Apple and Pear

INDUSTRY ADVISORY COMMITTEE
ANNUAL REPORT 2012/13
The projects in this report have been funded by HAL using the apple and pear industry levy and/or voluntary contributions from industry with matched funding from the Australian Government for all R&D activity.
According to the latest data available from the Australian Bureau of Statistics, the production of apples and pears increased from 2010 to 2011 by 13 per cent and 30 per cent respectively. Pear production increased over this period, however the long-term trend shows a consistent decline in production over the last 10 years.

Retail pricing tactics and a difficult environment for the processing sector saw a challenging year for the industry, as the large crop gave the retail sector an opportunity to put downward pressure on price. Varieties such as Royal Gala, however, achieved strong results, both in terms of price and quality of product.

Apple and pear imports decreased by 66 per cent and 52 per cent respectively in the 12 months to December 2012. The industry’s marketing campaigns continued to support the import challenge by developing consumer loyalty to locally grown apples and pears.

Total apple exports for the 12 months to December 2012 reached 3,734 tonnes—a 59 per cent increase compared to 2011. The return per kilo was 48 cents lower at $1.97; nevertheless the total export value was $7.35 million, which is 28 per cent higher than last season. The main growth came from higher volumes exported to Papua New Guinea, Thailand and Malaysia, and notably the United Kingdom (Pink Lady), which had an encouraging 102 per cent increase.

While industry is focused predominately on the domestic market, efforts to develop the export market has seen significant growth. It is forecast that apple and pear exports for 2012 will represent 1.2 per cent and 6.2 per cent of their production respectively.

**Levy Investment**

Due to the publication of this report prior to the availability of the 2012/13 financial year results, information from the industry’s 2012/13 forecast budget is provided.

The 2012/13 levy forecast income is $4,650,000. The current levy is detailed in table below.

A total of $3,514,251 is forecast to be invested into research and development (R&D) projects, and $2,907,688 towards marketing projects. The Australian Government is forecast to provide $1,985,926 of matched funding to support 49 R&D projects in the R&D levy program.

In addition to levy funds, $3,036,218 of voluntary contributions (VC) is forecast to be provided to the industry for supplementing levy-funded projects and/or solely funding VC-only projects in the R&D and marketing programs. VC funds are matched by the Australian Government for all R&D activity.

Horticulture Australia Limited (HAL) is responsible for managing these funds and takes advice on how to invest the funds from the Apple and Pear Industry Advisory Committee (IAC). Consultation with the IAC is essential in determining the most critical investment priorities for the industry. Priorities investment set by the IAC include:

- Productivity and supply chain.
- Climate change.
- Germplasm improvement.
- Market access and biosecurity.
- Market research.
- Industry development.
- Portfolio management.

In 2012/13, Apple & Pear Australia Limited acted as the service provider on 16 projects.

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 Investment Plan (SIP). The plan guides future R&D and marketing investment over a five-year period. Activities in 2012/13 were therefore guided by the Apple and Pear Strategic Investment Plan 2010–2015, which can be found at www.horticulture.com.au/industries/apple_and_pear.

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. Improve sales volume by five per cent for apples and maintain pear volume by:
   a. Stimulating domestic demand by five per cent through product quality and innovation.
   b. Expanding apple and pear exports to 10 per cent of marketable product exported by 2015.
2. Produce high-quality apples and pears at internationally competitive price.

3. Provide a supportive operating environment.

**R&D program**

The 2012/13 R&D program included 56 projects, with 31 projects funded by levies, eight projects funded by voluntary contributions, and 17 projects funded by both the industry levy and voluntary contributions.

Key highlights for the R&D program during 2012/13 include:

- The development of a new communications plan which aims to rejuvenate industry communications to assist growers make better business decisions, and to improve the effectiveness of messages to industry stakeholders.

- The commencement of the first climate change program project, which aims to understand apple and pear production systems in a changing climate. This will reduce the vulnerability of the Australian apple and pear industry by identifying and understanding the potential impact of climate change.

- The commencement of two new PIPS orchard productivity program projects focused on precision fertigation for improved apple orchard productivity, and maximising productivity and quality of new pear varieties.

**Marketing program**

Throughout the 2012/13 year there was strong consumer support of the new Aussie Apples brand.

The 2012/13 apple campaign shifted from focusing on a specific consumer target market to a wider consumer focus. The campaign targeted all age groups and highlighted why consumers should buy Aussie Apples in comparison to other snack choices. Aussie Apples also entered into a major partnership with Bowel Cancer Australia to launch Red Aussie Apple Month.

The 2013/13 pear campaign focused on educating consumers to create a better eating experience. The refreshed brand image was further expanded while retaining the ‘Rediscover the Pear’ slogan, encouraging consumers to use pears as an everyday ingredient to grow volume and value sales.

The development of close partnerships with major retailers including co-branded advertising material, gift-with-purchase tactics and in-store promotions have also been a strong focus of both campaigns.

The continuous development of the apple and pear export sector is a key strategy of the industry’s SIP. Funding for promotional activities in international markets for new apple and pear exporters was made available by proposal in April 2013.

**Conclusion**

This report provides a snapshot of project activities in the 2012/13 year. The report’s sections are divided by the industry’s investment priorities to reflect the activities being undertaken that address the industry’s SIP.

For more information contact:
Barbara Romero-Cespedes, HAL Industry Services Manager
T 0416 240 280
E barbara.romero@horticulture.com.au

During Red Aussie Apple Month in June 2013, $25,000 was raised to support Bowel Cancer Australia

Pear and Asparagus Tart, from the new Australian Pears cookbook
Asian export market development

Export is a high priority for the apple and pear industry. Apple & Pear Australia Limited (APAL) have invested heavily to establish the Pink Lady brand in global markets and see the potential for increased exports of Pink Lady from Australia, along with other varieties. APAL is working with growers who are keen to re-engage in export to help counteract the effects of increased imports and lower domestic prices.

This project focuses on improving industry export capability through collaborative exporting, coordinated marketing programs, reputation building for Australian apples and pears, coupled with a cultural change that embraces export and an improved understanding of technical and market access issues. The project will leverage the quality and marketing disciplines associated with the Pink Lady brand to support a growing presence in Asia.

The project is a partnership between APAL and the Victorian Department of Environment and Primary Industries, and seeks to assist the industry to export at least 10 per cent of marketable products by 2015.

Achievements of the program in the 2012/13 year include:

Developing industry export capability

- Delivering export paradigm workshops to all states.
- Facilitating an industry study tour to Asia, which included retail promotion of Pink Lady apples at Tops Supermarket in Thailand, the Asia Fruit Congress in Hong Kong and a study tour to southern China.
- An Asian importers tour to improve the business-to-business relationships on which trade is based.
- The production of two position papers on export opportunities were produced for APAL, along with two market insight articles for the Australian Fruitgrower magazine.

Developing collaborative exporting

The Team Australia export group was formed, which includes representatives from across the industry. This has proved to be a useful mechanism to foster interest and discussion on relevant issues, encouraging a coordinated approach to export to build a consistent and long-term supply of quality export fruit.

Trade and market access

An in-market promotional event of Pink Lady apples at Tops Supermarket in Thailand to build awareness of Australian apples, and to trial a supply chain that meets retailer expectations in Asia.

This three-year project concludes in June 2015.

Project AP11023
For more information contact:
Aimee McCutcheon, DEPI Vic
T 03 5833 5308
E aimee.mccutcheon@dpi.vic.gov.au

Asia Fruit Logistica 2012

The new Australia Fresh program was launched in September 2012 in Hong Kong at Asia’s largest fresh produce event—Asia Fruit Logistica, where the new program logo and overall Australia Fresh brand was showcased at the trade exhibition to over 5,700 visitors from all parts of the world.

Asia Fruit Logistica is the premier trade exhibition in Asia to focus exclusively on the fresh produce sector and related value chain for the whole Asian region. This three-day trade show first took place in Thailand in 2007 and has since moved to Hong Kong. Simultaneously and within the same venue, Asiafruit Congress is attended by over 600 top tier fresh produce trade professionals and their guests. The function is one of the key highlights of the event, offering both Australian exporters and industry the opportunity to foster trade partnerships with foreign buyers in an informal setting.

Australia Fresh is currently seeking expressions of interest for the upcoming Asia Fruit Logistica in September 2013. For further information visit the Australia Fresh website at www.australi afresh.com.au.

Project MT12501
For more information contact:
David Chenu, HAL
T 02 8295 2381
E david.chenu@horticulture.com.au

Pink Lady display at Tops food hall, Thailand (courtesy of APAL)

Pink Lady in-market promotion at the Tops food hall, Thailand (courtesy of DEPI Vic)
Apple and pear marketing program

**Apple marketing**

With greater numbers of imports expected to arrive in the country throughout 2013, Australian apple growers continued to let consumers know what makes Australian apples better, and why they simply come ‘from a better place’.

Throughout the 2012/13 year there was strong consumer support of the new Aussie Apples brand. In 2012, Aussie Apples aimed to capture the hearts and minds of grocery buyers with children aged five to 17, and in doing so, built a brand loyalty that will serve the industry for years to come.

In 2012/13, the focus shifted to why consumers of all ages should buy Aussie Apples as a comparison to other snack choices. One of the aims of the 2012/13 campaign was to maintain and grow the value of the product in terms of retail pricing.

**The Aussie Apples label**

The label has now been added to over 2 billion apples sold to consumers. Growers with customised labels have the opportunity to redesign their label to include the Aussie Apples brand. One of the major strengths of the industry is its strong national brand, which drives sales and help to secure the future against imports.

The 2012/13 campaign focused on the path to purchase and driving habitual sales. Partnerships with the major retailers included co-branded advertising material and a range of activations in-store, through to public relations activities at a series of events held at capital city royal shows.

The key objectives of the apple marketing program were:

- Restrict the market share of imported apples to five per cent.
- Maintain likelihood to choose apples with the Aussie Apples logo above 70 per cent.
- Awareness of Aussie Apples brand logo and/or sticker at a minimum of 50 per cent.
- Increase number of Aussie Apples per buying occasion from 10 to 12.
- Increase penetration and frequency of the ‘bustling families’ category by one point.
- Increase penetration and frequency of ‘independent singles’ category by one point.

Reaching these targets will result in a $10.6 million retail growth for the year. Using Nielsen Homescan and consumer research benchmark data commissioned by Horticulture Australia Limited (HAL), it has been ascertained that these objectives are on track to be met or exceeded.

The domestic program brings together the supply chain as a whole through innovative point-of-sale materials made exclusively available to independent retailers, and supplied through wholesalers in the central markets.

**Pear marketing**

Prior to 2009, pears relied on their health credentials, and in particular their low Glyceamic Index rating to appeal to Australian consumers. A more effective strategy was needed to position pears both in the fruit and the snack food category.

Extensive consumer research has been conducted since and was used to uncover how consumers felt about pears and what communication strategies they felt were most effective. Information on varieties, seasonality, testing for ripeness, storage and preparation were included in the research. The results from the research were consistent and quite alarming. For most consumers, pears had become the forgotten fruit. They were somewhat fighting with apples for the snack fruit dollar.

The 2012/13 campaign is a continuation of the strategy that begun in 2009/10. The campaign has had positive feedback and continues to move sales indicators in the right direction. With a greater emphasis on inspiration, the major change to the 2012/13 campaign was the tightening of the media schedule to focus on the path to purchase, targeting the two core target markets of ‘young transitionals’ and ‘established couples’.

**The Australian Pears cookbook**

Close partnerships were made with the major retailers with co-branded advertising, in-store partnerships and the introduction of tactics, such as the gift with purchase, cookbook giveaway of Australian Pears with pear sales in Woolworths during May 2013.

The refreshed brand image was further expanded while retaining the ‘Rediscover
the Pear’ slogan. Maggie Beer continued her role as a ‘friend in the kitchen’, providing recipes which were distributed at greengrocers nationally and the Australian Pears Restaurant at Taste of Sydney.

The key objectives of the domestic marketing program are:

- Reduce ripeness barrier to 20 per cent.
- Likely recipe usage at 30 per cent.
- Increase penetration and frequency of the ‘established couples’ category by one point.
- Increase penetration and frequency of the ‘young transitionals’ category by one point.

Reaching these targets will result in a $3.5 million retail growth for the year. Using Nielsen Homescan and consumer research benchmark data commissioned by HAL, it has been ascertained that these objectives are on track to be met or exceeded.

**Export marketing program**

**Apples**

The redevelopment of the apple and pear export sector is a key strategy of the industry’s strategic plan.

Australia currently exports two per cent of its apple production and five per cent of its pear production. The industry’s strategic objective is to increase apple and pear exports to 10 per cent of marketable production by 2015 by focusing on premium supply chain areas in specific markets.

The Australian apple industry faces strong competition from New Zealand, Chile, South Africa, China and the United States. As a small player, many of the costs to keep the export door open are prohibitive for individual exporters with low volumes, and apples are not seen as a priority for many horticultural exporters. In spite of the value of the Australian dollar increasing, these issues are being addressed and the promotion program is part of the strategy.

Funding for promotional activities in international markets for new apple exporters was made available by proposal in April 2013. This is the first time funding has been opened to proposal, with a focus on identified key markets. The request resulted in successful proposals being endorsed by the subcommittee from Glenburn Orchards, Berraworth Orchards and a joint proposal by members of Team Australia.

It has been important to maintain a profile for the Australian apple industry in export markets. In 2012/13 the program continued to leverage international exposure through the Australia Fresh trade promotion program and cooperative promotions. By integrating the apple profile into the Australia Fresh export activities, Australian apples were promoted at Asia Fruit Logistica in Hong Kong, Fruit Logistica in Berlin, through trade advertising in AsiaFruit Magazine and online at FreshPlaza.com, and via the Australia Fresh website www.australiafresh.com.au.

These activities helped reach the many buyers across the Asian markets where most apples are sold—India, Indonesia, Malaysia and Thailand. The United Kingdom, Japan and Taiwan are recognised as important markets with premium supply chains, and there is the potential to develop more trade than there currently exists.

**Pears**

Australia currently exports more than 60 per cent of its pears to Canada and New Zealand, where Australia has strong market shares. Exports to Asia, however, have dwindled with strong competition from South Africa.

Australian pears again leveraged their international profile through participation in the Australia Fresh promotion program of trade exhibition presentations, trade advertising and co-operative promotions.

The strong cooperative promotion in Western Canada, the largest export destination, was successful in maintaining a 75 per cent share of pear imports against competition from Argentina. In-store point-of-sale material, catalogue advertising and newspaper advertising supported the sales of Australian pears in Thrifty Foods, Buy Low Foods, and Market Place IGA.

Like with apples, funding for promotional activities in international markets for new pear exporters was made available by proposal in April 2013. This is the first time funding has been opened to proposal, with a focus on identified key markets. The requests resulted in successful proposals being endorsed by the subcommittee from Berraworth Orchards, Holman Fresh and a joint proposal from Team Australia. Activity has already been undertaken from these proposals, most notably with Loblaw in Canada.

Terms of reference have been written to further develop the strategic plan for both apple and pear exports to identify key growth markets and drive sales into the future.

Apple & Pear Australia Limited have managed a committed investment into future growth of key priority markets for exports, particularly through the appointment of Claire Fitchett as market development manager.

**Fruit and nut tracking study 2011–2013**

Sprout Research have been commissioned by Horticulture Australia Limited to track and report key metrics.

The goal of this project is to ensure there is continuity from previous studies, and that value is gained from the current project by tracking key metrics on brand health, advertising awareness and consumer behaviour.

As an outcome to the project, Sprout Research will monitor changes within the industry, which will be presented and delivered in reports to industry throughout 2012/13. These reports will help influence future strategy, and will be used as a tool to facilitate key decision making.

**For more information contact:**

Luke Westley, HAL
T 02 8295 2375
E luke.westley@horticulture.com.au
PIPS orchard productivity program

The Productivity, Irrigation, Pests and Soils (PIPS) program (2009–2014) is a national Horticulture Australia Limited (HAL) and Apple & Pear Australia Limited (APAL) flagship program designed to integrate research effort and provide a dynamic interface with industry, through co-investment and shared management. PIPS is managed by the Tasmanian Institute of Agriculture (TIA), who deliver the program in collaboration with Plant and Food Research New Zealand (PFR), Department of Environment and Primary Industries, Victoria (DEPI Vic) and the Queensland Department of Agriculture, Forestry and Fisheries (DAFF Qld).

The program is comprised of five research projects:

1. Tree structure.
2. Integrated pest and disease management (IPDM).
3. Soils, water and nutrients.
4. Precision fertigation for improved apple orchard productivity (began mid-2012).

Additional projects support the program management committee, and the technical and industry communications committee.

An independent review of the PIPS program (AP12032) will be conducted at the end of the 2012/13 year.

Tree structure

This project aims to optimise fruit quality by improving crop load management, and thereby improve orchard productivity. This is achieved employing artificial spur extinction (ASE)—a technique which regulates bud number and distribution by selectively thinning spurs at winter pruning.

Genotypic regulation of flowering behaviour was evaluated on floral bud types within the canopy of Royal Gala, Cripps Pink and Kalei apple trees. Floral bud behaviour can be confirmed as cultivar-determined, and that floral bud effects on fruit quality do not vary greatly across diverse environments.

This information is central to the applicability of the concepts of optimising particular bud types with canopy management for enhancing productivity and fruit quality across diverse growing regions.

Currently the project has two consecutive years’ productivity responses from studies that compare optimised floral bud management by ASE treatments, versus conventional pruning and crop load management using three crop loads across an estimated yield range from 45 to 75 T/ha. Treatment effects are measured using the fruit set responses, yield outcomes and fruit quality assessments in the three regions from the 2010/11 through to 2012/13 seasons. Return bloom responses to the ASE treatments were measured in spring of 2011 and 2012.

Progress and developments up to June 2012 have been disseminated through two cycles of Future Orchards (and supporting fact sheets), the 2012 APAL National Conference and Australian Fruitgrower articles.

In 2011 the project investigated the role of floral bud type on fruit set and fruit quality traits of two new high-quality dessert pear advanced selections from the Australian National Pear Breeding Programme, at DEPI Tatura. In 2012, the project established a study of alternative canopy management approaches on a young intensive Tatura V-trellis with selection 131, at DEPI Tatura.

Integrated pest and disease management

DEPI Victoria and PFR are developing two new biocontrol agents; consolidation of models and addition of new data to provide a tool for management of apple scab; and reviewing IPDM on a holistic scale. The biocontrol agents are for management of woolly apple aphid and codling moth.

A parasitoid wasp that attacks coding moth has been a successful control agent in the United States and Argentina. The wasp was imported into quarantine in both New Zealand and Australia for host-specificity testing by DEPI and PFR. Host-range testing of the parasitoid in both countries demonstrated high specificity against coding moth lava and pupae. Approval to release the parasitoid has been granted in New Zealand. Depending on Biosecurity Australia’s assessment, it may be possible to release Mastrus from quarantine in Australia in July 2013 and have sufficient numbers available for test releases by autumn 2014.

The biocontrol agent, Heringia, for woolly apple aphid has been imported into quarantine in New Zealand. DEPI is waiting until Biosecurity Australia approve release of Mastrus from quarantine so that space will be available to import Heringia via New Zealand.

Data collected for the investigation of apple scab management is being incorporated into a sub-model that relates temperature to the susceptibility of apple tissues, and integrates outputs from weather and ascospore maturity models to determine overall disease risk.

Soil, water and nutrients

This project aims to increase the eco-efficient use of water and nutrients through improving soil health, and understanding irrigation requirements in modern high-density apple and pear orchards. For Australian apple and pear orchards, the project will:

• Establish soil carbon status and infer trends over time.
• Determine the role of soil carbon in water and nutrient plant-availability.
• Investigate management techniques to enhance soil health.
• Measure and predict evapotranspiration in netted apple orchards and high-density pear orchards with varying canopies and tree structures.
• Investigate the effects of water deficits on fruit composition.

This project has investigated and reported on the benefits of biochar use as a soil amendment on optimised deficit irrigation with no loss of fruit quality, and found how to schedule irrigation requirement of apples under netting and in pears. Results have been reported during Future Orchards campaigns and in numerous Australian Fruitgrower articles and factsheets. DEPI
Young pear trees in the irrigation experiment of the Pear Field Laboratory at DEPI Tatura. The photo shows substantial difference in weed growth between drip (tree in the foreground) and microjet (trees further down the row) irrigation systems.

Precision fertigation for improved apple orchard productivity

This project (AP12006) aims to determine the influence of nutrient and water use efficiency on apple trees through fertigation on the consistent production of high-quality fruit.

The project will investigate:

- The effect of water stress and water surplus on nitrogen (N) uptake.
- The effect of N fertigation treatments on tree and fruit nutrition.
- The influence of fertigation on tree N storage and remobilisation.
- The influence of application type, soil type and rainfall on N leaching.
- Remote sensing of N deficiencies using canopy chlorophyll content index (CCCI) capability from remote sensing.

Ultimately the project will develop fertigation guidelines for growers to optimise whole tree nutrition and fertiliser management in order to increase orchard productivity and sustainability.

In a Royal Gala orchard on M26 rootstock in the Huon Valley, Tasmania, irrigation treatments (60, 100 and 160 per cent of grower irrigation practise) and fertigation infrastructure were installed to implement five N treatments. Preharvest treatments commenced in November 2012, and postharvest treatments were applied in late March 2013 and will continue throughout the life of the project.

In Shepparton East, the two long-term irrigation experiments in Royal Gala and Pink Lady of the Soils, Water, Nutrients project were sampled for leaf and woody tissue N status. Additional exploratory estimates of canopy chlorophyll content index from multispectral images immediately above the tree canopy were made at a similar time to leaf sampling. Preliminary results show no difference between the treatments.

Profitable pears: maximising productivity and quality of new pear varieties

Australian pear production has declined substantially driven by the loss in domestic and international markets. The Australian National Pear Breeding Program based at DEPI Tatura has developed unique varieties with the potential to recapture the markets for fresh pears.

This project (AP12002) aims to research and develop orchard management systems to maximise productivity three to four years after planting and sustain high yields of consistent quality fruit of these new varieties. Most of the research will be undertaken in the Pear Field Laboratory, a dedicated orchard at DEPI Tatura.

In the 2012/13 year, this project focused on investigating the:

- Mechanisms and effects of irrigation system and management on tree growth and precocity.
- Mechanisms and effects of rootstock, training system and planting density on tree growth, precocity, fruitfulness, yield and fruit quality.
- Relationships between fruit bud type and fruit quality, and the principles of artificial bud extinction.

Project AP09031, AP12002, AP12006 and AP12032

For more information contact:

Dr Dugald Close, TIAR
T 0419 386 288
E dugald.close@utas.edu.au
Export development is a primary objective of the apple and pear 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 Apple & Pear Australia Limited (APAL) to complete submissions to 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 apple and pear 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 the 12 months to December 2012, the apple and pear industry exported 11,363 tonnes of fruit, with a value of $18.06 million. Of this, 33 per cent were apples and 67 per cent were pears. These results were 43 per cent higher than 2011 for volume and 33 per cent higher by value.

Papua New Guinea, Indonesia and United Kingdom were the leading apple destinations, and Indonesia, New Zealand and Canada were the leading pear destinations. During the same period, 325 tonnes of apples were imported from China and New Zealand, and 1,582 tonnes of Asian pears imported from China worth $5.36 million combined.

China FVF trade fair and Taiwan market briefing

China World Fruit & Vegetable Trade Fair (China FVF), a major fresh produce trade fair in Beijing, China, concluded its fourth year in November 2012. It marked the second consecutive year that Australia Fresh participated in this show, with growing interest from the Australian horticulture export sector.

In addition to the five Australia Fresh members, Australia was the largest foreign representative at the event, with Citrus Australia and the Australian Lychee Growers Association also showcasing their produce under the Australian pavilion.

The program was developed with a view to represent Australia Fresh member industries and improve relations with key stakeholders in government and trade in China. The program was an outstanding success in terms of developing key contacts and furthering the interests of Australia Fresh members as well as increasing awareness and recognition for Australian produce.

Following the China visit, a second mission was organised for Australia Fresh member industry representatives to visit Taiwan. The program was implemented with a focus on exploring the Taiwanese fresh produce market and its viability for export, as well as building a network of buyers within the market. The program included a trade briefing with produce buyers and a supply chain tour through the retail markets in northern Taiwan. The supply chain tour was an educational activity for the Australia Fresh delegates as they gained a better understanding of the Taiwanese market and the opportunities that may be available to each of the industries represented.

Australia Fresh program members include the table grape, summerfruit, cherry, apple and pear, and avocado industries.

For more information on the upcoming trade activities in 2013, please contact Shanka Dharmaratne at info@australiafresh.com.au.

Project MT12502

For more information contact:
David Chenu, HAL
T 02 8295 2381
E david.chenu@horticulture.com.au
OBJECTIVE 2

Climate change

Apple and pear production in a changing climate

Mean temperatures in Australian apple growing regions are predicted to increase by 1.0–1.2°C and 0.7–0.9°C by 2030 for inland and coastal regions respectively.

It is currently unclear how the altered growing environment created by these potential temperate increases will impact pome fruit production across Australia.

This project is investigating ways to reduce the vulnerability of Australian apple and pear industries to changing climates. To achieve this, the project aims to understand the responses of apple and pear trees to the environment in order to predict crop responses to climate change and to develop strategies for growers to adapt.

One of the major activities of the project is the development of phenological models to predict bud burst and flowering times for the main commercial apple and pear varieties. Understanding how climate change may affect the timing of seasonal events such as bud burst, flowering and maturity is an important step in gaining an understanding of the potential impact of future growing environments.

In Victoria, the second project activity is investigating how netting can reduce radiation exposure, fruit surface temperature, and the incidence and severity of fruit sunburn.

Measurements in an apple orchard showed that netting reduced UV-B radiation by 30 per cent, whereas photosynthetically active radiation was reduced by 23 per cent. Daily maximum fruit surface temperatures were as much as 6°C lower under netting. Fewer fruit under netting reached temperature thresholds for occurrence of sunburn browning (46–49°C). Fruit under netting did not reach temperature thresholds for sunburn necrosis (52°C).

In Western Australia, a netting demonstration will compare the effect of different types of netting on the orchard environment, crop yield and fruit quality.

Results from these experimental activities will be drawn together by developing biophysical models, which will be combined with results from climate models to predict the implications for apple and pear growers under future climates.

A project extension component will combine project results with grower know-how and experience to develop adaptation strategies that ensure sustainable future production systems.

This is a collaborative project between the Department of Agriculture Fisheries and Forestry, Queensland, the Department Environment and Primary Industries, Victoria (DEPI Vic) and the Department of Agriculture and Food, Western Australia.

Project AP12029

For more information contact:
Dr John Wilkie, DAFF Qld
T 0402 390 885
E john.wilkie@daff.qld.gov.au

A close-up of an apple geared up for temperature monitoring by DEPI Vic scientists as part of research to determine the effectiveness of netting to reduce fruit surface temperature

A weather station and data logger for collection of environmental (weather) data, and the fruit surface temperature data
Developing new pome fruit products

New cultivars are seen as one of the best ways for industry to launch new, high-quality premium products that allow growers to capture an increased margin on their fruit. Australia, with its high labour costs, is unlikely to be able to compete on price in international markets or against low cost imports at home.

In response, the Australian industry’s strategy has been to create the Prevar program—a joint venture company owned by the Australian industry, the New Zealand industry and Plant and Food Research, which aims to develop new premium products, similar to Pink Lady, that will appeal to a different segment of the market and allow a higher retail price point.

Products in development include:

**Smitten** brand PremA17 apple: This is a high eating quality apple. During the year an exclusive Australian licence was signed with an Australian company.

**Honeymoon** brand PremA153 apple: This apple could be a replacement for Golden Delicious in Australia. A licence agreement, which includes an exclusive licence for Australia and a non-exclusive export licence, has now been signed.

**Rockit** brand PremA96 apple: This is a small, highly coloured, good eating apple, well suited to school lunch boxes or airline meals. The New Zealand master licensee has provided an exclusive licence to an Australian partner for the production of the variety in Australia.

**Velvetine** brand PremP33 pear: A non-exclusive licence has been signed for the Australian commercialisation of this pear.

**Papple** brand PremP109 pear. The master licensee AIGN has provided an exclusive licence for the production and marketing of this Japanese/Chinese pear cross cultivar in Australia.

**Interspecific pears**: Prevar is also creating a new fruit category (under the brand PIQA) for these interspecific (Chinese x Japanese x European) pears. Each cultivar in this family will have its own brand name (e.g. PIQABOO), that will work in tandem with the category brand.

The hybrid pears have excellent flavour, aroma, appearance, with excellent long storage and shelf life, and they are well suited to Asian export markets where initial shipments are sold at high prices. Worldwide, Prevar is aware of three or four similar breeding programs targeting these types of pears, but understands that the Prevar program is a decade in front of its competitors.

Overall, the Prevar program is delivering unique, high quality, premium apples and pears that are essential for the industry’s strategy of product differentiation based on quality, not price.

Project AP09035
For more information contact:
Garry Langford, APAL
T 03 6266 4344
E garry@ap/f_ip.com.au

Creating profitably with consumer-preferred scab-resistant apples – stage II

This Queensland-based, world-class apple breeding program is developing new varieties with resistance to apple scab (black spot) fungal disease.

The Kalei scab-resistant apple was released in 2012 and is attracting worldwide interest. Kalei is an attractive red apple that rates consistently high with consumers for appearance, flavour and texture.

An Australian Plant Breeders Rights application for a second apple selection, maturing immediately after Royal Gala, is also currently being finalised.

Consumer evaluations of four scab-resistant selections were conducted in Brisbane in March and April 2013 using Royal Gala, Red Delicious and Pink Lady for commercial comparison.

Forty advanced scab-resistant selections from an original population of 100,000 seedlings are being evaluated at Applethorpe Research Station, and four of these have been identified for inclusion in Australian Pome Fruit Improvement Program Ltd evaluation sites across Australia.

Project AP08041
For more information contact:
Dr Simon Middleton, DAFF Qld
T 07 4681 6126
E simon.middleton@daff.qld.gov.au

Kalei scab-resistant apple
Pear rootstock trial

This trial tested the suitability and adaptability of new pear rootstocks in Victoria’s Goulburn Valley, which is Australia’s major pear production region.

At the time of planting, it was believed that seedlings of Pyrus calleryana D6 were the best pear rootstock for the region due to its heavy soil. D6 produces large trees that are slow to begin cropping—it typically fruits in the fifth leaf. Accordingly, it is not a viable rootstock for modern, high-density, early-cropping pear orchards.

In 2004, Packham, Williams and Corella varieties were planted on four stocks: D6, Quince A with a Burre Hardy inter-stem, BP1 and BM2000.

In 2011, a small number of trees on DCA Fox 11 were planted using Tatura Trellis and Central Leader training systems.

The trial has run for eight years. While the performance of the rootstocks varies with both the scion variety and tree training system used, it’s now clear that Quince stocks perform well in the Goulburn Valley. Indeed, Quince A has been the standout rootstock, especially for Packham.

A significant development of the trial is that further work will be undertaken by the Department of Environment and Primary Industries, Victoria, in their Pear Field Laboratory planting at Tatura. This will look more closely at the interaction of some of the rootstocks used in this trial (e.g. Quince A, BP1, BM 2000), and the dwarfing stock Quince C, with the growth, yield and fruit quality of the new pear varieties ANP0118, ANP0131 and ANP0534.

Project AP10016
For more information contact:
Garry Langford, APFIP
T 03 6266 4344
E garry@apflp.com.au

Pear evaluation program – stage II

This project is evaluating the seedlings that were produced in the pear breeding program up until June 2010, when breeding operations finished.

During the 2012/13 year, which is the final year of this project, six breeding lines were promoted to commercial evaluation (ANP0534, ANP0711, ANP0644, ANP0648, ANP1001 and ANP0514). These selections are now in a number of the Australian Pome Fruit Improvement Program Limited evaluations sites, with ANP0534 in a larger trial in the Goulburn Valley.

Since the majority of pear selections ripen between late January and early March, any selections that ripen at the extremes of the pear season, with good appearance and/or eating quality have extra market potential. Several of these have been identified.

More than 600 breeding selections have been harvested in the 2013 season and will be assessed over the coming months.

Project AP11031
For more information contact:
Garry Langford, APAL
T 03 6266 4344
E glangford@apal.org.au

Commercialisation of pear varieties

This project provides for the commercialisation of two pear varieties—ANP0118 and ANP0131, bred in the Department of Environment and Primary Industries (DEPI) breeding program based at Tatura, Victoria.

ANP-0118 is an early pear that has a very attractive red blush and is ready to eat off the tree.

ANP-0131 is a late season pear. It has a red blush and outstanding eating qualities, even after storage and conditioning.

The trees are in large-scale, 100-tree evaluation sites in seven production regions throughout Australia. Even though these trees are now in their fourth leaf, fruit set has been very light at all sites, making commercial evaluation impossible. Pollination is the likely problem and this will be addressed in future seasons.

Brand names and getups (effectively brand logos) have been developed in a specialised process and protected as trademarks. Apple & Pear Australia Limited does not wish to publicise the names until a final decision on commercialisation is made.

Propagators (nurseries) have been selected and the overseas evaluation of the varieties is progressing.

With fruit from DEPI Tatura, consumer evaluation is being conducted on the fruit, names and getups of both varieties. The comparator variety for ANP-0118 is Williams. For ANP-0131, the comparator is Packham.

Project AP09026
For more information contact:
Garry Langford, APAL
T 03 6266 4344
E glangford@apal.org.au
OBJECTIVE 4
Market access and biosecurity

Protecting pollination

The Pollination Program manages a number of research projects, with the aim of securing the future of Australia’s horticultural and agricultural crop pollination on a sustainable and profitable basis. The program is a jointly funded partnership with the Rural Industries Research and Development Corporation (RIRDC), Horticulture Australia Limited (HAL) and the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF).

The impact of an exotic pest or disease incursion is considered to be the most significant risk to the beekeeping industry, and in turn, the industries reliant on pollination. One of the key threats is Varroa mite, and much of the activity in the years the program has been running has focused on this pest. If Varroa mite, or similar bee pests reach Australian shores and becomes entrenched, it is expected to cost between $21 million and $50 million per year over 30 years. The loss of pollination by both managed and wild European honeybees has the potential to impact a range of fruits, vegetables and pastures.

Achievements of the program to date include:

- The release of the report Future Surveillance Needs for Honeybee Biosecurity, which confirmed exotic bee pests to have the potential to reach Australia onboard ships and their cargoes.
- A simulation exercise which tested the likely impact of Varroa mite, which brought together biosecurity regulators from both plant and animal industries. After participating in the exercise, regulators confirmed how difficult Varroa mite would be to eradicate and acknowledged the flow-on impact to horticultural and other plant industries.
- The launch of the report Pollination Aware in August 2010, which highlighted the risks associated with Australia’s reliance on incidental pollination, and the benefits to yield and quality if plants are pollinated at optimal levels. Major steps were made in quantifying the value of pollination to each of the 35 key industries, and the likely demand for paid pollination services if Varroa wipes out incidental pollination.
- A gathering of industry experts in Canberra to investigate both chemical and non-chemical options for the control of Varroa mite. International experts also provided a perspective on the experiences of other countries in their management and mismanagement of Varroa.
- A pollination manual has also been written to provide practical advice for Australian and New Zealand beekeepers and the many growers reliant on them for crop production. The manual will provide straightforward information that readers can readily apply to optimise pollination and promote good pollination practices.

Throughout 2012/13, several projects are continuing their work to raise awareness of the importance of pollination and the need to plan and prepare for Varroa mite:

- In recognition of the importance of ports in detecting bee pests, the Bee Force trial has been set up around the ports of Melbourne, Geelong and Avalon, giving a number of urban beekeepers a role in providing surveillance of exotic pests.
- Applications are being prepared, seeking permits from the Australian Pesticides and Veterinary Medicines Authority (APVMA) to allow the use of three Varroa mite control products currently available in New Zealand. These approvals will be held in ‘reserve’, for use in the event of an incursion.
- Communication, including pollination education, extension and capacity building.

In addition to planning and preparation, the program is working in the following areas:

- Work closely with the federal government to develop a honeybee industry and pollination continuity strategy, should Varroa mite become established in Australia.
- Plant Health Australia (PHA) is working closely with the honeybee and pollination industries to develop an Apiary Industry Biosecurity Manual. The manual aims to reduce the risk of exotic and established pests impacting a number of bee and pollination-reliant industries.

RIRDC funds for the program are provided by the Honeybee Research and Development Program, with industry levies matched by funds provided by the Australian Government. Funding from HAL for the program is from the apple and pear, almond, avocado, cherry, vegetable and summerfruit levies, and voluntary contributions from the dried prune and melon industries, with matched funds from the Australian Government.

For more information, visit www.rirdc.gov.au/pollination.
Biosecurity implementation

Through this project, a Honey Bee Industry Biosecurity Plan, a Biosecurity Manual for the Honey Bee Industry, four pest-specific contingency plans and a Biosecurity Online Training module have been made available.

The development of these documents was a collaborative effort between the Australian Honey Bee Industry Council (AHBIC) and PHA. The Industry Biosecurity Group, which consists of experts from government agencies and industry, provided valuable input while these documents were under review.

The documents and the pre-emptive planning process boosted the honey bee and pollinator-reliant plant industries’ capacity to deal with the threat of new pests. It places these industries on the front foot in identifying and minimising risks, and heightens the capacity to respond quickly and effectively to emergency plant pest incursions.

National bee pest surveillance workshop

This two-day workshop brought together the AHBC, DAFF, RIRDC, HAL and representatives from every state and territory government, as well as honey bee scientists and pollinator-reliant industries to determine what the National Bee Pest Surveillance Program should contain, and how it could be funded. This workshop benefited both the honey bee industry and plant industries dependent on honey bees for pollination.

The workshop effectively delivered a continued-funding model for the program post-June 2013, and widened the scope of the surveillance strategy to target bee pests and pest bees. This will increase the chance of early detection of bee pests and pest bees, thus increasing the chances of mounting an effective eradication program.

Project MT10058 and MT11034

For more information contact:
Rodney Turner, PHA
T 02 6215 7720
E rturner@phau.com.au

Surveillance of Asian honey bees

Exotic bees and their associated exotic parasites pose a significant threat to the Australian bee industry and to agriculture generally, where European honey bees provide a valuable pollination service worth between four and six billion dollars.

Traditional surveillance of exotic bee pests is costly, and in some cases may not be as effective as we might expect. One solution is to develop and deploy auto-reporting devices for bee detection that are cheap and efficient, require little maintenance, report detections in real-time around the clock, and can be located in great numbers throughout the entry pathways for exotic bees. This project undertook to design and build prototypes for two different remote sensing devices for monitoring bees and reporting the data via satellite. These devices are to be tested in field situations as a proof of concept.

Two prototypes have been constructed and lab tested. One is designed to be placed on cargo vessels to attract and trap bees. Sensors in the trap will detect the bee and send an alert via satellite to a monitoring website. The vessel can then be intercepted prior to entering the local port.

The second prototype is a bee feeding station equipped with sensors that will monitor bee species that visit the feeding station and transmit data via satellite to a central monitoring website. Bees will not be trapped in this device. Instead audio signals and images will be captured to verify species identification. This remote sensing feeding station will be deployed on land, in high-risk entry pathways and following an incursion to monitor the spread and colonisation patterns of the exotic bees.

The project is currently in the field testing and evaluation phase, with both prototypes being deployed for the first stages of field testing. Further testing and refinement of the design and construction will follow until the project end date on 30 June 2013.

Project MT11033

For more information contact:
Gary Kong, PBCRC
T 0423 024 118
E g.kong@crcplantbiosecurity.com.au

Remote sensing of beehives to improve surveillance

Conventionally, bait boxes installed at Australian ports for the purpose of attracting and intercepting pest bees have been inspected manually by apiary officers. Honey bee biosecurity would be greatly enhanced by automatic surveillance of bait boxes.

This project developed a proof-of-concept image analysis-based remote sensing system that automatically detects when a swarm of bees has entered a bait box. Image analysis has been demonstrated to reliably indicate the presence of a swarm inside a bait box during controlled testing. A low-cost smartphone inside the bait box...
acts as the remote camera surveillance platform that autonomously performs image capture, analysis and remote notification.

Prototype bait boxes with remote camera surveillance and solar power have been installed in Brisbane and Cairns ports, and have been operating reliably and without human intervention throughout 2012/13.

A follow on project is recommended for further refinement and provisional deployment of multiple bait boxes, prior to large-scale deployment of the system.

**Project MT10063**

For more information contact:
Cheryl McCarthy, NCEA
T 07 4631 2297
E cheryl.mccarthy@usq.edu.au

---

**OHMA operational support 2012–2015**

This is a three-year industry and across industry funded pay-on-invoice project to support the activities of the Office of Horticulture Market Access (OHMA) Committee to improve market access and export growth for Australian horticulture into markets which are closed or inhibited by quarantine or tariff barriers.

It supports the operational activities of OHMA, including travel of members to and from meetings, printing of meeting papers, fees payable to independent chair, and overseas travel related to the OHMA chair and other committee members as approved by Horticulture Australia Limited.

The project commenced in-line with the first OHMA meeting, held Canberra on 27 February 2013. Two or three more OHMA meeting are expected to occur throughout 2013.

**Project MT12028**

For more information contact:
Kim James, HAL
T 08 6488 2209
E kim.james@horticulture.com.au
OHMA Market Access Manager 2012–2015

The Office of Horticultural Market Access (OHMA) is an industry-based committee of Horticulture Australia Limited which has been established to provide industry advice to government agencies for the negotiation of quarantine and non-quarantine market access. OHMA aims to maximise the opportunities for Australian horticultural market access through involvement under the following three key pillars:

• Raise the profile of Australian horticulture by developing target market relationships with an industry focus as commercial market access drivers.
• Provide strong support to official access negotiations.
• Identify, support and guide R&D into market access.

The role, which is funded by project MT12029, aims to work with industry to identify and set priorities and strategies for market access, to develop and maintain close working relationships with relevant government bodies involved in market access negotiations in order to effectively represent horticulture industry views to government, and communicate market access issues and outcomes back to industry.

In the 2012/13 financial year, Chris Langley was appointed as the new OHMA Market Access Manager. Since taking up the role in October 2012 he has worked to develop relationships with key exporting industries and government departments involved in the market access process. Langley has represented horticulture at trade briefings in Canberra, at the bilateral agricultural working group with Indonesia and at Free Trade Agreement (FTA) negotiations for the Trans Pacific Partnership.

Langley has assisted Apple & Pear Australia Limited (APAL) in preparing a market access application for improved access to Canada; he made a presentation on market access issues to apple growers in Batlow as part of the APAL/Victorian Department of Environment and Primary Industries’ Asian Export Market Development project and has contributed to the development of a new export development strategic plan for apples and pears.

The OHMA Committee itself will meet three times during this reporting period, during which time it works closely with the Department of Agriculture, Fisheries and Forestry to progress priority access applications, assess new market access requests and provide industry input into priorities for FTA negotiations and other issues such as the proposed a fruit fly workshop with China.

Project MT12029
For more information contact:
Chris Langley, Langley Consulting
T 0498 723 103
E chris@langleyconsulting.com.au

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
For more information contact:
Kim James, HAL
T 08 6488 2209
E kim.james@horticulture.com.au
Australia Fresh core program

Australia Fresh core program is an export trade development initiative funded by the apple and pear, avocado, cherry, summerfruit and table grape industries.

The program strategy addresses significant export issues raised by Australian horticulture industry bodies, including the development of cost effective export market initiatives and improving Australia’s export competitiveness and market presence in overseas markets.

The core program unifies industries’ export priorities and aims to build greater export efficiencies and capability by successfully facilitating industries and stakeholders to share their resources. The program facilitates knowledge and expertise transfer by employing a ‘Team Australia’ approach in export markets, in turn delivering added value and incremental benefits to participants through the core program as well as other add on export activities.

The program aims to:

• Provide stronger market intelligence to identify and secure new opportunities so member industries, growers and exporters can compete and succeed in foreign markets.
• Enhance and strengthen business links between Australia and overseas markets by establishing the profile of Australian horticulture industries, and increase awareness of industry capability in these international markets.
• Develop and implement programs to address member industry priorities, including international trade shows, training seminars, online and offline promotions, and in-market consumer promotions.
• Leverage the resources of each participating industry, trade organisations (e.g. Australian Horticultural Exporters Association and Austrade) and commercial exporters in raising the profile of Australian horticulture to effectively expand commercial pathways to trade.

To date, a number of key activities have been completed in this fiscal year, as a direct result of the coordination and organisation through the Australia Fresh core program, including:

• Tradeshow participation at Asia Fruit Logistica (Hong Kong) and China FVF (Beijing).
• Two trade missions and briefings in China (Beijing) and Taiwan (Taipei).
• Export market intelligence and trade analysis for members on key export markets.
• Organisation of the annual horticulture export symposium (Sydney).
• Regular e-newsletters and trade communication to industry and export stakeholders.

A third trade mission is has been organised with Australian member industries and exporters focused on the ASEAN region in late June 2013. These activities compliment the core program member priorities and objectives, and maximises the unified approach to building a greater international presence for Australian horticulture.

A complete final report will be made available to each of the participating industries in the coming months once all activities are completed.

Project MT12032
For more information contact:
David Chenu, HAL
T 02 8295 2381
E david.chenu@horticulture.com.au

Understanding the purchase behaviour of fresh produce consumers

Reliable information on consumer purchase patterns helps the apple and pear industry to gain a better understanding of shopping behaviour and empowers better demand and promotion planning throughout the year.

Nielsen’s Homescan Consumer Panel has been designed to monitor and understand household purchasing of packaged grocery and fresh produce. With 10,000 demographically representative households, their Australian panel is now the second largest panel per capita in the world, providing household level data on a continuous basis.

In the analysis prepared for the apple and pear industry, this vital market information is being used to track performance and demographic consumption, and to help define strategies to improve the industry’s sales performance.

In the latest figures based on a 52-week ending moving annual total, nine out of 10 Australian households purchased apples, and the average Australian household is now buying apples 14 times per year. In addition, ‘bustling families’ are the most important lifestage buyer groups from a value sales contribution perspective.

Project MT12010
For more information contact:
Sandeep Chahal, The Nielsen Company
T 0414 671 417
E sandeep.chahal@nielsen.com
Modern production techniques for the Victorian Goulburn Valley pome fruit industry

The Goulburn-Murray region and north eastern and southern Victorian contain a large number of orchards seeking to improve production capacity and profitability. This project targeted increasing tree planting density and quality of produce to orchards without advanced orchard infrastructure, as orchard management practices remain the single most critical factor in improving profitability for certain varieties.

The project assisted growers to address the challenges facing them through the many technology transfer outcomes through:

• A study tour for Gippsland fruit growers, which helped local growers establish their own orchard variety breakup and potential import threat from New Zealand.

• Pest and disease expertise from Industry Development Officers (IDOs) assisted growers identify potential problems and control methods.

• Facilitation of Apple & Pear Australia Limited (APAL) initiatives such as the Future Orchards project.

• One-on-one visits to growers taking initiative to follow the Future Orchards model are integral for technology transfer uptake.

• Pest and disease expertise from IDOs assisted growers identify potential problems and control methods.

Increased grower interaction with the Future Orchards project was achieved throughout 2012/13, with pear growers seeking dwarfing rootstocks for future pear plantings. A key focus will be in pear orchards in the near future, with nurseries looking to increase stock of quince rootstocks to supply Goulburn-Murray orchardists.

More research is required in the suitability of pear variety and rootstock combinations, as well as the adaptability of these reduced vigour stocks to high temperatures in the Goulburn-Murray region.

Apple plantings in southern Victoria are looking to further reduce crop loss risk by establishing orchard cooling systems. More research is required on harlequin bug as a pest in apple orchards.

Pear export marketing and increased access is essential to reducing oversupply pressure on the domestic market. Data collection of orchard variety and the structure of Victorian orchards will be a future focus for both IDOs.

Project AP10019
For more information contact:
Michael Crisera, Fruit Growers Victoria Ltd
T 0418 379 746
E fido@fgv.com.au
Future Orchards – III

The Australian apple and pear industry has a pressing need to increase its international competitiveness, especially in the light of possible increased imports and the concurrent need to increase exports.

Future Orchards III is designed to address issues that impede increased efficiency, and to demonstrate and discuss international best practice.

This project, which began in 2006, attracts funding support as it has proved the most effective method of communicating new production methods to the widest possible group of industry participants.

The project engages directly with growers with twice-yearly orchard walks in all major growing districts, regular webinars, monthly articles in Australian Fruitgrower magazine and through an appointed network of local front line advisors.

AgFirst of New Zealand is a specialist horticulture services provider and leads the project. Each orchard walk includes guest experts from Australia and overseas.

Other aspects of the project include:

- The use of Focus Orchards to provide modelling for what is possible in Australia.
- Gathering extensive orchard data for use in an Orchard Business Analysis.

- Gathering tree development data for year-to-year and district-to-district comparisons of tree performance.
- Local consultation.
- Local orchard trials.

This project, together with all its previous iterations has produced some marked improvements in growing efficiency, availability of information and awareness of the apple and pear industry in countries that are leading production development.

In addition, many Australian growers can consider themselves as adhering to international best practice. Continued support of projects with similar aims will deliver significant improvements in the long term.

Project AP11017

For more information contact:
Jesse Reader, APAL
T 02 8295 2327
E jreader@apal.org.au
Apple and pear industry communications

Apple & Pear Australia Limited (APAL) invests considerable time and resources to try to ensure growers and industry are abreast of emerging trends, issues, markets and key activities.

This communication project employs a wide range of tools to provide growers with business-critical information to increase their knowledge of the market in which they operate.

The information is delivered in a timely manner and covers all aspects of on-farm production: orchard management, biosecurity and chemical use to name a few.

Some of the communications include but aren’t limited to: Australian Fruitgrower magazine, delivered monthly; Apple and Pear World News, a weekly summary of media coverage of industry issues; Industry Juice, an e-newsletter providing more than 400 subscribers with news on APAL activities; media releases on industry issues; and the APAL website, an information hub.

Communication tools were overhauled in 2012, with particular attention paid to the e-newsletter and website. The overhaul sought to improve readability, content, functionality and greater interactivity.

As a result, APAL launched a new website in June 2013 to provide growers with improved information to help industry make business decisions based on best practice.

Project AP12013
For more information contact:
Sarah Kulman, APAL
T 03 9329 3511
E skulman@apal.org.au

InfoPome – data and analysis

Access to accurate and timely data is essential for businesses to make informed decisions. Growers, packers and exporters need to know what stock is available in storage month-by-month across the country.

Market inventory intelligence enables businesses to decide when to hold or sell stock, and allows the industry as a whole to better understand the national crop levels. Having access to this data can also contribute to export decision making.

Apple & Pear Australia Limited, via the InfoPome stock system, surveys coolstores across the country every month. Coolstore managers enter their stock figures by variety. These figures are collated and reported in aggregate then distributed to industry.

Without a centralised system it would be very difficult to have a thorough understanding of what was available in other states.

In excess of 50 new coolstores were added to the system for the start of the 2013 season. This is helping to improve the accuracy and reliability of data by smoothing out fluctuations. It is essential that coolstores enter accurate data, not just estimates, so that data quality is improved for the entire industry.

Project AP11033
For more information contact:
Claire Fitchett, APAL
T 03 9329 3511
E cfitchett@apal.org.au

Deciduous Tree Fruit Industry Conference 2013

The apple and pear industry conference is held every second year and seeks to provide growers with an insight into the future of the fruit industry. This year Apple and Pear Australia Limited (APAL) will take a different approach to generate maximum grower engagement.

APAL has joined forces with Summerfruit Australia Limited and the Australian Nashi Growers Association.

Together the four industries will deliver a three-day program that will focus on innovation. Appropriately titled ‘Innovate or Real-Estate’, the program will engage participants with a conversation about the current operating environment.

Key speaker topics will focus on the development of new varieties, orchard automation, export and new market opportunities, germ plasm and food innovations.

Innovation will feature prominently throughout the conference program. The conference will be held 17–19 July 2013 in Queensland’s Gold Coast.

Project MT12703
For more information contact:
Sarah Kulman, APAL
T 03 9329 3511
E skulman@apal.org.au
Overseas study tour

The Australian apple industry currently exports less than two per cent of marketable crop. This is primarily due to the domestic market offering better returns for growers than export markets in recent years. However, with domestic prices softening and the opening of new export markets, the industry is beginning to re-engage with exports to help maintain its competitiveness and viability.

The overseas study tour was designed to give Australian apple growers and exporters first-hand insight into key Asian export markets. The tour helped participants to:

- Understand market requirements, including importation requirements and labelling.
- Understand consumer preferences, such as colour, size and taste profile.
- Analyse what Australia’s competitors are doing in market, including both northern and southern hemisphere providers, to see what can be learnt from them.
- Understand and articulate Australia’s competitive advantage, specifically where Australia’s niche is in the Asian market place.
- Develop meaningful relationships with the people who will support Australia’s export sales in to Asia.

Return on investment evaluation program

The apple and pear program evaluation was part of a series of economic impact assessments being completed by Horticulture Australia Limited (HAL) for the Australian Government. The evaluation provided objective evidence of the return to growers and taxpayers from levy-funded research and development across five clusters of apple and pear projects:

- Plant health.
- Crop production and environment.
- Breeding and biotechnology.
- Market development.
- Biosecurity and market access.

The draft evaluation of these clusters identified positive benefit-cost ratios of between 2.2 and 5.5. These results fall well within the bands for agriculture in general, which are typically within a band of between two and 12. A benefit cost ratio of 2.2 means that for every dollar invested by HAL and others, $2.20 was or will be returned to apple and pear levy payers and/or the Australian community.

Project AP10006
For more information contact:
Michael Clarke, AgEconPlus Pty Ltd
T 0438 844 024
E clarke@ageconplus.com.au

Project AP11708
For more information contact:
Claire Fitchett, APAL
T 03 9329 3511
E cfitchett@apal.org.au
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.

Consultation funding

The consultation agreement between Apple & Pear Australia Limited (APAL) and 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 apple and pear industry’s R&D levy and matched funds from the Australian Government.

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

The consultation funding expenditure for APAL for 11 months from 01 July 2012 was $479,938. This represents 7.3 per cent of the total annual levy expenditure. Consultation funding in respect of R&D represents 9.4 per cent of the investment in R&D expenditure and consultation funding in respect of marketing represents 5.2 per cent of the investment in marketing expenditure.

Project AP12910

For more information contact:
Jon Durham, APAL
T 03 9329 3511
E jdurham@apal.org.au

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 apple and pear 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.

- **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.
- **Climate variability and climate change**: 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.
The apple and pear 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.

### ACROSS INDUSTRY PROGRAM

<table>
<thead>
<tr>
<th>Project no.</th>
<th>Rural R&amp;D priorities</th>
<th>Project title</th>
<th>Levy or VC</th>
<th>Project start</th>
<th>Project finish</th>
<th>Life of project value</th>
<th>2012/13 YTD* expenditure</th>
<th>Organisation</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>AH12009</td>
<td></td>
<td>Partnering fresh produce with retail: quality assurance harmonisation – phase I</td>
<td>Levy</td>
<td>1/08/12</td>
<td>31/05/13</td>
<td>$143,500</td>
<td>$143,500</td>
<td>Kitchener Partners</td>
<td>Tristan Kitchener 0407 827 738</td>
</tr>
<tr>
<td>AH12010</td>
<td></td>
<td>Partnering fresh produce with retail: joint working groups</td>
<td>Levy</td>
<td>1/08/12</td>
<td>30/10/13</td>
<td>$274,475</td>
<td>$201,722</td>
<td>Kitchener Partners</td>
<td>Tristan Kitchener 0407 827 738</td>
</tr>
<tr>
<td>AH12016</td>
<td></td>
<td>Partnering fresh produce with retail: quality assurance harmonisation – phase II</td>
<td>Levy</td>
<td>15/05/13</td>
<td>30/06/15</td>
<td>$307,271</td>
<td>$97,461</td>
<td>Kitchener Partners</td>
<td>Tristan Kitchener 0407 827 738</td>
</tr>
<tr>
<td>VG11019</td>
<td></td>
<td>Hortstats database: maintenance</td>
<td>Levy</td>
<td>1/01/12</td>
<td>31/05/13</td>
<td>$30,000</td>
<td>$4,000</td>
<td>Australian Bureau of Agricultural &amp; Resource Economics</td>
<td>Matthew Miller 02 6272 3527</td>
</tr>
</tbody>
</table>

### Objective 1: To enhance the efficiency, transparency, responsiveness and integrity of the supply chain

<table>
<thead>
<tr>
<th>Project no.</th>
<th>Rural R&amp;D priorities</th>
<th>Project title</th>
<th>Levy or VC</th>
<th>Project start</th>
<th>Project finish</th>
<th>Life of project value</th>
<th>2012/13 YTD* expenditure</th>
<th>Organisation</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>AH11016</td>
<td></td>
<td>Partnership Program with Dieticians Association of Australia</td>
<td>Levy/VC</td>
<td>1/10/11</td>
<td>30/06/13</td>
<td>$180,000</td>
<td>$90,000</td>
<td>Dieticians Association of Australia</td>
<td>Jodie McHenery 02 4954 4964</td>
</tr>
</tbody>
</table>

### Objective 2: Maximise the health benefits of horticultural products

<table>
<thead>
<tr>
<th>Project no.</th>
<th>Rural R&amp;D priorities</th>
<th>Project title</th>
<th>Levy or VC</th>
<th>Project start</th>
<th>Project finish</th>
<th>Life of project value</th>
<th>2012/13 YTD* expenditure</th>
<th>Organisation</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>AH11014</td>
<td></td>
<td>Leadership training: industry development for professionals</td>
<td>Levy</td>
<td>1/04/12</td>
<td>31/12/12</td>
<td>$6,586</td>
<td>$4,000</td>
<td>Horticulture Australia Limited</td>
<td>Peter Melville 02 8295 2317</td>
</tr>
<tr>
<td>AH11036</td>
<td></td>
<td>Industry Development Forum 2012</td>
<td>Levy</td>
<td>1/04/12</td>
<td>31/10/12</td>
<td>$35,591</td>
<td>$34,773</td>
<td>Horticulture Australia Limited</td>
<td>Dr Alison Anderson 02 8295 2316</td>
</tr>
<tr>
<td>AH11039</td>
<td></td>
<td>Horticulture Leaders – Across Horticulture Leadership Training</td>
<td>Levy/VC</td>
<td>15/05/12</td>
<td>29/01/13</td>
<td>$136,250</td>
<td>$81,750</td>
<td>Strategic Business Development Pty Ltd</td>
<td>Russell Cummings 0414 929 585</td>
</tr>
<tr>
<td>AH12012</td>
<td></td>
<td>Technical, secretarial and operational services for the NWPPA desktop study</td>
<td>Levy</td>
<td>22/08/12</td>
<td>31/05/13</td>
<td>$11,000</td>
<td>$0</td>
<td>Plant Health Australia</td>
<td>Nicholas Woods 02 6125 7704</td>
</tr>
<tr>
<td>AH12015</td>
<td></td>
<td>Food Innovation Hub</td>
<td>Levy</td>
<td>8/05/13</td>
<td>31/08/13</td>
<td>$28,166</td>
<td>$0</td>
<td>Food Innovation Partners</td>
<td>Russel Rankin 07 3289 4591</td>
</tr>
<tr>
<td>MT12029</td>
<td></td>
<td>Horticultural Market Access Manager 2012-2015</td>
<td>Levy/VC</td>
<td>1/10/12</td>
<td>30/09/15</td>
<td>$613,500</td>
<td>$86,670</td>
<td>Langley Consulting</td>
<td>Chris Langley 0498 723 103</td>
</tr>
</tbody>
</table>

### Objective 3: Position horticulture to compete in a globalised environment

<table>
<thead>
<tr>
<th>Project no.</th>
<th>Rural R&amp;D priorities</th>
<th>Project title</th>
<th>Levy or VC</th>
<th>Project start</th>
<th>Project finish</th>
<th>Life of project value</th>
<th>2012/13 YTD* expenditure</th>
<th>Organisation</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>AH10008</td>
<td></td>
<td>Future Focus: ongoing activities</td>
<td>Levy</td>
<td>7/03/11</td>
<td>24/10/12</td>
<td>$109,000</td>
<td>$201,722</td>
<td>Centre for International Economics</td>
<td>Derek Quirke 02 6245 7800</td>
</tr>
<tr>
<td>AH11009</td>
<td></td>
<td>Autonomous perception systems for horticulture tree crops</td>
<td>Levy</td>
<td>1/05/12</td>
<td>27/11/15</td>
<td>$599,500</td>
<td>$97,461</td>
<td>University of Sydney</td>
<td>Dr Salah Sukkarieh 02 9351 8154</td>
</tr>
<tr>
<td>AH11014</td>
<td></td>
<td>Leadership training: industry development for professionals</td>
<td>Levy</td>
<td>1/04/12</td>
<td>31/12/12</td>
<td>$6,586</td>
<td>$4,000</td>
<td>Horticulture Australia Limited</td>
<td>Peter Melville 02 8295 2317</td>
</tr>
<tr>
<td>AH11036</td>
<td></td>
<td>Industry Development Forum 2012</td>
<td>Levy</td>
<td>1/04/12</td>
<td>31/10/12</td>
<td>$35,591</td>
<td>$34,773</td>
<td>Horticulture Australia Limited</td>
<td>Dr Alison Anderson 02 8295 2316</td>
</tr>
<tr>
<td>AH11039</td>
<td></td>
<td>Horticulture Leaders – Across Horticulture Leadership Training</td>
<td>Levy/VC</td>
<td>15/05/12</td>
<td>29/01/13</td>
<td>$136,250</td>
<td>$81,750</td>
<td>Strategic Business Development Pty Ltd</td>
<td>Russell Cummings 0414 929 585</td>
</tr>
<tr>
<td>AH12012</td>
<td></td>
<td>Technical, secretarial and operational services for the NWPPA desktop study</td>
<td>Levy</td>
<td>22/08/12</td>
<td>31/05/13</td>
<td>$11,000</td>
<td>$0</td>
<td>Plant Health Australia</td>
<td>Nicholas Woods 02 6125 7704</td>
</tr>
<tr>
<td>AH12015</td>
<td></td>
<td>Food Innovation Hub</td>
<td>Levy</td>
<td>8/05/13</td>
<td>31/08/13</td>
<td>$28,166</td>
<td>$0</td>
<td>Food Innovation Partners</td>
<td>Russel Rankin 07 3289 4591</td>
</tr>
<tr>
<td>MT12029</td>
<td></td>
<td>Horticultural Market Access Manager 2012-2015</td>
<td>Levy/VC</td>
<td>1/10/12</td>
<td>30/09/15</td>
<td>$613,500</td>
<td>$86,670</td>
<td>Langley Consulting</td>
<td>Chris Langley 0498 723 103</td>
</tr>
</tbody>
</table>

### Objective 4: Achieve long term viability and sustainability for Australian horticulture

<table>
<thead>
<tr>
<th>Project no.</th>
<th>Rural R&amp;D priorities</th>
<th>Project title</th>
<th>Levy or VC</th>
<th>Project start</th>
<th>Project finish</th>
<th>Life of project value</th>
<th>2012/13 YTD* expenditure</th>
<th>Organisation</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>AH09003</td>
<td></td>
<td>Plant protection: regulatory support and coordination</td>
<td>Levy</td>
<td>1/07/09</td>
<td>30/05/14</td>
<td>$995,061</td>
<td>$187,800</td>
<td>AKC Consulting Pty Ltd</td>
<td>Kevin Bodnaruk 02 9499 3833</td>
</tr>
<tr>
<td>AH09014</td>
<td></td>
<td>Across industry climate RD&amp;E activities</td>
<td>Levy</td>
<td>13/04/10</td>
<td>29/11/13</td>
<td>$75,126</td>
<td>$647</td>
<td>Horticulture Australia Limited</td>
<td>Peter Melville 02 8295 2317</td>
</tr>
<tr>
<td>AH10003</td>
<td></td>
<td>Horticulture component of the National Climate Change Research Strategy for Primary Industries</td>
<td>Levy</td>
<td>30/11/11</td>
<td>3/05/16</td>
<td>$225,000</td>
<td>$22,500</td>
<td>Horticulture Australia Limited</td>
<td>Peter Melville 02 8295 2317</td>
</tr>
<tr>
<td>AH10006</td>
<td></td>
<td>Pesticide spray drift in horticulture: a response to new guidelines from the APVMA</td>
<td>Levy</td>
<td>1/07/10</td>
<td>31/05/13</td>
<td>$20,000</td>
<td>$1,966</td>
<td>Horticulture Australia Limited</td>
<td>Jodie Pedrana 0404 314 751</td>
</tr>
<tr>
<td>AH11005</td>
<td></td>
<td>Horticulture Environmental Desk Audit</td>
<td>Levy</td>
<td>30/11/11</td>
<td>10/12/12</td>
<td>$50,000</td>
<td>$10,000</td>
<td>Growcom</td>
<td>Jane Muller 07 3213 2483</td>
</tr>
<tr>
<td>AH11006</td>
<td></td>
<td>Carbon amelioration in horticulture</td>
<td>Levy</td>
<td>1/12/11</td>
<td>31/08/12</td>
<td>$78,010</td>
<td>$36,510</td>
<td>Department of Primary Industries</td>
<td>Justine Cox 0438 770 187</td>
</tr>
</tbody>
</table>
### ACROSS INDUSTRY PROGRAM

<table>
<thead>
<tr>
<th>Project no.</th>
<th>Rural &amp; R&amp;D priorities</th>
<th>Project title</th>
<th>Levy or VC</th>
<th>Project start</th>
<th>Project finish</th>
<th>Life of project</th>
<th>2012/13 YTD* expenditure</th>
<th>Organisation</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>AH11007</td>
<td></td>
<td>Developing a LCI database for Australian agriculture</td>
<td>Levy</td>
<td>2/01/12</td>
<td>1/10/13</td>
<td>$20,000</td>
<td>$0</td>
<td>Rural Industries R&amp;D Corporation</td>
<td>Peter Melville 02 8295 2317</td>
</tr>
<tr>
<td>AH11008</td>
<td></td>
<td>Horticulture response to APVMA spray drift regulations</td>
<td>Levy</td>
<td>20/12/11</td>
<td>30/05/13</td>
<td>$70,000</td>
<td>$0</td>
<td>Joint RDC collaboration</td>
<td>Jodie Pedrana 0404 314 751</td>
</tr>
<tr>
<td>AH11010</td>
<td></td>
<td>Biotechnology awareness in horticulture</td>
<td>Levy</td>
<td>10/10/11</td>
<td>31/05/13</td>
<td>$130,000</td>
<td>$38,842</td>
<td>Horticulture Australia Limited</td>
<td>Dr Alok Kumar 0418 322 070</td>
</tr>
<tr>
<td>AH11011</td>
<td></td>
<td>Horticulture funding of the CRC for plant biosecurity</td>
<td>Levy</td>
<td>30/06/12</td>
<td>30/05/18</td>
<td>$3,000,000</td>
<td>$500,000</td>
<td>CRC For National Plant Biosecurity</td>
<td>Dr Simon McKirdy 02 6201 2882</td>
</tr>
<tr>
<td>AH11029</td>
<td></td>
<td>Provision of independent technical and secretarial services to the NWPPA</td>
<td>Levy</td>
<td>20/12/11</td>
<td>31/05/13</td>
<td>$50,000</td>
<td>$0</td>
<td>Plant Health Australia</td>
<td>Nicholas Woods 02 6215 7704</td>
</tr>
<tr>
<td>AH12008</td>
<td></td>
<td>Australian Horticulture Export Symposia 2012</td>
<td>Levy</td>
<td>1/07/12</td>
<td>30/05/13</td>
<td>$40,000</td>
<td>$31,570</td>
<td>Horticulture Australia Limited</td>
<td>David Chenu 02 8295 2381</td>
</tr>
<tr>
<td>AH12017</td>
<td></td>
<td>Feasibility Study: all-of-horticulture peak representative body</td>
<td>Levy</td>
<td>1/05/13</td>
<td>30/06/14</td>
<td>$30,000</td>
<td>$0</td>
<td>Horticulture Australia Limited</td>
<td>Dr Alison Anderson 02 8295 2316</td>
</tr>
<tr>
<td>MT10029</td>
<td></td>
<td>Managing pesticide access in horticulture</td>
<td>Levy</td>
<td>1/07/10</td>
<td>2/07/15</td>
<td>$1,674,450</td>
<td>$153,750</td>
<td>AgAware Consulting Pty Ltd</td>
<td>Peter Dal Santo 03 5439 5916</td>
</tr>
<tr>
<td>MT10049</td>
<td></td>
<td>A multi-target approach to fruitspotting bug management</td>
<td>Levy</td>
<td>1/03/11</td>
<td>1/04/16</td>
<td>$1,310,000</td>
<td>$38,333</td>
<td>Department of Primary Industries</td>
<td>Dr Ruth Huwer 02 6626 1196</td>
</tr>
<tr>
<td>MT10066</td>
<td></td>
<td>Project coordination for MT10049</td>
<td>Levy</td>
<td>14/03/11</td>
<td>31/05/13</td>
<td>$40,000</td>
<td>$1,448</td>
<td>RCR Agri Pty Ltd</td>
<td>Chasely Ross 0409 707 806</td>
</tr>
<tr>
<td>AH11003</td>
<td></td>
<td>AIC: support function</td>
<td>Levy</td>
<td>15/09/11</td>
<td>30/08/13</td>
<td>$84,187</td>
<td>$23,400</td>
<td>Horticulture Australia Limited</td>
<td>Warwick Scherf 02 8295 2323</td>
</tr>
<tr>
<td>AH11017</td>
<td></td>
<td>Sponsorship of Apprentice for Excellence Awards</td>
<td>Levy</td>
<td>1/07/11</td>
<td>22/06/14</td>
<td>$75,000</td>
<td>$19,000</td>
<td>Horticulture Australia Limited</td>
<td>Melissa Smith 02 8295 2340</td>
</tr>
<tr>
<td>AH11023</td>
<td></td>
<td>Graham Gregory Award and Function</td>
<td>Levy</td>
<td>1/07/11</td>
<td>30/06/16</td>
<td>$150,000</td>
<td>$31,436</td>
<td>Horticulture Australia Limited</td>
<td>Melissa Smith 02 8295 2340</td>
</tr>
<tr>
<td>AH11024</td>
<td></td>
<td>Across industry program communications plan</td>
<td>Levy</td>
<td>31/07/11</td>
<td>31/07/13</td>
<td>$20,000</td>
<td>$0</td>
<td>Horticulture Australia Limited</td>
<td>Melissa Smith 02 8295 2340</td>
</tr>
<tr>
<td>AH11026</td>
<td></td>
<td>Across industry program administration</td>
<td>Levy</td>
<td>1/07/11</td>
<td>30/06/13</td>
<td>$25,000</td>
<td>$12,071</td>
<td>Horticulture Australia Limited</td>
<td>Warwick Scherf 02 8295 2323</td>
</tr>
<tr>
<td>AH11028</td>
<td></td>
<td>Statistical Handbook for Horticulture: revision</td>
<td>Levy</td>
<td>1/12/11</td>
<td>28/11/12</td>
<td>$49,500</td>
<td>$10,000</td>
<td>Oliver and Doam</td>
<td>Agnes Barnard 02 6011 4743</td>
</tr>
<tr>
<td>AH12800</td>
<td></td>
<td>Across Industry Annual Report 2011/12</td>
<td>Levy</td>
<td>1/07/12</td>
<td>31/06/13</td>
<td>$6,000</td>
<td>$1,885</td>
<td>Horticulture Australia Limited</td>
<td>Amanda Lucas 02 8295 2318</td>
</tr>
<tr>
<td>MT12028</td>
<td></td>
<td>OHMA Operational Support 2012-2015</td>
<td>Levy/VC</td>
<td>1/10/12</td>
<td>31/06/15</td>
<td>$91,500</td>
<td>$9,684</td>
<td>Horticulture Australia Limited</td>
<td>Kim James 08 6488 2209</td>
</tr>
</tbody>
</table>

*YTD as of 31 May 2013

**Australian Government Rural R&D Priorities:**
- Productivity and adding value
- Supply chain and markets
- Natural resource management
- Climate change and climate variability
- Biosecurity
- Innovation skills
- 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;
<table>
<thead>
<tr>
<th>Project no.</th>
<th>Industry obj.</th>
<th>Rural &amp; R&amp;D priorities</th>
<th>Project title</th>
<th>Levy or VC</th>
<th>Project start</th>
<th>Project finish</th>
<th>Life of project value</th>
<th>2012/13 YTD expenditure</th>
<th>Organisation</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP06007</td>
<td></td>
<td></td>
<td>Alternaria fruit spot: new directions (follows AP05002)</td>
<td>Levy</td>
<td>1/09/06</td>
<td>31/12/13</td>
<td>$592,416</td>
<td>$18,747</td>
<td>The Department of Agriculture, Fisheries and Forestry, Qld</td>
<td>Allan McWaters</td>
</tr>
<tr>
<td>AP08002</td>
<td></td>
<td></td>
<td>Pear variety evaluation and certification</td>
<td>Levy</td>
<td>25/11/08</td>
<td>30/07/13</td>
<td>$300,000</td>
<td>$30,000</td>
<td>Australian Pome Fruit Improvement Program Ltd</td>
<td>Garry Langford</td>
</tr>
<tr>
<td>AP08004</td>
<td></td>
<td></td>
<td>Managing the risk of flesh browning for Cripps Pink apples using a climate model</td>
<td>Levy</td>
<td>1/08/08</td>
<td>3/03/14</td>
<td>$157,000</td>
<td>$23,900</td>
<td>Applied Horticultural Research P/L</td>
<td>Dr Gordon Rogers</td>
</tr>
<tr>
<td>AP08041</td>
<td></td>
<td></td>
<td>Creating profitability with consumer-preferred scab-resistant apples – stage II</td>
<td>Levy</td>
<td>16/02/09</td>
<td>31/05/13</td>
<td>$364,149</td>
<td>$0</td>
<td>The Department of Agriculture, Fisheries and Forestry, Qld</td>
<td>Dr Simon Middleton</td>
</tr>
<tr>
<td>AP09031</td>
<td></td>
<td></td>
<td>PIPS Orchard Productivity Program</td>
<td>Levy/VC</td>
<td>1/12/09</td>
<td>31/12/14</td>
<td>$8,189,702</td>
<td>$1,560,206</td>
<td>TIAR</td>
<td>Dr Dugald Close</td>
</tr>
<tr>
<td>AP09035</td>
<td></td>
<td></td>
<td>Development of new pome fruit products</td>
<td>Levy/VC</td>
<td>28/02/10</td>
<td>31/03/14</td>
<td>$10,514,924</td>
<td>$1,752,487</td>
<td>Apple &amp; Pears Australia Limited</td>
<td>Garry Langford</td>
</tr>
<tr>
<td>AP10006</td>
<td></td>
<td></td>
<td>Return on investment evaluation program</td>
<td>Levy</td>
<td>15/04/12</td>
<td>30/03/13</td>
<td>$50,000</td>
<td>$0</td>
<td>AgEconPlus Pty Ltd</td>
<td>Michael Clarke</td>
</tr>
<tr>
<td>AP10009</td>
<td></td>
<td></td>
<td>MRL risk analysis for major export markets for the pome fruit industry (follows AP07011)</td>
<td>Levy</td>
<td>5/07/10</td>
<td>14/06/13</td>
<td>$30,000</td>
<td>$8,000</td>
<td>AKC Consulting Pty Ltd</td>
<td>Kevin Bodnaruk</td>
</tr>
<tr>
<td>AP10016</td>
<td></td>
<td></td>
<td>Pear rootstock trial</td>
<td>Levy</td>
<td>31/07/10</td>
<td>1/05/15</td>
<td>$64,000</td>
<td>$0</td>
<td>Australian Pome Fruit Improvement Program Ltd</td>
<td>Garry Langford</td>
</tr>
<tr>
<td>AP11014</td>
<td></td>
<td></td>
<td>Apple and pear technical manager</td>
<td>Levy</td>
<td>1/09/11</td>
<td>31/08/14</td>
<td>$507,340</td>
<td>$154,000</td>
<td>Apple &amp; Pears Australia Limited</td>
<td>Jesse Reader</td>
</tr>
<tr>
<td>AP11016</td>
<td></td>
<td></td>
<td>Market development for the apple industry</td>
<td>Levy</td>
<td>12/09/11</td>
<td>12/09/14</td>
<td>$447,769</td>
<td>$140,000</td>
<td>Apple &amp; Pears Australia Limited</td>
<td>Claire Fitchett</td>
</tr>
<tr>
<td>AP11017</td>
<td></td>
<td></td>
<td>Future Orchards – III</td>
<td>Levy</td>
<td>1/04/12</td>
<td>15/05/14</td>
<td>$906,355</td>
<td>$271,907</td>
<td>Apple &amp; Pears Australia Limited</td>
<td>Jesse Reader</td>
</tr>
<tr>
<td>AP11023</td>
<td></td>
<td></td>
<td>Asian export market development</td>
<td>Levy</td>
<td>1/04/12</td>
<td>14/03/15</td>
<td>$345,000</td>
<td>$80,000</td>
<td>Department of Environment and Primary Industries, Vic</td>
<td>Aimee McCutcheon</td>
</tr>
<tr>
<td>AP11026</td>
<td></td>
<td></td>
<td>Apple and pear bridging communications project</td>
<td>Levy</td>
<td>1/02/12</td>
<td>15/10/12</td>
<td>$301,606</td>
<td>$104,422</td>
<td>Apple &amp; Pears Australia Limited</td>
<td>Sarah Kulman</td>
</tr>
<tr>
<td>AP11031</td>
<td></td>
<td></td>
<td>Pear evaluation program – stage II</td>
<td>Levy</td>
<td>23/01/12</td>
<td>30/06/13</td>
<td>$317,035</td>
<td>$125,200</td>
<td>Apple &amp; Pears Australia Limited</td>
<td>Garry Langford</td>
</tr>
<tr>
<td>AP11033</td>
<td></td>
<td></td>
<td>InfoPome – data and analysis</td>
<td>Levy</td>
<td>1/04/12</td>
<td>30/01/15</td>
<td>$73,300</td>
<td>$12,000</td>
<td>Apple &amp; Pears Australia Limited</td>
<td>Claire Fitchett</td>
</tr>
<tr>
<td>AP11035</td>
<td></td>
<td></td>
<td>Minor-use permits for the apple and pear industry</td>
<td>Levy</td>
<td>15/01/12</td>
<td>31/05/13</td>
<td>$2,000</td>
<td>$767</td>
<td>Horticulture Australia Limited</td>
<td>Jodie Pedrana</td>
</tr>
<tr>
<td>AP11037</td>
<td></td>
<td></td>
<td>Resistance testing on triazoles for the apple and pear industry</td>
<td>Levy</td>
<td>1/01/13</td>
<td>1/04/13</td>
<td>$5,550</td>
<td>$5,550</td>
<td>South Australia Research &amp; Development Institute</td>
<td>Barbara Hall</td>
</tr>
<tr>
<td>AP11038</td>
<td></td>
<td></td>
<td>Costs to develop projects within the apple and pear RD&amp;E programs</td>
<td>Levy</td>
<td>13/02/12</td>
<td>31/05/15</td>
<td>$127,045</td>
<td>$2,214</td>
<td>Horticulture Australia Limited</td>
<td>Brad Wells</td>
</tr>
<tr>
<td>AP12002</td>
<td></td>
<td></td>
<td>Profitable pears: maximising productivity and quality of new pear varieties</td>
<td>Levy</td>
<td>16/07/12</td>
<td>31/05/18</td>
<td>$1,082,500</td>
<td>$100,000</td>
<td>Department of Environment and Primary Industries, Vic</td>
<td>Ian Goodwin</td>
</tr>
<tr>
<td>Project no.</td>
<td>Industry obj.</td>
<td>Rural &amp; R&amp;D priorities</td>
<td>Project title</td>
<td>Levy or VC</td>
<td>Project start</td>
<td>Project finish</td>
<td>Life of project value</td>
<td>2012/13 YTD expenditure</td>
<td>Organisation</td>
<td>Contact</td>
</tr>
<tr>
<td>------------</td>
<td>---------------</td>
<td>------------------------</td>
<td>---------------</td>
<td>------------</td>
<td>---------------</td>
<td>---------------</td>
<td>-----------------------</td>
<td>--------------------------</td>
<td>--------------</td>
<td>---------</td>
</tr>
<tr>
<td>AP12006</td>
<td>1</td>
<td></td>
<td>Precision fertigation for improved apple orchard productivity</td>
<td>Levy</td>
<td>2/07/12 1/07/15</td>
<td>$420,134</td>
<td>$95,500</td>
<td>University of Tasmania</td>
<td>Nigel Swarts 08 8303 9562</td>
<td></td>
</tr>
<tr>
<td>AP12013</td>
<td>6</td>
<td></td>
<td>Apple and pear industry communications</td>
<td>Levy</td>
<td>1/10/12 1/10/15</td>
<td>$1,460,043</td>
<td>$300,000</td>
<td>Apple &amp; Pear Australia Limited</td>
<td>Sarah Kulman 03 9329 3511</td>
<td></td>
</tr>
<tr>
<td>AP12028</td>
<td>1</td>
<td></td>
<td>Visiting pear researcher</td>
<td>Levy</td>
<td>28/02/13 31/05/16</td>
<td>$80,000</td>
<td>$0</td>
<td>Horticulture Australia Limited</td>
<td>Brad Wells 02 8295 2327</td>
<td></td>
</tr>
<tr>
<td>AP12029</td>
<td>2</td>
<td></td>
<td>Understanding apple and pear production systems in a changing climate</td>
<td>Levy</td>
<td>24/10/12 1/09/16</td>
<td>$586,315</td>
<td>$81,700</td>
<td>The Department of Agriculture, Fisheries and Forestry, Qld</td>
<td>Dr John Wilkie 0402 390 865</td>
<td></td>
</tr>
<tr>
<td>AP12032</td>
<td>1</td>
<td></td>
<td>An independent review of the PIPS program</td>
<td>Levy</td>
<td>1/03/13 30/08/13</td>
<td>$28,100</td>
<td>$13,100</td>
<td>Horticulture Australia Limited</td>
<td>Brad Wells 02 8295 2327</td>
<td></td>
</tr>
<tr>
<td>AP12033</td>
<td>6</td>
<td></td>
<td>Research speed updating – pilot</td>
<td>Levy</td>
<td>1/05/13 31/10/13</td>
<td>$21,000</td>
<td>$16,800</td>
<td>Apple &amp; Pear Australia Limited</td>
<td>Jesse Reader 02 8295 2327</td>
<td></td>
</tr>
<tr>
<td>AP12034</td>
<td>6</td>
<td></td>
<td>Apple and Pear Industry Leadership Initiative</td>
<td>Levy/VC</td>
<td>13/05/13 14/05/16</td>
<td>$490,472</td>
<td>$0</td>
<td>Apple &amp; Pear Australia Limited</td>
<td>Annie Farrow 03 9329 3511</td>
<td></td>
</tr>
<tr>
<td>AP12036</td>
<td>1</td>
<td></td>
<td>Bridging the knowledge gap to breed high-value, flavonoid-rich apples</td>
<td>Levy/VC</td>
<td>18/06/13 1/07/16</td>
<td>$474,502</td>
<td>$0</td>
<td>Department of Agriculture &amp; Food, WA</td>
<td>Michael Considine 08 6488 1783</td>
<td></td>
</tr>
<tr>
<td>AP12500</td>
<td>1</td>
<td></td>
<td>Apple industry domestic marketing program 2012/13</td>
<td>Levy</td>
<td>1/07/12 30/06/13</td>
<td>$1,830,290</td>
<td>$871,629</td>
<td>Horticulture Australia Limited</td>
<td>Luke Westley 02 8295 2375</td>
<td></td>
</tr>
<tr>
<td>AP12502</td>
<td>1</td>
<td></td>
<td>Apple industry export marketing program 2012/13</td>
<td>Levy</td>
<td>14/09/12 21/06/13</td>
<td>$110,000</td>
<td>$21,847</td>
<td>Horticulture Australia Limited</td>
<td>Luke Westley 02 8295 2375</td>
<td></td>
</tr>
<tr>
<td>AP12703</td>
<td>7</td>
<td></td>
<td>Apple and pear industry international networking</td>
<td>Levy</td>
<td>10/05/13 30/06/14</td>
<td>$30,000</td>
<td>$0</td>
<td>Apple &amp; Pear Australia Limited</td>
<td>Jon Durham 03 9329 3511</td>
<td></td>
</tr>
<tr>
<td>AP12800</td>
<td>7</td>
<td></td>
<td>Apple &amp; Pear Industry Annual Report 2011/12</td>
<td>Levy</td>
<td>1/07/12 30/06/13</td>
<td>$13,437</td>
<td>$9,437</td>
<td>Horticulture Australia Limited</td>
<td>Amanda Lucas 02 8295 2318</td>
<td></td>
</tr>
<tr>
<td>AP12910</td>
<td>7</td>
<td></td>
<td>Apple &amp; Pear Consultation Funding Agreement 2012/13</td>
<td>Levy</td>
<td>1/07/12 10/08/13</td>
<td>$486,217</td>
<td>$479,938</td>
<td>Apple &amp; Pear Australia Limited</td>
<td>Jon Durham 03 9329 3511</td>
<td></td>
</tr>
<tr>
<td>MT07028</td>
<td>1</td>
<td></td>
<td>Towards sustainable pheromone based IPM in orchards</td>
<td>Levy/VC</td>
<td>1/01/08 31/12/12</td>
<td>$1,478,247</td>
<td>$20,000</td>
<td>Department of Environment Primary Industries, Vic</td>
<td>Dr Alexandre Il’ichev 02 8295 2327</td>
<td></td>
</tr>
<tr>
<td>MT09006</td>
<td>1</td>
<td></td>
<td>Improving European earwig management in pome and cherry orchards through the use of pheromones</td>
<td>Levy</td>
<td>2/11/09 30/03/13</td>
<td>$93,750</td>
<td>$0</td>
<td>TIAR</td>
<td>Dr Geoffrey Allen 03 6226 2732</td>
<td></td>
</tr>
<tr>
<td>MT09026</td>
<td>2</td>
<td></td>
<td>Protecting pollination</td>
<td>Levy/VC</td>
<td>30/03/09 31/10/12</td>
<td>$85,083</td>
<td>$17,287</td>
<td>Horticulture Australia Limited</td>
<td>Kim James 08 6488 2209</td>
<td></td>
</tr>
<tr>
<td>MT10058</td>
<td>4</td>
<td></td>
<td>Biosecurity implementation to strengthen Australia’s honey bee and pollination responsive industries</td>
<td>Levy/VC</td>
<td>15/07/11 31/12/12</td>
<td>$45,000</td>
<td>$0</td>
<td>Plant Health Australia</td>
<td>Rodney Turner 02 6215 7720</td>
<td></td>
</tr>
<tr>
<td>MT10063</td>
<td>4</td>
<td></td>
<td>Remote sensing of beehives to improve surveillance</td>
<td>Levy/VC</td>
<td>1/08/11 30/04/13</td>
<td>$152,000</td>
<td>$0</td>
<td>National Centre for Engineering in Agriculture</td>
<td>Cheryl McCarthy 07 4631 2297</td>
<td></td>
</tr>
<tr>
<td>MT11028</td>
<td>5</td>
<td></td>
<td>Fruit and nut tracking study 2011-2013</td>
<td>Levy</td>
<td>15/03/12 30/06/13</td>
<td>$37,520</td>
<td>$5,141</td>
<td>Sprout Research</td>
<td>Heath Adams 07 3635 8802</td>
<td></td>
</tr>
<tr>
<td>MT11033</td>
<td>4</td>
<td></td>
<td>Surveillance of Asian honey bees</td>
<td>Levy/VC</td>
<td>1/07/12 30/05/13</td>
<td>$100,000</td>
<td>$0</td>
<td>Plant Biosecurity Cooperative Research Centre</td>
<td>Dr Gary Kong 0423 024 118</td>
<td></td>
</tr>
<tr>
<td>MT11034</td>
<td>4</td>
<td></td>
<td>National bee pest surveillance workshop</td>
<td>Levy/VC</td>
<td>1/07/12 1/10/12</td>
<td>$28,000</td>
<td>$0</td>
<td>Plant Health Australia</td>
<td>Rodney Turner 02 6215 7120</td>
<td></td>
</tr>
<tr>
<td>MT11037</td>
<td>4</td>
<td></td>
<td>Market access audit by Thai officials of growing and packing conditions</td>
<td>Levy/VC</td>
<td>26/04/12 30/09/12</td>
<td>$11,500</td>
<td>$8,734</td>
<td>Horticulture Australia Limited</td>
<td>Kim James 08 6488 2209</td>
<td></td>
</tr>
<tr>
<td>Project no.</td>
<td>Industry obj.</td>
<td>Rural &amp; R&amp;D priorities</td>
<td>Project title</td>
<td>Levy or VC</td>
<td>Project start</td>
<td>Project finish</td>
<td>Life of project value</td>
<td>2012/13 YTD* expenditure</td>
<td>Organisation</td>
<td>Contact</td>
</tr>
<tr>
<td>------------</td>
<td>---------------</td>
<td>-------------------------</td>
<td>---------------</td>
<td>------------</td>
<td>---------------</td>
<td>----------------</td>
<td>----------------------</td>
<td>--------------------------</td>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td>MT12000</td>
<td>1</td>
<td>Garden</td>
<td>Development of mass-trapping methods for cooling moth females in disrupted orchards</td>
<td>Levy/VC</td>
<td>28/02/13</td>
<td>30/12/16</td>
<td>$574,212</td>
<td>$0</td>
<td>Department of Environment and Primary Industries, Vic</td>
<td>Dr Alexandre Ilichev 02 8295 2327</td>
</tr>
<tr>
<td>MT12009</td>
<td>5</td>
<td>Export</td>
<td>Export and import market intelligence 2012–2014</td>
<td>Levy</td>
<td>15/07/12</td>
<td>30/06/14</td>
<td>$140,122</td>
<td>$12,053</td>
<td>Fresh Intelligence Consulting</td>
<td>Wayne Prowse 02 9440 2138</td>
</tr>
<tr>
<td>MT12010</td>
<td>5</td>
<td>Agriculture</td>
<td>Understanding the purchase behaviour of fresh produce consumers</td>
<td>Levy/VC</td>
<td>1/07/12</td>
<td>30/06/14</td>
<td>$1,023,359</td>
<td>$99,349</td>
<td>The Nielsen Company</td>
<td>Sandeep Chahal 0414 671 417</td>
</tr>
<tr>
<td>MT12028</td>
<td>4</td>
<td>Horticultural</td>
<td>OHMA operational support 2012–2015</td>
<td>Levy/VC</td>
<td>1/10/12</td>
<td>31/05/15</td>
<td>$91,500</td>
<td>$5,608</td>
<td>Horticulture Australia Limited</td>
<td>Kim James 08 6488 2209</td>
</tr>
<tr>
<td>MT12029</td>
<td>4</td>
<td>Horticultural</td>
<td>Horticultural Market Access Manager 2012–2015</td>
<td>Levy/VC</td>
<td>1/10/12</td>
<td>30/09/15</td>
<td>$613,500</td>
<td>$4,428</td>
<td>Langley Consulting</td>
<td>Chris Langley 0498 723 103</td>
</tr>
<tr>
<td>MT12032</td>
<td>5</td>
<td>Horticultural</td>
<td>Australia Fresh core program 2012/13</td>
<td>Levy/VC</td>
<td>1/07/12</td>
<td>30/06/13</td>
<td>$79,500</td>
<td>$0</td>
<td>Horticulture Australia Limited</td>
<td>David Chenu 02 8295 2381</td>
</tr>
<tr>
<td>MT12045</td>
<td>4</td>
<td>Horticultural</td>
<td>Submission to authorities in Japan and Taiwan addressing provisional MRLs</td>
<td>Levy</td>
<td>31/01/13</td>
<td>31/05/15</td>
<td>$46,000</td>
<td>$0</td>
<td>AKC Consulting Pty Ltd</td>
<td>Kevin Bodnaruk 02 9499 3833</td>
</tr>
<tr>
<td>MT12502</td>
<td>1</td>
<td>Horticultural</td>
<td>China FVF trade show and Taiwan market briefing</td>
<td>Levy/VC</td>
<td>1/07/12</td>
<td>30/05/13</td>
<td>$45,250</td>
<td>$0</td>
<td>Horticulture Australia Limited</td>
<td>David Chenu 02 8295 2381</td>
</tr>
<tr>
<td>MT12703</td>
<td>6</td>
<td>Horticultural</td>
<td>Deciduous Tree Fruit Industry Conference 2013</td>
<td>Levy/VC</td>
<td>1/02/13</td>
<td>30/09/13</td>
<td>$283,643</td>
<td>$52,329</td>
<td>Apple &amp; Pear Australia Limited</td>
<td>Sarah Kulman 03 9329 3511</td>
</tr>
<tr>
<td>PA12500</td>
<td>1</td>
<td>Horticultural</td>
<td>Pear industry domestic marketing program 2012/13</td>
<td>Levy</td>
<td>1/07/12</td>
<td>30/06/13</td>
<td>$750,000</td>
<td>$698,963</td>
<td>Horticulture Australia Limited</td>
<td>Luke Westley 02 8295 2375</td>
</tr>
<tr>
<td>PA12502</td>
<td>1</td>
<td>Horticultural</td>
<td>Pear industry export marketing program 2012/13</td>
<td>Levy</td>
<td>19/07/12</td>
<td>22/06/13</td>
<td>$110,000</td>
<td>$32,375</td>
<td>Horticulture Australia Limited</td>
<td>Luke Westley 02 8295 2375</td>
</tr>
</tbody>
</table>

The apple and pear VC program operates in addition to levy investment program

<table>
<thead>
<tr>
<th>Project no.</th>
<th>Industry obj.</th>
<th>Rural &amp; R&amp;D priorities</th>
<th>Project title</th>
<th>Levy or VC</th>
<th>Project start</th>
<th>Project finish</th>
<th>Life of project value</th>
<th>2012/13 YTD* expenditure</th>
<th>Organisation</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP09026</td>
<td>3</td>
<td>Horticultural</td>
<td>Commercialisation of pear varieties</td>
<td>VC</td>
<td>1/01/10</td>
<td>31/07/14</td>
<td>$266,400</td>
<td>$0</td>
<td>Apple &amp; Pear Australia Limited</td>
<td>Garry Langford 03 6266 4344</td>
</tr>
<tr>
<td>AP10019</td>
<td>6</td>
<td>Horticultural</td>
<td>Modern production techniques for the Victorian Goulburn Valley pome fruit industry</td>
<td>VC</td>
<td>1/09/10</td>
<td>31/12/13</td>
<td>$422,500</td>
<td>$82,084</td>
<td>Fruit Growers Victoria Ltd</td>
<td>Michael Crisera 0418 379 746</td>
</tr>
<tr>
<td>AP10024</td>
<td>3</td>
<td>Horticultural</td>
<td>The reconditioning of the pome fruit varietal collection at Grove, Tasmania</td>
<td>VC</td>
<td>15/11/10</td>
<td>30/09/12</td>
<td>$220,000</td>
<td>$44,000</td>
<td>Scientific Horticulture Pty Ltd</td>
<td>Dr Gordon Brown 03 6239 6411</td>
</tr>
<tr>
<td>AP11706</td>
<td>6</td>
<td>Horticultural</td>
<td>Overseas study tour</td>
<td>VC</td>
<td>21/06/12</td>
<td>30/11/12</td>
<td>$51,700</td>
<td>$10,340</td>
<td>Apple &amp; Pear Australia Limited</td>
<td>Claire Fitchett 03 9329 3511</td>
</tr>
<tr>
<td>AP12700</td>
<td>6</td>
<td>Horticultural</td>
<td>New Zealand study tour for Gippsland Fruit Growers</td>
<td>VC</td>
<td>9/11/12</td>
<td>30/03/13</td>
<td>$23,127</td>
<td>$23,127</td>
<td>Fruit Growers Victoria Ltd</td>
<td>Michael Crisera 03 5833 5240</td>
</tr>
<tr>
<td>AP12702</td>
<td>6</td>
<td>Horticultural</td>
<td>New apple variety study tour</td>
<td>VC</td>
<td>1/02/13</td>
<td>30/06/13</td>
<td>$29,259</td>
<td>$23,407</td>
<td>Montague Fresh</td>
<td>Gavin Wylie 03 9709 8149</td>
</tr>
<tr>
<td>AP12704</td>
<td>1</td>
<td>Horticultural</td>
<td>North American apple and pear study tour</td>
<td>VC</td>
<td>23/05/13</td>
<td>31/10/13</td>
<td>$67,500</td>
<td>$0</td>
<td>Apple &amp; Pear Australia Limited</td>
<td>Jesse Reader 02 8295 2327</td>
</tr>
<tr>
<td>MT12501</td>
<td>1</td>
<td>Horticultural</td>
<td>Asia Fruit Logistica 2012</td>
<td>VC</td>
<td>1/07/12</td>
<td>1/03/13</td>
<td>$98,168</td>
<td>$0</td>
<td>Horticulture Australia Limited</td>
<td>David Chenu 02 8295 2381</td>
</tr>
</tbody>
</table>

*YTD as of 31 May 2013. This list does not include expenditure on carried-forward projects due to late running milestones, which accounted for in the apple & pear YTD levy investment summary.
Due to the publication of this report prior to the end of the 2012/13 financial year, the 2011/12 levy investment summary is included in this report.

### Year ended 30 June 2012

<table>
<thead>
<tr>
<th></th>
<th>Marketing 2011/12 $</th>
<th>R&amp;D 2011/12 $</th>
<th>Combined 2011/12 $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funds available 1 July 2011</td>
<td>3,270,366</td>
<td>1,972,943</td>
<td>5,243,309</td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Levies received</td>
<td>3,418,580</td>
<td>1,998,413</td>
<td>5,416,993</td>
</tr>
<tr>
<td>Commonwealth contributions</td>
<td>1,827,506</td>
<td>1,827,506</td>
<td></td>
</tr>
<tr>
<td>Other income</td>
<td>157,479</td>
<td>106,938</td>
<td>264,417</td>
</tr>
<tr>
<td><strong>Total income</strong></td>
<td>3,576,059</td>
<td>3,932,857</td>
<td>7,508,916</td>
</tr>
<tr>
<td><strong>Budget</strong></td>
<td>2,875,711</td>
<td>4,310,274</td>
<td>7,185,985</td>
</tr>
<tr>
<td><strong>Variance to budget</strong></td>
<td>700,348</td>
<td>(377,417)</td>
<td>322,931</td>
</tr>
<tr>
<td><strong>Program investment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Levy programs</td>
<td>5,038,546</td>
<td>3,216,488</td>
<td>8,255,034</td>
</tr>
<tr>
<td>Service delivery programs by HAL</td>
<td>631,267</td>
<td>438,523</td>
<td>1,069,790</td>
</tr>
<tr>
<td>Across industry contribution</td>
<td>157,479</td>
<td>106,938</td>
<td>264,417</td>
</tr>
<tr>
<td>Levy collection costs</td>
<td>116,954</td>
<td>66,491</td>
<td>183,445</td>
</tr>
<tr>
<td><strong>Total investment</strong></td>
<td>5,786,767</td>
<td>3,775,690</td>
<td>9,562,457</td>
</tr>
<tr>
<td><strong>Budget</strong></td>
<td>3,791,267</td>
<td>5,246,245</td>
<td>9,037,512</td>
</tr>
<tr>
<td><strong>Variance to budget</strong></td>
<td>(1,995,500)</td>
<td>1,470,555</td>
<td>(524,945)</td>
</tr>
<tr>
<td><strong>Annual surplus/deficit</strong></td>
<td>(2,210,708)</td>
<td>157,167</td>
<td>(2,053,541)</td>
</tr>
<tr>
<td><strong>Closing balance 30 June 2012</strong></td>
<td>1,059,658</td>
<td>2,130,110</td>
<td>3,189,768</td>
</tr>
</tbody>
</table>

### Eleven months ended 31 May 2013

<table>
<thead>
<tr>
<th></th>
<th>Marketing 2012/13 $</th>
<th>R&amp;D 2012/13 $</th>
<th>Combined 2012/13 $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funds available 1 July 2012</td>
<td>1,059,658</td>
<td>2,130,110</td>
<td>3,189,768</td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Levies received</td>
<td>3,138,323</td>
<td>1,861,236</td>
<td>4,999,559</td>
</tr>
<tr>
<td>Commonwealth contributions</td>
<td>1,611,730</td>
<td>1,611,730</td>
<td></td>
</tr>
<tr>
<td>Other income</td>
<td>85,082</td>
<td>82,269</td>
<td>167,351</td>
</tr>
<tr>
<td><strong>Total income</strong></td>
<td>3,223,405</td>
<td>3,555,235</td>
<td>6,778,640</td>
</tr>
<tr>
<td><strong>Budget</strong></td>
<td>2,800,719</td>
<td>3,723,146</td>
<td>6,523,865</td>
</tr>
<tr>
<td><strong>Variance to budget</strong></td>
<td>422,686</td>
<td>(167,911)</td>
<td>254,775</td>
</tr>
<tr>
<td><strong>Program investment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Levy programs</td>
<td>2,812,875</td>
<td>2,849,816</td>
<td>5,662,691</td>
</tr>
<tr>
<td>Service delivery programs by HAL</td>
<td>344,199</td>
<td>373,643</td>
<td>717,842</td>
</tr>
<tr>
<td>Across industry contribution</td>
<td>57,337</td>
<td>57,337</td>
<td></td>
</tr>
<tr>
<td>Levy collection costs</td>
<td>55,910</td>
<td>50,576</td>
<td>106,486</td>
</tr>
<tr>
<td><strong>Total investment</strong></td>
<td>3,212,984</td>
<td>3,331,372</td>
<td>6,544,356</td>
</tr>
<tr>
<td><strong>Budget</strong></td>
<td>2,889,586</td>
<td>4,149,338</td>
<td>7,038,924</td>
</tr>
<tr>
<td><strong>Variance to budget</strong></td>
<td>(323,398)</td>
<td>817,966</td>
<td>494,568</td>
</tr>
<tr>
<td><strong>Annual surplus/deficit</strong></td>
<td>10,421</td>
<td>223,863</td>
<td>234,284</td>
</tr>
<tr>
<td><strong>Closing balance 31 May 2013</strong></td>
<td>1,070,079</td>
<td>2,353,973</td>
<td>3,424,052</td>
</tr>
</tbody>
</table>
Apple and Pear Industry Advisory Committee (IAC)

Julie Haslett – Independent Chair
Jason Jarvis
John Lawrenson
Scott Montague
Greg Mouat
Scott Price
Kevin Sanders
Michael Stafford
Ugo Tomasel
Phil Turnbull
Jon Durham (Ex-Officio)
Barbara Romero-Cespedes (Ex-Officio)

For more information contact:

Barbara Romero-Cespedes
Industry Services Manager
Horticulture Australia Limited
Level 7, 179 Elizabeth Street
Sydney NSW 2000
T 0416 240 280
E barbara.romero@horticulture.com.au