within the Statement of Comprehensive Income and is offset by a reduction in the Systems Upgrade Reserve.

	2016	2015
	\$	\$
NOTE 10: TRADE AND OTHER PAYABLES		
Current		
Trade payables	-	-
Other payables	2,959,188	2,238,509
	2,959,188	2,238,509

(a) Fair value

Due to the short term nature of these payables, their carrying value is assumed to approximate their fair value.

NOTE 11: PROVISIONS		
Long service leave – current	214,536	167,100
Long service leave – non-current	251,169	262,669
Annual leave	625,015	487,054
Employee oncosts	152,701	128,355
Make good provision	122,711	122,711
Total	1,366,132	1,167,889
Carrying amount at the end of the year – current	992,252	782,509
Carrying amount at the end of the year – non-current	373,880	385,380
	No.	No.
(a) Number of employees at year end (full time equivalent)	74.4	54.1

NOTE 12: RETAINED SURPLUS		
Balance at the beginning of the year/period	50,589,822	-
Net surplus for the year/period	9,271,615	6,434,567
Other comprehensive income	-	44,155,255
Retained surplus at the end of the year/period	59,861,437	50,589,822
Reconciliation of net surplus for the year/period:		
Corporate net surplus	(1,593,221)	432,729
R&D net surplus	7,115,648	4,947,810
Marketing net surplus	3,749,188	1,054,028
Net surplus	9,271,615	6,434,567

When managing capital, management's objective is to ensure the Company continues as a going concern as well as to maintain optimal returns for all stakeholders. The Company is not subject to any externally imposed capital requirements.

For the year ended 30 June 2016 the entity has recognised corporate revenue, including corporate recoveries, income and interest of \$14,587,888. Corporate expenditure during this period amounted to \$16,181,109 resulting in a corporate deficit for the year of \$1,593,221.

The corporate retained surplus amounts to \$3,246,222 and is utilised to manage the operations of the Company, while the R&D and marketing retained surplus represents industry funds received but not yet expended on the R&D and marketing programs. In 2014/15 a reserve of \$2,392,000 for new business systems and \$564,439 for business transition was set aside. As at 30 June 2016 \$1,541,121 of the business systems reserve and \$32,570 of the transitional reserve were yet to be utilised.

	2016	2015
	\$	\$
NOTE 13: COMMITMENTS		
(a) Operating lease commitments		
Future minimum payables under non-cancellable operating leases as at 30 June 2016 are as follows:		
– within one year	778,019	591,149
– after one year but not more than five years	1,156,939	1,676,023
	1,934,958	2,267,172

The Company has entered into commercial leases on its premises. There were four leases in effect at balance date, the remaining life of each being between 11 and 37 months. There are also two agreements in place for the rental of office equipment, the remaining life of each being between 23 and 24 months.

NOTE 14: CONTINGENT LIABILITIES		
Estimates of the maximum amounts of contingent liabilities that may become payable:		
R&D and marketing expenditure liabilities		
– within one year	56,713,414	54,015,226
– after one year but not more than five years	91,903,513	64,075,413
	148,616,927	118,090,639
Bank guarantee facility	400,000	400,000

NOTE 15: DIRECTOR AND KEY MANAGEMENT PERSONNEL REMUNERATION					
	Short term		Post employment	Termination benefits	Total
	Salaries and fees	Cash bonus/ Other benefits	Superannuation/ Insurance	ETPs/Leave entitlements	
30 June 2016					
Directors	482,863	-	35,998	-	518,861
Key management personnel	1,538,504	142,944	183,442	-	1,864,890
Total	2,021,367	142,944	219,440	0	2,383,751
30 June 2015					
Directors	304,245	-	39,067	-	343,312
Key management personnel	884,007	235,974	147,844	443,546	1,711,371
Total	1,188,252	235,974	186,911	443,546	2,054,683

At Horticulture Innovation Australia Limited, the key management personnel are the executive team. The executive pay is structured as a total remuneration package with superannuation payments made in accordance with the Superannuation Guarantee Legislation to the executive's choice of superannuation fund for the 2015/16 financial year. The balance of the executive's remuneration can be structured at the executive's discretion within the Company's salary sacrificing policy. The executive is eligible for a performance bonus based on criteria determined in consultation with the Board.

NOTE 16: BUSINESS COMBINATIONS AND ACQUISITIONS

Horticulture Innovation Australia Limited was incorporated on 27 October 2014. The company was established in response to recommendations of an independent review of Horticulture Australia Limited.

The assets, liabilities and funds of Horticulture Australia Limited were transferred to Horticulture Innovation Australia Limited on 4 November 2014.

The fair values of the identifiable assets, liabilities and funds of Horticulture Australia Limited at the date of acquisition were:

Assets	\$
Cash and cash equivalents	11,601,286
Term deposits	23,000,000
Trade and other receivables	6,689,549
Prepayments	1,151,063
Plant and equipment	1,285,693
Intangibles	1,815,572
	45,543,163
Liabilities	
Trade and other payables	162,682
Provisions	1,225,226
	1,387,908
Net assets transferred in	44,155,255
Assets transferred have been allocated to the following funds:	
Corporate	2,788,405
Systems upgrade reserve	2,392,000
Transitional reserve	800,000
R&D retained surplus	27,303,114
Marketing	10,871,736
	44,155,255

No consideration was paid for the transfer. No goodwill arose on the transaction.

In accordance with AASB 3 Business Combinations, the gain arising on the transfer of the assets and liabilities has been recognised in the Statement of Comprehensive Income.

No adjustments were made to the above fair values subsequently.

NOTE 17: RELATED PARTY TRANSACTIONS

The Directors of the Company during the period were:

- » Selwyn Snell
- » Mark Napper
- » Robert Clark
- » David Cliffe
- » Susan Finger
- » David Moon
- » Peter Wauchope
- » Ridley Bell (resigned 27 November 2015)
- » Richard Hamley (appointed 27 November 2015)
- » Stephen Lynch (appointed 27 November 2015)
- » Stephen Morrow (resigned 27 November 2015).

Because of the nature of the skills and other interests of Directors related to horticulture, there is potential for conflict of interest given the broad range of R&D and marketing projects undertaken by the Company. The Company keeps a register of Directors' declared conflicts of interest, and each Board meeting commences with a declaration of conflicts in relation to the agenda items. All transactions are conducted using commercial arms-length principles and made under normal terms and conditions.

NOTE 18: SUBSEQUENT EVENTS

There have been no material events occurring after balance sheet date.

NOTE 19: COMPANY DETAILS AND THE PRINCIPAL PLACE OF BUSINESS

The registered office of the Company is:

Horticulture Innovation Australia Limited
Level 8, 1 Chifley Square
Sydney, NSW 2000

Directors' declaration

In accordance with a resolution of the Directors of Horticulture Innovation Australia Limited, we state that:

In the opinion of the Directors:

- (a) the financial statements and notes of the Company are in accordance with the Corporations Act 2001, including:
- (i) giving a true and fair view of the Company's financial position as at 30 June 2016 and of its performance for the year ended on that date, and
 - (ii) complying with Accounting Standards and Corporations Regulations 2001, and
- (b) there are reasonable grounds to believe the Company will be able to pay its debts as and when they become due and payable.

This declaration is made on behalf of the Board of Directors.



Selwyn Snell
Chair

Dated this fourteenth day of September 2016 in Sydney



Mark Napper
Director

Dated this fourteenth day of September 2016 in Sydney



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Independent auditor's report to the members of Horticulture Innovation Australia Limited

Report on the financial report

We have audited the accompanying financial report of Horticulture Innovation Australia Limited, which comprises the statement of financial position as at 30 June 2016, the statement of comprehensive income, statement of changes in funds and statement of cash flows for the year then ended, notes comprising a summary of significant accounting policies and other explanatory information, and the directors' declaration.

Directors' responsibility for the financial report

The directors of the company are responsible for the preparation of the financial report that gives a true and fair view in accordance with Australian Accounting Standards - Reduced Disclosure Requirements and the Corporations Act 2001 and for such internal controls as the directors determine are necessary to enable the preparation of the financial report that is free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on the financial report based on our audit. We conducted our audit in accordance with Australian Auditing Standards. Those standards require that we comply with relevant ethical requirements relating to audit engagements and plan and perform the audit to obtain reasonable assurance about whether the financial report is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial report. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial report, whether due to fraud or error. In making those risk assessments, the auditor considers internal controls relevant to the entity's preparation of the financial report that gives a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal controls. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the directors, as well as evaluating the overall presentation of the financial report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Independence

In conducting our audit we have complied with the independence requirements of the Corporations Act 2001. We have given to the directors of the company a written Auditor's Independence Declaration, a copy of which is included by reference in the directors' report.

Opinion

In our opinion the financial report of Horticulture Innovation Australia Limited is in accordance with the Corporations Act 2001, including:

- (a) giving a true and fair view of the financial position of Horticulture Innovation Australia Limited at 30 June 2016 and of its performance for the year ended on that date; and

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(b) complying with Australian Accounting Standards - Reduced Disclosure Requirements and the Corporations Regulations 2001.

Ernst & Young

Daniel Cunningham
Partner
Sydney
14 September 2016



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Auditor's Independence Declaration to the Directors of Horticulture Innovation Australia Limited

As lead auditor for the audit of Horticulture Innovation Australia Limited for the financial year ended 30 June 2016, I declare to the best of my knowledge and belief, there have been:

- a) no contraventions of the auditor independence requirements of the *Corporations Act 2001* in relation to the audit; and
- b) no contraventions of any applicable code of professional conduct in relation to the audit.

Ernst & Young

Daniel Cunningham
Partner
14 September 2016



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