

Overview

The Australian persimmon industry is comprised of growers extending from Western Australia, South Australia, Victoria, Northern New South Wales (NSW) and South East Queensland (Qld).

The Qld crop experienced an off-crop year, however fruit quality was very good due to the optimal weather conditions. While the southern crop experienced an on-crop year, the hot dry summer influenced fruit size negatively. Overall the 2012/13 season was a sound production year, although down from the 2011/12 bumper season.

The industry continues to work towards achieving the goals of the current strategic investment plan, which will conclude at the end of 2013. Key research areas sit alongside the major priorities and include:

- Varietal development for superior yield and quality characteristics.
- Pest and disease management.
- Market access.
- Consumer research and productivity.

The industry continues to collaborate with the Old Department of Agriculture, Forestry and Fisheries and the NSW Department of Primary Industries.

Levy investment

The 2012/13 levy income received was \$140,855. The current levy is 6.25 cents per kilogram. A total of \$243,800 was invested into research and development (R&D) projects, and \$67,282 towards marketing projects. The Australian Government provided \$115,473 of matched funding to support 11 R&D projects in the R&D levy program.

Horticulture Australia Limited (HAL) is responsible for managing these funds and takes advice on how to invest the funds from the Persimmon Industry Advisory Committee (IAC). Consultation with the IAC is essential in determining the most critical investment priorities for the industry. Strategy and program management is the key priority set by the IAC.

In 2012/13, Persimmons Australia Incorporated acted as the service provider on one project.

The industry also contributes 2.25 per cent of levy and/or voluntary contributions (matched 4.5 per cent) to an across industry program that addresses issues that affect all of horticulture, such as water availability, climate change, biosecurity and market access.

Strategic objectives

The process for determining the industry's priorities begins with the development of the industry's strategic plan, which guides future R&D and marketing investment over a five-year period. Activities in the 2012/13 period were therefore guided by the Persimmon Industry Strategic Plan 2009-2013 (SIP), which can be found www.horticulture.com.au/industries/ persimmon.

This plan was developed to reflect the industry's priorities, the Australian Government's rural R&D priorities and is reviewed regularly. The industry's objectives, as outlined in the strategic plan, are:

- 1. Increase on-farm productivity.
- 2. Improve supply chain management.
- 3. Increase demand for product.
- 4. Strengthen industry capability.

R&D program

Key highlights of the program include the commencement of the third phase of the Australian sweet persimmon industry development project, which is working towards developing a best practice

postharvest handling guide for growers.



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Increase on-farm productivity

A review of market access challenges and opportunities took place in the 2012/13 year. The project demonstrated that cold storage is an effective postharvest treatment method against Queensland fruit fly larvae, and identified the potential of postharvest treatment with ethyl formate to treat mealybug. However, both areas require further research.

A global literature review project was undertaken to gain better understanding of insecticides currently unavailable in Australia. The review aims to assist industry establish an integrated pest management compatible solution to mealybug. Key researchers, growers, consultants and industry partners were also consulted to formulate potential management strategies and areas requiring further R&D investment.

Marketing program

Following the success of the 2011/12 marketing campaign, brand ambassador Poh Ling Yeow continued to work with industry. Her public profile was harnessed on point-of-sale material distributed to independent greengrocers nationally at the start of the season. Poh's involvement led to a sustained increase in demand of persimmons.

The 2012/13 campaign also saw the continuation of the working relationship with the independent grocery channel to increase both retailer and consumer awareness of persimmons and their versatility.

Additionally, the campaign included consumer research survey which will be used to assist in the development of future campaigns and the three-year strategic marketing plan.

Conclusion

This report provides a snapshot of project activities in the 2012/13 year. The report's sections are divided by the industry's objectives to reflect the activities being undertaken that address these industry issues.

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Scoping study: management options for mealybug in persimmon

Citrus, longtailed and citrophilous mealybugs are harmful pests in persimmon, reducing plant vigour and contaminating fruit. Growers are currently reliant on a limited number of mostly broad-spectrum insecticides, few of which are compatible with biological control. This reliance on broad-spectrum chemistry, coupled with the lack of an effective monitoring system, has hindered the development of an integrated pest management (IPM) system in persimmon. The lack of alternative insecticides also encourages overuse of the few effective registered chemicals, and the consequent development of resistance.

This project undertook a review of worldwide research in order to identify control techniques not currently available to, or utilised by the Australian persimmon industry. It also identified future research and development (R&D) required for the management of these pests.

Literature searches were conducted and key researchers, growers, consultants and industry partners were consulted. This included a visit to researchers and growers in New Zealand.

Current information was collated in the areas of biology, distribution, life cycle and seasonal activity of the three pest species.

Potential management techniques and areas requiring further R&D were identified, and the following categorised as high priority:

- Increase the number of IPM-compatible insecticides available to growers for control of mealybug and other persimmon pests, and phase out older, overused broad spectrum chemistry.
- Trial adjuvants to increase insecticide efficacy through enhanced coverage and penetration of the mealybugs' waxy coating.
- Determine the most effective timing of insecticide applications for maximum efficacy. For instance, contact insecticides should be timed to coincide with the exposed and dispersing crawlers.



Mealybug on the calyx of a persimmon

- Develop an effective monitoring system for mealybug in persimmon, utilising pheromone lures and based on a better understanding of the biology, behaviour and seasonal activity of the pest species. This is a prerequisite for appropriate timing of insecticide applications.
- Obtain registrations or permits for effective chemical control for ants, which can protect mealybugs from natural enemies and contribute to their dispersal.
- Trial postharvest disinfestation techniques such as hot water immersion, cold storage and oils as a postharvest din

It is recommended that future research should be focused on these priority areas. This will enable the development of an IPM system for persimmon utilising a range of control techniques, and based on an understanding of mealybug activity through efficient monitoring.

Project PR11000

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Australian sweet persimmon industry development – phase III

The major objective of the third phase of this project is to complete pre and postharvest management studies initiated in previous phases, and to make recommendations for pest and disease control and postharvest management.

Issues identified as having high priority for completion as well as for future research and development include:

- Improving fruit quality through varietal selection.
- Improving storage and shelf life using cold storage treatments.
- Developing postharvest handling protocols and better control of mealybug.
- Clearwing moth and leaf and fruit diseases.

Systemic insecticide trials in Woombye and Nambour, Queensland (Qld) have identified chemicals that may be effective in controlling mealybugs. This work showed that mealybug populations under the calyx were reduced by the application of foliar and soil insecticides applied in mid-October.

Further research into correct timing of insecticides and development of monitoring systems will increase the efficacy of this approach. The potential of citrus mealybug pheromone lures as a monitoring tool has

been investigated and shows promise in detecting infestations and early emergence of mealybugs after the overwintering period.

The efficacy of the clearwing moth (Carmenta crysophanes) mating disruption pheromone is being evaluated in trials at Amamoor, Qld. Early results show a reduction in moth activity and borer damage in blocks treated with 1100 pheromone twist ties per hectare.

The efficacy of soil and foliar applied systemic insecticides to control clearwing moth borer has been examined in Grantham at an orchard with high levels of infestation. Results indicate that most treatments reduced borer damage on new shoots, however a final assessment in June will indicate the best treatment.

Currently storage methods are being evaluated to finalise postharvest management protocols and to determine storage life under different regimes. Current trials are evaluating short and long-term storage of fruit from major growing regions such as coastal Qld and Kingaroy/Burnett, and South Australia/Victoria. Storage temperatures of 0° and 15°C in combination with the ethylene inhibitor 1-MCP and modified atmosphere bags will be evaluated to give growers storage strategies for different markets.



A clearwing moth monitoring trap, used in mating disruption pheromone trials in Amamoor, Qld

A postharvest manual will be available to growers in May 2014. It will incorporate sections on harvesting, maturity indices, fruit defects and blemishes, cool storage, use of 1-MCP, modified atmosphere bags and other packaging. It will describe protocols for short, medium and long-term storage.

Project PR12000

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DAFF Qld researchers Grant Bignell (left) and David Bruun (right) preparing fruit for storage trials



A class 1 tray of Fuyu treated with 1-MCP, ready for long-term storage at $0\,^{\circ}\text{C}$

Export and import market intelligence 2012–2014

Export development is a new objective for the persimmon industry. Timely and accurate market information is important for understanding the current performance of the industry as it moves towards meeting its export goals.

Accurate information on Australian and competing foreign exports enables Persimmons Australia Incorporated to



prepare reports for government and stakeholders with a strong understanding of the market.

By researching trade information from various trade databases, which is collated into a usable report with tables, graphs and commentary, industry leaders and growers are provided with the latest information on the export performance of the persimmon industry.

This project provides regular updates for exports by total volume, value, prices per

kilogram in key markets for the season to date, and moving annual totals for long-term five and 10-year trends, plus market shares in key export markets.

In 12 months to December 2012, the persimmon industry exported 263 tonnes of fruit, with a value of \$997,000. Singapore, Malaysia and Thailand were the major export destinations. From January to May 2013 the industry had exported 207 tonnes of persimmons which is 20 per cent below the same period last year for over 95 per cent of the season measured.

Singapore and Malaysia were the leading Australian persimmon destinations, which accounted for 83 per cent of all export volume while Thailand and Hong Kong accounted for a further 15 per cent.

During 2012, Australia imported 674 tonnes of persimmons from New Zealand.

The project provides four reports over two years plus monthly updated in season. To date, a full-year January to December 2012 report has been provided, plus monthly updates for April and May. A 2013 season result to June, annual report to December and a final report in June 2014 will follow.

Project MT12009

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Minor use permits for the persimmon industry

Pesticide companies submit use patterns for registration to the Australian Pesticide and Veterinary Medicines Authority (APVMA). The persimmon industry is therefore provided with limited registrations because of its minor crop status.

Minor use permits are required in the persimmon industry due to its small market size, which does not bring adequate commercial returns for the research and development investment by pesticide companies.

This project funds the preparation and submission of minor use permits to the APVMA on behalf of the persimmon industry.

Recent permits as a result of this project have been issued by the APVMA for:

PER13445—Chlorothalonil for the control of cercospora leaf spot (issued 22 August 2012; expires 30 September 2015)

PER13176—Shin Etsu MD Carmenta Pheromone for the control of clearwing persimmon borer (issued 30 November 2012; expires 30 September 2015).

PER13694—Methidathion/persimmons/ various insect pests (issued 1 October 2012; expires 30 September 2017).

PER13815—Maldison/persimmons/fruit fly (issued 20 February 2013; expires 31 May 2016).

PER13932—Chlorpyrifos/persimmon/ cluster grub (issued 1 May 2013; expires 31 March 2018).

PER13933—petroleum oil/persimmons/ scale (issued 1 January 2013; expires 30 November 2017).

Details of the conditions of use associated with the above permits can be found on the APVMA website www.apvma.gov.au/permits/search.php.

The minor use program through Horticulture Australia Limited (HAL) has initiated the strategic agrochemical review process (SARP) to give strategic direction to the minor use investments for its member industries.

The persimmon industry recently completed a SARP in conjunction with AgAware Consulting Pty Ltd in September 2012, to help prioritise pesticide needs for the future. The final SARP report should be finalised and distributed to industry by the end of June 2013.

Project PR10001

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Market access opportunities review to meet export and domestic requirements

Increasing volumes of persimmon fruit necessitate finding new markets for Australian persimmons. Market access is therefore the most crucial issue for the Australian persimmon industry.

This project reviewed the market access requirements for key markets and showed significant opportunities and challenges exist for the industry. The presence of quarantine pests such as Queensland fruit fly (QFF) and mealybugs are major constraints to marketing Australian persimmons on export markets. In addition, the use of postharvest fumigants such as methyl bromide as quarantine treatments are becoming restricted and other commercial disinfestation options are required.

The project demonstrated the efficacy of cold treatment against QFF larvae in persimmon fruit. Cold treatment also has

significant advantages in extending the storage life of persimmon fruit to allow access to distant markets. However, as most persimmon fruit are chilling sensitive, the use of other common commercial postharvest treatments which can delay and reduce chilling injury should be considered.

This study also followed a commercial persimmon supply chain from the orchard in Queensland into the Brisbane and Sydney wholesale markets. The results showed that the while the temperature in the supply chain was well managed at 14–15°C and chilling injury was avoided, the benefits of refrigerated transport were relatively minor. These findings confirm that Fuyu persimmons can be successfully handled at 13–15°C, however to maximise the postharvest life and export potential of Australian persimmons, lower storage temperatures could be used.



Mealy bug under persimmon calyx



QFF laying eggs into persimmon fruit

The project also showed the use of a potential new postharvest treatment against mealybugs. A single four-hour treatment ethyl formate gas in carbon dioxide at 15°C killed all mealy bugs both in naturally infested persimmon fruit. The postharvest application of ethyl formate in carbon dioxide is registered as Vapormate by BOC Gases for use in horticulture.

These preliminary experiments need to be followed up with more comprehensive insect mortality and fruit quality studies.

Project PR11001

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Infesting Fuyu persimmons with QFF at a New South Wales Department of Primary Industries disinfestation trial

Marketing program

The 2012/13 marketing program ran from February to June 2013. To date, the program has achieved positive results for the persimmon industry.

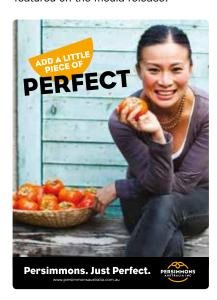
Following the success of partnering with household name Poh Ling Yeow in the 2011/12 year, the industry decided to continue the relationship in 2012/13.

Brand ambassador

Poh Ling Yeow was runner-up in the first MasterChef in 2009. She is the presenter of *Poh Lends a Hand* on ABC TV and received a Logie in 2011 for the Most Popular New Female Talent. As a fifth-generation Chinese Malaysian, Poh adores persimmons and is a keen consumer of the fruit.

This year, rather than use Poh solely for the public relations (PR) activities, she also featured on the point-of-sale material that was distributed to national independent stores at the start of the persimmon season. In addition to the point-of-sale material, Poh's ambassadorship included the following elements:

- The use of her image on the persimmon website, for media outreach and on industry marketing materials such as brochures and annual reports.
- The provision of quotes which were featured on the media release.



The A3 poster was distributed to independent retailers nationally

- Development of the following four recipes featuring persimmons for future media outreach, as well as for use on the pointof-sale in the 2013/14 campaign:
- Persimmon, smoked chicken, hazelnuts, hazelnut oil, mesculin salad.
- 2. Chewy persimmon and ginger cookies.
- Persimmon, rocket and candied walnut salad with blue cheese dressing.
- 4. Sago, coconut, lime and persimmon pudding.

Public relations

PR agency Crossman Communications ran a successful program for the persimmon industry. In addition to managing the relationship with Poh, the public relations campaign involved the following components:

A media kit including:

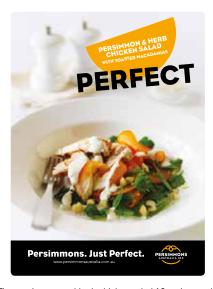
- A media release highlighting the start of the season and Poh's return as ambassador.
- An updated industry and health benefits fact sheet.
- A new consumer tips and tricks guide, including what to look for when purchasing and storage information.
- Poh's persimmon recipes were formatted and incorporated into the kit along with high resolution images.

Website development:

- Persimmons Australia website was updated with Poh's new recipes, images and the 2012/13 season media kit.
- Links to hero coverage was also posted throughout the season to keep the site fresh.

Point-of-sale development and distribution

There were 908 A3 double-sided posters and 1,222 A6 recipe cards developed and distributed nationally to independent stores throughout 2012/13. These were distributed through Horticulture Australia Limited's (HAL) contacts at the central markets.



The persimmon and herb chicken salad A6 recipe card

Retail pilot and merchandising program

During the 2011/12 marketing program, HAL negotiated a persimmon sampling program with IGA stores which involved merchandising and sampling. Due to the success of this activity, the in-store sampling was again implemented in the 2012/13 program.

The program commenced in April 2013 and was held in six New South Wales IGA stores. Each store that participated received one sampling session each, and two merchandising and retailer education calls.

During the same month, the campaign also included a separate merchandising program, held in 39 Queensland and Victoria stores. This activity helped create in-store theatre and buy-in from retailers.

The results of this activity are still being finalised, however the approach of having a combination of both merchandising and sampling allow for maximum impact.

Consumer research

The Persimmon Industry Advisory Committee commissioned Sprout Research to undertake a consumer research project as part of the 2012/13 marketing program. The project objectives were:

- 1. Measure category and varietal awareness of persimmons.
- Better understand consumers knowledge of persimmons, inducing usage knowledge and health benefits.

- Determine consumer's perceptions of where persimmons fit within the fresh fruit category.
- Better understand the purchase triggers and barriers and how they can be overcome.
- Measure how frequently consumers are buying persimmons and determine how to increase purchase frequency.
- 6. Profile consumers by frequency of purchase and type of purchase.
- Measure relativeness/appeal of the PR campaign among current consumers and non-consumers of persimmons.
- Incorporate the findings into the development of the next three-year strategic plan.

Overall, the 2012/13 program has been a great success for industry and HAL is looking forward to another successful year in 2013/14.

Project PR12002, PR12005 and PR12500

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Market access audit by Thai officials of growing and packing conditions

The persimmon, apple, pear, nashi and kiwifruit industries are currently exporting fresh produce to Thailand. Government officials in both Australia and Thailand need to be satisfied that the phytosanitary requirements agreed to by both countries are being adhered to. As part of these agreements, biosecurity officials from Thailand visited Australia to inspect and audit facilities (including farms and pack houses) from those industries exporting to or wanting to export to Thailand and Australia.

In April 2012, Australian and Thai officials visited representative farms and packing sheds from key production areas for each commodity. Wherever possible, picking and packinghouse operations were observed, depending on seasonality and daily operational hours.

The locations visited by the officials and industry personnel in each nominated

state were either typical locations or those which are specifically set up for such exports.

Two Thai officials visited farms and pack houses in Gatton, Stanthorpe, Mount Tamborine, Orange, Shepparton, Grove, Lenswood, and Kirup in Western Australia.

Australia will be notified in due course of any changes to trading conditions by way of bilateral meetings between the two countries. Following these meetings, the Australian apple, pear, nashi and kiwifruit industries should receive a report from the Department of Agriculture, Fisheries and Forestry with those trading condition changes.

Project MT11037

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OBJECTIVE 3

Strengthen industry capability

Multi-industry economic evaluation

The evaluation of six smaller industry research and development (R&D) programs formed part of a series of economic impact assessments being completed by Horticulture Australia Limited to comply with Australian Government requirements. The evaluation provided objective evidence of the return to growers and taxpayers from levy-funded R&D.

A single project was randomly selected for benefit cost analysis evaluation from each of the six industries. The projects and relevant benefit cost ratios are: Pineapple industry:

Management of phytophthora in pineapple using potassium phosphonate: stage I and II—benefit cost ratio of 10.92.

Persimmon industry:

Irradiation for market access—benefit cost ratio of 15.07.

Papaya industry:

Breeding program—benefit cost ratio of 2.58.

Passionfruit industry:

Genetic improvement for disease resistance —benefit cost ratio of 5.26.

Chestnut Industry:

Biology and management of nut rot—benefit cost ratio of 8.84.

Custard apple industry:

New training systems for custard apple —benefit cost ratio of 11.8.

Project results are reasonably typical for investment in agricultural R&D, which historically has been able to generate benefit cost ratios of between three and 12 for successful programs.

Project MT10045

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INVESTING IN AUSTRALIAN HORTICULTURE

Australian Government priorities

As part of the Australian Government's commitment to rural research and development (R&D), horticulture industries can access matching Commonwealth funding though Horticulture Australia Limited (HAL) for all R&D activities.

The Australian Government's Rural R&D Priorities aim to foster innovation and guide R&D effort in the face of continuing economic, environmental and social change.

HAL's operations are closely aligned with these priorities.

This chart shows the percentage of expenditure in HAL's persimmon industry R&D program against each of the Australian Government priorities for rural R&D. Full details of expenditure across all industries is available in HAL's annual report at www.horticulture.com.au.

Technology (8.5%) Innovation skills (1.2%) Productivity and adding value (19.5%) Biosecurity (12.2%) Climate variability and climate change (1.2%) Natural resources management (1.2%) Supply chain and markets (56.1%)

Productivity and adding value

Improve the productivity and profitability of existing industries and support the development of viable new industries.

Supply chain and markets

Better understand and respond to domestic and international markets and consumer requirements and improve the flow of such information through the whole supply chain, including to consumers.

■ Natural resource management

Support effective management of Australia's natural resources to ensure primary industries are both economically and environmentally sustainable.

Build resilience to climate variability and adapt to and investigate the effects of climate change.

Biosecurity

Protect Australia's community, primary industries and environment from biosecurity threats.

Innovation skills

Improve the skills to undertake research and apply its findings.

Technology

Promote the development of new and existing technologies.

Consultation funding

The consultation agreement between Persimmon Australia Incorporated (PAI) and Horticulture Australia Limited (HAL) sets out the tasks each organisation will perform to enable the other to discharge its responsibilities related to levy payers and industry services.

Consultation agreement activities are funded by HAL using the persimmon industry's R&D levy and matched funds from the Australian Government.

These funds enable PAI to undertake the Annual Levy Payers' Meeting, conduct IAC meetings, attend HAL Industry Forums, HAL/PAI Executive Board to Board consultation meetings, and other formal and informal consultation between personnel of PAI and HAL.

The full year consultation funding expenditure for PAI in 2011/12 was \$37,745. This represents 12.1 per cent of the total annual levy expenditure. Consultation funding in respect of R&D represents 11.6 per cent of the investment in R&D expenditure and consultation funding in respect of marketing represents 14 per cent of the investment in marketing expenditure.

Project PR12910

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HAL's roles and relationships

Horticulture Australia Limited (HAL) is a not-for-profit industry owned company. Its role is to manage the expenditure of funds collected by the Australian Government on behalf of horticulture industries. In 2012/13 HAL invested more than \$100 million in projects to benefit horticulture industries.

 $An \ Industry \ Advisory \ Committee \ (IAC) \ is \ established \ for each \ industry \ with \ a \ statutory \ levy \ and \ annual \ income \ exceeding \ \$150,000.$

The Prescribed Industry Body (PIB) for an industry is responsible for recommending to HAL the establishment of, and any changes to, statutory levies. The PIB for an industry with a statutory levy recommends membership of the IAC to HAL and must demonstrate how the skills required on an IAC are met by the persons they recommend for appointment to the committee.

For more information please visit www.horticulture.com.au.

ACROSS INDUSTRY PROGRAM

The persimmon industry contributes funding towards an across industry program that addresses issues affecting all of horticulture. Details of the current program are listed below. A full report of the program can be found at www.horticulture.com.au/industries/across_industry_program.asp.

| Project no. | Rural R&D priorities | Project title | Levy or VC | Project start | Project finish | Life of project value | 2012/13 expenditure | Organisation | Contact | |
|--|----------------------|--|---------------|------------------|-------------------|-----------------------|------------------------|--|---------------------------------------|--|
| Objective 1: To enhance the efficiency, transparency, responsiveness and integrity of the supply chain | | | | | | | | | | |
| AH12009 | ፟ Ø | Partnering fresh produce with retail: quality assurance harmonisation – phase I | Levy | 1/08/12 | 31/05/13 | \$143,500 | \$143,500 | Kitchener Partners | Tristan Kitchener 0407 827 738 | |
| AH12010 | 2 Ø | Partnering fresh produce with retail: joint working groups | Levy | 1/08/12 | 30/10/13 | \$274,475 | \$229,199 | Kitchener Partners | Tristan Kitchener 0407 827 738 | |
| AH12016 | Z | Partnering fresh produce with retail: quality assurance harmonisation – phase II | Levy | 15/05/13 | 30/06/15 | \$307,271 | \$97,461 | Kitchener Partners | Tristan Kitchener 0407 827 738 | |
| VG11019 | 2 9 <u>1</u> | Hortstats database: maintenance | Levy | 1/01/12 | 31/05/13 | \$30,000 | \$10,000 | Australian Bureau of Agricultural and Resource Economics | Matthew Miller 02 6272 3527 | |
| Objective 2: Maximise the health benefits of horticultural products | | | | | | | | | | |
| AH11016 | Ø | Partnership Program with Dieticians Association of Australia | Levy | 1/10/11 | 30/06/13 | \$180,000 | \$90,000 | Dieticians Association of Australia | Jodie McHenery 02 4954 4964 | |
| Objective 3: Position horticulture to compete in a globalised environment | | | | | | | | | | |
| AH09021 | Ø | Office of Horticulture Market Access – operations support | Levy | 1/09/09 | 30/09/12 | \$266,399 | \$21,414 | Horticulture Australia Limited | Kim James 08 6488 2209 | |
| AH09027 | ~ 😭 | Investing in Youth Scholarship | Levy | 31/05/10 | 31/03/15 | \$80,000 | \$15,000 | Rural Industries Research and Development Corporation | Margo Andrae 02 6271 4132 | |
| AH10008 | ☑❷≋ ở₽₽₽ | Future Focus: ongoing activities | Levy | 7/03/11 | 24/10/12 | \$109,000 | \$29,000 | Centre for International Economics | Derek Quirke 02 6245 7800 | |
| AH11009 | 2 0 1 | Autonomous perception systems for horticulture tree crops | Levy | 1/05/12 | 27/11/15 | \$599,500 | \$180,000 | University of Sydney | Dr Salah Sukkarieh 02 9351 8154 | |
| AH11014 | ~ 🕏 | Leadership training: industry development for professionals | Levy | 1/04/12 | 31/12/12 | \$6,586 | \$3,989 | Horticulture Australia Limited | Peter Melville 02 8295 2317 | |
| AH11036 | 2 9 | Industry Development Forum 2012 | Levy | 1/04/12 | 31/10/12 | \$35,591 | \$34,773 | Horticulture Australia Limited | Dr Alison Anderson 02 8295 2316 | |
| AH11039 | Z | Horticulture Leaders – Across Horticulture Leadership Training | Levy/ VC | 15/05/12 | 29/01/13 | \$136,250 | \$81,751 | Strategic Business Development Pty Ltd | Russell Cummings 0414 929 585 | |
| AH12012 | Z Ø ≋ | Technical, secretarial and operational services for the NWPPA desktop study | Levy | 22/08/12 | 31/05/13 | \$11,000 | \$11,000 | Plant Health Australia | Nicholas Woods 02 6215 7704 | |
| AH12015 | P | Food Innovation Hub | Levy | 8/05/13 | 31/08/13 | \$28,166 | \$22,533 | Food Innovation Partners | Russel Rankin 07 3289 4591 | |
| AH12017 | Z | Feasibility study: all-of-horticulture peak representative body | Levy | 1/05/13 | 30/06/14 | \$15,000 | \$20,077 | Horticulture Australia Limited | Dr Alison Anderson 02 8295 2316 | |
| MT12029 | 2 | Horticultural Market Access Manager 2012-2015 | Levy/ VC | 1/10/12 | 30/09/15 | \$613,500 | \$92,070 | Langley Consulting | Chris Langley 0498 723 103 | |
| Objective 4: Achieve long term viability and sustainability for Australian horticulture | | | | | | | | | | |
| AH09003 | 2 Ø | Plant protection: regulatory support and coordination | Levy | 1/07/09 | 30/05/14 | \$995,061 | \$187,800 | AKC Consulting Pty Ltd | Kevin Bodnaruk 02 9499 3833 | |
| AH09014 | 杏 | Across industry climate RD&E activities | Levy | 13/04/10 | 29/11/13 | \$75,126 | \$11,647 | Horticulture Australia Limited | Peter Melville 02 8295 2317 | |
| AH10003 | ∡ ≋ ☆ | Horticulture component of the National Climate Change Research Strategy for Primary Industries | Levy | 30/11/11 | 3/05/16 | \$225,000 | \$45,000 | Horticulture Australia Limited | Peter Melville 02 8295 2317 | |
| AH10006 | \ | Pesticide spray drift in horticulture: a response to new guidelines from the APVMA | Levy | 1/07/10 | 31/05/13 | \$20,000 | \$1,966 | Horticulture Australia Limited | Jodie Pedrana 0404 314 751 | |
| AH11005 | \ | Horticulture Environmental Desk Audit | Levy | 30/11/11 | 10/12/12 | \$50,000 | \$10,000 | Growcom | Jane Muller 07 3213 2483 | |
| AH11006 | ≥ ≋ | Carbon amelioration in horticulture | Levy | 1/12/11 | 31/08/12 | \$78,010 | \$36,510 | Department of Primary Industries | Justine Cox 0438 770 187 | |

ACROSS INDUSTRY PROGRAM

| Project no. | Rural R&D priorities | Project title | Levy or VC | Project start | Project finish | Life of project value | 2012/13 expenditure | Organisation | Contact |
|----------------|----------------------|--|---------------|------------------|-------------------|-----------------------|------------------------|---|------------------------------------|
| AH11007 | № ₩ ☆ | Developing a LCI database for Australian agriculture | Levy | 2/01/12 | 1/10/13 | \$20,000 | \$0 | Rural Industries Research and Development Corporation | Peter Melville 02 8295 2317 |
| AH11008 | ≋ | Horticulture response to APVMA spray drift regulations | Levy | 20/12/11 | 30/05/13 | \$70,000 | \$0 | Joint RDC collaboration | Jodie Pedrana 0404 314 751 |
| AH11010 | <u>N</u> | Biotechnology awareness in horticulture | Levy | 10/10/11 | 31/05/13 | \$130,000 | \$38,858 | Horticulture Australia Limited | Dr Alok Kumar 0418 322 070 |
| AH11011 | 2 | Horticulture funding of the CRC for plant biosecurity | Levy | 30/06/12 | 30/05/18 | \$3,000,000 | \$500,000 | CRC For National Plant Biosecurity | Dr Simon McKirdy 02 6201 2882 |
| AH11029 | ⊿ ≋ | Provision of independent technical and secretarial services to the NWPPA | Levy | 20/12/11 | 31/05/13 | \$50,000 | \$25,000 | Plant Health Australia | Nicholas Woods 02 6215 7704 |
| AH12008 | Z | Australian Horticulture Export Symposia 2012 | Levy | 1/07/12 | 30/05/13 | \$40,000 | \$39,570 | Horticulture Australia Limited | David Chenu 02 8295 2381 |
| AH12017 | Ø | Feasibility study: all-of-horticulture peak representative body | Levy | 1/05/13 | 30/06/14 | \$30,000 | \$20,077 | Horticulture Australia Limited | Dr Alison Anderson 02 8295 2316 |
| MT10029 | 2 Ø | Managing pesticide access in horticulture | Levy | 1/07/10 | 2/07/15 | \$1,674,450 | \$219,500 | AgAware Consulting Pty Ltd | Peter Dal Santo 03 5439 5916 |
| MT10049 | ≥ ≋ <u>□</u> | A multi-target approach to fruitspotting bug management | Levy | 1/03/11 | 1/04/16 | \$1,310,000 | \$38,333 | Department of Primary Industries | Dr Ruth Huwer 02 6626 1196 |
| MT10066 | ≥ ≋ <u>□</u> | Project coordination for MT10049 | Levy | 14/03/11 | 31/05/13 | \$40,000 | \$1,663 | RCR Agri Pty Ltd | Chaseley Ross 0409 707 806 |
| Objective ! | 5: Other | | | | | | | | |
| AH11003 | ☑છ≋ ởû♀⊑ | AIC: support function | Levy | 15/09/11 | 30/08/13 | \$84,187 | \$23,400 | Horticulture Australia Limited | Warwick Scherf 02 8295 2323 |
| AH11017 | Ģ | Sponsorship of Appetite for Excellence Awards | Levy | 1/07/11 | 22/06/14 | \$75,000 | \$19,000 | Horticulture Australia Limited | Melissa Smith 02 8295 2340 |
| AH11023 | ĝ | Graham Gregory Award and Function | Levy | 1/07/11 | 30/06/16 | \$150,000 | \$31,436 | Horticulture Australia Limited | Melissa Smith 02 8295 2340 |
| AH11024 | ~ 9 | Across industry program communications plan | Levy | 31/07/11 | 31/07/13 | \$20,000 | \$0 | Horticulture Australia Limited | Melissa Smith 02 8295 2340 |
| AH11026 | ❷❷≋ 呇♀♀ | Across industry program administration | Levy | 1/07/11 | 30/06/13 | \$25,000 | \$12,071 | Horticulture Australia Limited | Warwick Scherf 02 8295 2323 |
| AH11028 | 2 9 | Statistical Handbook for Horticulture: revision | Levy | 1/12/11 | 28/11/12 | \$49,500 | \$10,000 | Oliver and Doam | Agnes Barnard 02 8011 4743 |
| AH12800 | ❷❷≋ ఈ⋒♀⊑ | Across Industry Annual Report 2011/12 | Levy | 1/07/12 | 31/06/13 | \$6,000 | \$1,885 | Horticulture Australia Limited | Amanda Lucas 02 8295 2318 |
| MT12028 | Z | OHMA Operational Support 2012-2015 | Levy/ VC | 1/10/12 | 31/05/15 | \$91,500 | \$10,337 | Horticulture Australia Limited | Kim James 08 6488 2209 |

Australian Government Rural R&D Priorities:

Productivity and adding value

Supply chain and markets

rkets See Natural

Property Innovation skills

■ Natural resource management

🕇 Climate change and climate variability

Biosecurity (

Technology

CLIMATE CHANGE RD&E

Throughout 2012/13 the Australian horticulture industry invested in a diverse array of climate change and climate variability projects to mitigate risk and explore potential opportunities. Targeted projects delivered against a range of objectives pertinent to either a particular industry, or the horticulture industry as a whole.

Horticulture Australia Limited (HAL) invested in cross-collaborative programs, such as the Climate Change Research Strategy for Primary Industries (CCRSPI) and Agricultural Lifecycle Inventory (AusAgLCI), and specific projects and programs on crop phenology, nitrogen management, regulated deficit irrigation, carbon and soil, and urban forest projects.

HAL's RD&E investment is obtained through industry levies, voluntary contributions and matched by the Australian Government.

PERSIMMON PROGRAM

| Project no. | Industry obj. | Rural R&D priorities | Project title | Levy or VC | Project start | Project finish | Life of project value | 2012/13 expenditure* | Organisation | Contact |
|----------------|------------------|----------------------|--|---------------|------------------|-------------------|-----------------------|-------------------------|--|-------------------------------------|
| Levy program | | | | | | | | | | |
| MT10045 | 4 | Z | Multi-industry economic evaluation | Levy | 1/03/11 | 31/12/12 | \$12,000 | \$0 | AgEconPlus Pty Ltd | Michael Clarke 0438 844 024 |
| MT11037 | 3 | Ø | Market access audit by Thai officials of Australian apple, pear, persimmon and kiwifruit growing and packing conditions | Levy/ VC | 26/04/12 | 30/04/13 | \$11,500 | \$270 | Horticulture Australia Limited | Kim James 08 6488 2209 |
| MT12009 | 2 | Ø | Export and import market intelligence 2012–2014 | Levy | 15/07/12 | 30/06/14 | \$140,122 | \$2,094 | Fresh Intelligence Consulting | Wayne Prowse 0408 164 966 |
| PR10001 | 2 | 2 | Minor use permits for the persimmon industry | Levy | 31/03/11 | 31/05/13 | \$10,863 | \$4,763 | Horticulture Australia Limited | Jodie Pedrana 0404 314 751 |
| PR11000 | 1 | 2 Ø | Scoping study: management options for mealybug in persimmon | Levy | 14/10/11 | 1/12/12 | \$13,904 | \$4,810 | The Department of Agriculture, Fisheries and Forestry, Qld | Dr Lara Senior 07 3255 4394 |
| PR11001 | 2 | Ø | Market access opportunities review to meet export and domestic market requirements for Australian persimmons | Levy | 13/01/12 | 30/11/12 | \$40,000 | \$12,000 | Department of Primary Industries, NSW | Dr John Golding 02 4348 1926 |
| PR12000 | 1 | Ø 6 <u>\</u> | Australian sweet persimmon industry development – phase III | Levy | 1/07/12 | 30/05/14 | \$172,488 | \$92,150 | The Department of Agriculture, Fisheries and Forestry, Qld | Grant Bignell 07 54535 947 |
| PR12002 | 3 | Ø | Consumer research | Levy | 13/05/13 | 30/06/13 | \$15,000 | \$0 | Sprout Research | Heath Adams 07 3635 8802 |
| PR12005 | 2&3 | Ø | Retail education and IGA sampling | Levy | 1/01/13 | 30/06/13 | \$9,000 | \$6,966 | Retail Activation | Alena Swinbourne 02 8295 2335 |
| PR12500 | 3 | Ø | Persimmon industry marketing program 2012/13 | Levy | 1/07/12 | 30/06/13 | \$41,000 | \$33,957 | Horticulture Australia Limited | Alena Swinbourne 02 8295 2335 |
| PR12800 | 3 | ◩ớ≋ ở₽₽⊑ | Persimmon Industry Annual Report 2011/12 | Levy | 1/07/12 | 30/06/13 | \$1,920 | \$1,832 | Horticulture Australia Limited | Amanda Lucas 02 8295 2318 |
| PR12910 | 4 | ❷❷≋ 呇⋒♀⊑ | Persimmon consultation funding agreement 2012/13 | Levy/ VC | 1/07/12 | 10/08/13 | \$37,745 | \$37,745 | Persimmon Australia Incorporated | Nick Hobbs 0434 969 514 |

^{*}This list does not included expenditure on carried-forward projects due to late running milestones, which is accounted for in the persimmon investment summary

Australian Government Rural R&D Priorities:

✓ Productivity and adding value
 ✓ Supply chain and markets
 ⋈ Natural resource management
 ⋈ Innovation skills
 □ Technology



PERSIMMON LEVY INVESTMENT SUMMARY

| Year ended 30 June 2013 | Marketing 2012/13 \$ | R&D 2012/13 \$ | Combined 2012/13 \$ |
|----------------------------------|----------------------------|----------------------|---------------------|
| Funds available 1 July 2012 | 25,592 | 128,903 | 154,495 |
| Income | | | |
| Levies received | 56,342 | 84,513 | 140,855 |
| Commonwealth contributions | | 115,473 | 115,473 |
| Other income | 1,364 | 4,335 | 5,699 |
| Total income | 57,706 | 204,321 | 262,027 |
| Budget | 48,612 | 201,916 | 250,528 |
| Variance to budget | 9,094 | 2,405 | 11,499 |
| Program investment | | | |
| Levy programs | 52,441 | 204,337 | 256,778 |
| Service delivery programs by HAL | 6,415 | 26,609 | 33,024 |
| Across industry contribution | | 4,313 | 4,313 |
| Levy collection costs | 8,426 | 8,541 | 16,967 |
| Total investment | 67,282 | 243,800 | 311,082 |
| Budget | 53,415 | 264,847 | 318,262 |
| Variance to budget | (13,867) | 21,047 | 7,180 |
| Annual surplus/deficit | (9,576) | (39,479) | (49,055) |
| Closing balance 30 June 2013 | 16,016 | 89,424 | 105,440 |

Persimmon Industry Advisory Committee (IAC)

Nick Hobbs (Chair)

Kent Andrew

Brett Guthrey

Stephen Jeffers

Geoff Patteson

Jeanette Wilson

Anna-Louise Cross (Ex-Officio)



For more information contact:



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