Avocados Australia

HAL

Know-how for Horticulture™

Avocado

INDUSTRY REPORT 08 • 09

Avocado program expansion continues

The avocado industry is continuing to experience significant growth with new plantings coming into production. This strong increase in production is putting the domestic market under some pressure with prices responding to supply and demand forces. However, the current avocado levy investment is very focused on building consumer demand through effective promotion activities and through research and development projects to help the industry meet consumer needs and expectations and explore new market opportunities.

As this report has been prepared prior to the completion of the financial year (for tabling at the annual levy payers meeting in July), the financial summary on the back page includes income and expenditure to the end of April 2009. However, at the time of reporting, total levy income in 2008/09 was forecast to be approximately $3,547,500 by the end of June. Total levy program expenditure (including commonwealth matching funds for all R&D) was forecast to be $4,536,199 with $1,954,834 invested in promotion activities and $2,581,365 in research and development projects.

There are five key goals set out in the current avocado strategic plan and these are being addressed through various projects to:

1. Build strong demand for increasing production at profitable prices.
2. Ensure consumers can confidently purchase consistently high quality fresh avocados at retail level.
3. Continuously improve the efficiency of avocado production and marketing systems.
4. Provide avocado producers with a range of benefits that will assist them to achieve their business goals.
5. Ensure appropriate organisation, resourcing and management of the affairs of the Australian Avocado Industry on an on-going basis.

Significant progress has been made over the past four years since this plan was written across each of these five goals.

A new strategic plan will commence development in 2010 that will set the direction for the next five year period. Development of this plan will commence with a solid foundation of consumer research that is currently being undertaken.

This annual report provides a snapshot of the key avocado projects undertaken during 2008/09 through the HAL avocado investment program. The program is well balanced across a range of activities with a strong consumer and market focus.

The third year of the new 'add an avo' marketing campaign has been completed using a mix of conventional mediums and new ways to communicate with consumers. This year was the largest promotion program ever conducted for the avocado industry.

A high proportion of the research and development projects are aimed at meeting consumer needs and exploring new markets to help further expand avocado consumption. An example is the new avocado food service strategy which is now being implemented to expand avocado utilisation in the food service sector.

A number of R&D projects are targeted at improving fruit quality and production efficiency. Retail quality surveys are continuing to measure, at retail level, exactly how effectively the avocados on offer at the retail shelf match consumers' expectations. This information will provide a benchmark to assess improvements over time and will help to identify priority R&D projects to better meet consumer expectations. Research into better disease management continues to be a high priority for both production efficiency and consumer satisfaction.

A number of industry development initiatives have been supported aimed at assisting producers to achieve their business goals. For example, a series of study groups have been running since 2006. Also, a comprehensive communication program including the production of *Talking Avocados* helps to provide producers with access to the latest information and outcomes from the levy investment program.

It is intended that the range of well targeted investments using marketing and R&D funds will assist the Australian avocado industry to continue to prosper.

For more information contact:
John Tyas
Industry Services Manager, HAL
T 07 3394 8220
E john.tyas@horticulture.com.au

These projects have been funded by HAL using the avocado levy and/or voluntary contributions from industry with matched funding from the Australian Government for all R&D activity.

Climate Change is increasingly becoming a significant topic for the horticulture industry. In 2007/08 the industry began contributing to the horticulture component of phase one of the national Climate Change Research Strategy for Primary Industries (CCRSPI).

The aim of CCRSPI Phase One was to develop a comprehensive research strategy that will allow industries to be informed by good research and be prepared to respond to the opportunities and risks presented by climate change. The scope of the strategy will be broad, covering any issue that needs consideration over the short (3 years), medium (5+ years) and long term (10+ years). The research strategy and phase one final report is available from the CCRSPI website http://lwa.gov.au/ccrspi/.

HAL is now contributing to phase two of the project in 2008/09 in collaboration with other Rural RDCs, CSIRO and Federal, State and Territory Governments. This phase aims to develop an implementation plan for the research strategy for 2009/10 onwards.

Goal one – Build strong demand for increasing production at profitable prices

Determination of health-promoting bioactives in Australian avocados

Avocados are known to contain high amounts of health-benefiting phytonutrients including monounsaturated fatty acids, carotenoids, and vitamins B, C and E.

Recent studies carried out using Californian-grown 'Hass' avocados have reported that extracts from the fruit also possess in-vitro (i.e in test-tube) anti-cancer properties against prostate cancer cells.

The aim of this work was to obtain scientifically creditable information relating to the health-promoting benefits of substances found in Australian avocados (Hass variety). This was achieved by quantifying the major lipid-soluble phytonutrients found in avocados and assessing their antioxidant and in-vitro cancer-inhibiting properties.

Lipid-soluble extracts from Australian-grown 'Hass' avocados were found to contain vitamin E (α, γ and δ forms) (1398–2643µg/100g FW), chlorophylls (a and b forms) (2304–3680µg/100g FW) and lutein (160–273µg/100g FW) as their major components. A notable fruit-to-fruit variation in the levels of these components was observed but this has also been reported with Californian-grown fruit.

Avocado extracts (from Australian-grown fruit) rich in vitamin E, chlorophylls, carotenoids were found to have high antioxidant activity in in-vitro tests. A sub-fraction of these extracts was found to be active against colon and gastric cancer cells whilst was not very effective against leukaemia cells in test-tube assays.

This information may now be used to further promote/market Australian avocados and strengthen their position in the mind of the national and international public as a natural, health-benefiting fruit.

Results from this work have been presented at a significant international conference (Pigments in Food 08) held during August 2008 in Helsinki, Finland. A presentation

will also be made at the 4th Australian and New Zealand Avocado Growers Conference (ANZAGC 09) in Cairns in July. A manuscript describing this work has been submitted to the *Journal of Functional Foods* and is currently under review. The final report for this project was forwarded to HAL in January 2009. The project has now been completed.

Project AV07003

For more information contact
Dimitrios Zabaras, CSIRO
T 02 9490 8352
E Dimitrios.Zabaras@csiro.au

The market opportunities for avocado beyond fresh fruit sales

Over recent years Avocados Australia has invested significant funds in projects investigating industry supply chain management and efficiency. The impact of inferior quality avocado fruit, particularly in seasons of high supply, has been seen as one of the key factors impacting on supply chain efficiency and related profitability. One of the main reasons that inferior fruit reaches the fresh market is because growers have limited opportunities to access other supply chains where lower quality fruit may be acceptable.

Although some processing of avocado fruit does occur in Australia, the volume of products absorbed through these supply chains is limited. Furthermore, the range of avocado value-added products is also limited. A number of reasons contribute to this, including the inconsistent supply of fruit at appropriate price levels; lack of viable markets; underdeveloped market opportunities for various value added products; and limitation and costs of associated processing technologies.

This project provides a detailed report that identifies potential market development opportunities for the utilisation of low grade fruit in the Australian avocado market. It examines the limitations of the major value-added market segment with respect to costs and competitors.

Case studies from the Australian olive oil industry, functional foods sector and avocado food services sector in the United States are also presented in the report. These case studies investigate other comparable industry/business development models and identifying key attributes of success (or failure) in the creation of viable supply chains for value added products.

This project will provide guidance to industry stakeholders in regard to future investment in value-adding projects. It does not provide detailed business development plans, as it is expected that individual industry members would independently undertake more detailed investigation (including specific research and development and financial modeling) prior to commercial investment in product development.

Project AV07024

For more information contact:
Jenny Margetts, p2p business solutions
T 0418 215276
E jmargetts@bigpond.com

Avocados: domestic marketing program

The ongoing 2008/09 national promotion campaign is the largest the avocado industry has conducted to date.

The campaign utilised online, television and magazine advertising, and sampling sessions to target female grocery buyers 20–39 years (primary target) and 40–54 years (secondary target). The target market was chosen based on the recommendations from consumer research carried out in 2005 and additional data.

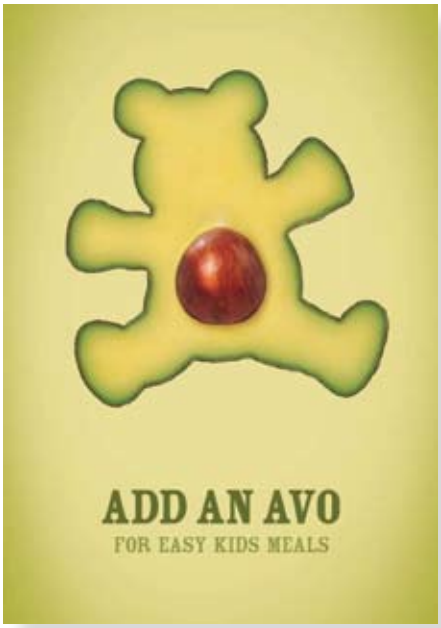
Key messaging centred on introducing new uses for avocados and was supported by recipes. The industry's goal is to build strong demand for an increasing level of production at profitable prices. To achieve this the program's objectives are to:

- Convince occasional users to increase purchase frequency from one purchase per month to 1.5 by 2010.
- Maintain a balance between demand and supply by adding value propositions and creating an emotional bond with the product. This will help minimise seasonal influences on avocado purchasing.
- Promote the value propositions mentioned above; these values help consumers to connect with the product and help in a general population push, through communication of vitamin and mineral content.
- Expand into niche markets – new segments that will provide the industry with new channels to promote the product.
- Decrease whim purchases and increase planned purchases by making avocados top of mind by showing their versatility.

Online to December 2008

Digital communication, the fastest growing medium in advertising, allows communication with consumers quickly, cost-effectively and in a more targeted way. The objective of the avocado online advertising campaign was to drive traffic to the Avocados Australia website.

The success of this type of tactic is measured by the 'click-through rate' (CTR), i.e. the percentage of consumers that click on the ad and go through (in this case) to the Avocados Australia website. The avocado online campaign, which ran



from July to August 2008, achieved a CTR of 0.51 per cent – more than five times the industry average of 0.10 per cent. The 2007 campaign attracted a CTR of 0.36 per cent.

The total number of clicks on the banner ad over the course of the campaign was 31,640, most coming from ads sent via email, and electronic direct marketing (eDM). Two direct marketing companies were used for the electronic mailouts (eDM 'sends'). Both companies work from databases of consumers who have nominated an interest in receiving advertising information. An increase in the number of clicks from 10,297 in the 2007 campaign to 31,640 in the 2008 campaign, demonstrates the growing effectiveness of online advertising.

Overall, eDM sends generated the highest level of clicks to the Avocados Australia website. In total, 18,002 clicks were generated from this form of media.

The video on *ninemsn Lifestyle* established a 0.87 per cent CTR – almost nine times the industry average.

Television to December 2008

The television campaign targets a 'foodie' audience – those with a keen interest in food and cooking. The avocado television commercial ran during high rating food-related programs *Ramsay's Kitchen* and *Hell's Kitchen* on free-to-air TV and on pay TV stations Lifestyle, W, Arena, and Max.

Additionally, a major on-air and online viewer promotion was conducted through LifeStyle FOOD channel.

A competition spot aired on LifeStyle FOOD to drive traffic to an online competition page. The competition was also included in an issue of LifeStyle FOOD's e-newsletter, and was distributed to more than 80,000 members. One major prize was offered – a five-night package at a health retreat.

Magazines until December 2008

Advertisements ran in prominent women's magazines *Delicious, Super Food Ideas, Good Taste, Notebook, Woman's Day, Everyday Food, New Idea, Who Weekly*, as well as niche magazines *Diabetic Living, Women's Health, Fitness First, Fernwood, Mother and Baby, Practical Parenting, Woolworths Australian Parents* and *Pregnancy & Birth*. The media spend on advertising was leveraged by an additional 81 per cent of free-of-charge coverage in the magazine which took the form of editorial and recipes.

Word-of-mouth sampling to December 2008

The word-of-mouth sampling program targetted community groups of mums with babies aged six months to two years. The program aimed to educate mums on the benefits of avocados for pregnant women and babies and provide opportunities for babies to trial the product.

Mums commented that they had "not thought" of giving avocados to their children and for their children to taste avocados in a presentation and respond positively was "just what we needed to encourage us to feed our children avocados".

Results from the mums' circuit show that after sampling avocados in presentations, 92 per cent of people said they would purchase and consume more avocados. Similar results were recorded within the family circuit, 89 per cent said they would purchase and consume more avocados after the presentation.

The recipe booklet distributed on the mums' circuit was well received with mums saying they appreciated "fresh inspiration" when cooking, and to have such "healthy, yummy recipes" to choose from was great.

The recipe booklet distributed on the family circuit was also very well received. Education on the palate change in children between one and three years of age was supplemented by inspiration from the pages of the Avocado recipe book.

Nutritionist spokesperson

Nutritionist Zoe Bingley-Pullin was appointed as avocado spokesperson. She developed nutrition content for the website and will assist the industry with ongoing campaigns.

The 2009 campaign (January – June)

The avocado promotion campaign over the first months of 2009 completes the strategy mapped out for the 2008/09 financial year. Activities are similar to those reported elsewhere, with the objective of increasing consumption by highlighting the versatility of avocados through relevant and inspiring recipes and other content.

The Industry Advisory Committee (IAC) endorsed additional funds to further enhance the existing media plan from January to July 2009. The main aim was to ensure that a strong call-to-action message reached consumers to increase consumption of avocados from March when a high volume of avocados entered the market.

Online

The online campaign was further extended from January 2009 to June 2009. In addition to placing advertisements within online environments, avocado content was placed on other editorial pages to engage audiences where they get their other news of the day. This provided additional opportunitites to click through and visit the avocado website. Sponsorships were placed with three publishers:

- Fairfax Digital
- Yahoo!7
- News Digital media

Based on data from October 2008, more than four million unique users visited the Fairfax Digital network of sites, 3.5 million unique users visited the News Digital network of sites and more than five million unique users visited the Yahoo!7 portal.

Yahoo!7 uses behavioural targeting technology which allows the tracking of a unique user through their individual internet address (IP address). It is possible to track what this user does on the internet and advertisers are able to serve them online banner ads according to their specific online behaviours. Through this behavioural targeting the avocado campaign will be able to more specifically target consumers with an interest in health, food and nutrition.

An investment will also be made to track the performance of the avocado industry's online promotion campaign through Adconian which offers similar behavioural targeting tactic to that used by Yahoo!7, however it operates on a bigger scale. Instead of targeting users within the Yahoo!7 portal of sites, Adconian can target all users visiting close to 80 per cent of Australia's websites.

The search criteria 'avocados' is at present performing well in the unpaid search listing.

Television

The avocado industry has partnered with *Better Homes and Gardens* on Network 7 which airs in Sydney, Melbourne, Brisbane, Adelaide and Perth. This allows the industry to get in-program cooking content.

Similarly on Pay TV, in addition to sponsoring *USA Iron Chef*, spots have been bought on channels such as Fox 8, Arena, and W as well as UK TV.

Magazines

Analysis of existing media used in the 2008 avocado campaign showed that the current committed magazine schedule delivers a solid number of insertions across a strong mix of titles from February to June 2009. It reaches 56 per cent of the target audience who will view the ad 2.48 times. Any more insertions in these titles would have a minimal affect on reach, therefore new titles should be explored. The magazine schedule will be enriched by buying ad space in *Better Homes and Gardens* magazine. By buying one insertion in this magazine advertising will reach 60 per cent of the target audience 2.69 times, which implies that there will be an increase of four reach points.

Avocado consumer website

The avocado consumer website strategy, commenced in January 2009, has the following objectives:

- Engage with consumers already in the database.
- Increase volume through database subscriptions.
- Drive sales through a call-to-action during peak season (March–September).

Avocados: domestic marketing program continued

It will also ensure the nutritional advice on the website is credible, referenced accurately and complies with Food Standards Australia New Zealand (FSANZ) requirements.

The goals of the consumer website strategy are to:

- Ensure that those on the existing avocado consumer website database are people 'of value' and persuade them to refer like-minded friends and family to the site.
- Increase volume, drive sales and engage with consumers on the database through a program that will inspire more purchase occasions for avocados.
- Give consumers a reason to increase usage of avocados in a way that is engaging and rewarding.

A program that is content-rich and drives frequency of consumption was launched in March. It ran for a 30-day period and incorporated 30 different engaging ways of using avocados. The focus was on recipes, nutritional benefits, health and beauty, with the program proposition being "revitalisation". Zoe Bingley-Pullin helped develop the 30-day program that incorporated tips for mind, body and spirit. The 'revitalisation' program featured on the avocado consumer website.

Word-of-mouth sampling

The word-of-mouth sampling program started in February 2009 and ran until May 2009. This platform educated young mothers with babies (six months to two years) about the benefits of avocados.

PR campaign

Because avocados are regarded as an occasional (treat) food and purchases are driven by a specific use or occasion, there is an opportunity to leverage avocados' role in at-home entertaining.

The US avocado industry successfully leveraged the Super Bowl to establish avocados' role in at-home entertaining, and while the promotion started in the 1990s, it is now well and truly established (Super Bowl Sunday is second highest eating occasion for avocados with 10,000 tonnes consumed and its 'at-home party day' averages 18 guests per party).

The Australian avocado industry has started to build its 'at-home entertaining' positioning through a relationship with the NRL's 'One Community' program which is a community relations program, including the 'Eat well, Play well, Stay well' campaign.

To kickstart the season, a recipe competition is featuring on the One Community website. Consumers are being asked to vote for their favourite avocado recipe and have the chance to win tickets to the NRL Grand Final in October.

The NRL is helping to promote this competition with support from all 16 NRL clubs and their respective health ambassadors; each health ambassador has been given an existing avocado recipe to champion.

Traffic to the recipe competition will come from the NRL's newsletter that has 150,000 subscribers, NRL club newsletters/websites, media releases distributed to local newspapers and links from Avocado Australia's website. Zoe Bingley-Pullin and Avocados Australia are also featured in a new NRL magazine being distributed to more than 70,000 junior rugby league players.

The publicity program will also be rolled out, including:

- TV promotion to highlight avocados and NRL relationship.
- Publication of a state vs state story where the state premiers (and supporters of the NRL's State of Origin) will be asked to create a unique avocado dish in support of their team.
- Publication of a nutritional story where footy fans will be asked to swap pies for guacamole.
- Announcement of the recipe competition results.

As part of this program, the avocado industry now has access to the NRL's One Community spokespeople for media interviews and quotes in media releases.

Project AV08500

For more information contact:
Gunjan Tandan, HAL Marketing Manager
T 02 8295 2300
E gunjan.tandan@horticulture.com.au

Data collection program

The data collection project allows for the acquisition, analysis and reporting of horticulture industry import and export data and domestic market trade data to support industry knowledge and decision making based on consumption and trade patterns.

MT08015 has historically delivered information to the participating industries via reports and demonstrations created from the available data platforms acquired in the project.

The project has now entered a new phase that will look to build on the past as well as see a greater emphasis on communicating with industry to arrange the supply of key statistics and data with a view to having positive impact on each industry's production and trade.

Particular reports will vary across industries but typically will include Australian export volumes and amounts versus imports across different trade partners. Domestic sales trends will be displayed across retail and independent markets as well as providing consumer behaviour data on purchase frequency, volumes, value and market penetration.

The industries contributing to this project are avocado, apple & pear, almond, citrus, cherry, lychee, mango, macadamia, mushroom, nashi, onion, papaya, summerfruit, table grape and vegetable.

Project MT08015

For more information contact:
Roger Bramble, Horticulture Industry Analyst
T 02 8295 2300
E roger.bramble@horticulture.com.au

Export development for the Australian avocado industry

The Australian avocado industry is facing increased international competition, increasing supply and is currently heavily focused on the domestic market. To date, the strength of the domestic market, driven by increased consumption, has been a natural deterrent to industry-wide development of export markets.

Although Australia's avocado export volumes continue to grow, albeit from a small base, competition in avocado export markets is also increasing. Major exporting countries, such as Mexico, Chile, and Peru; and emerging exporting countries, such as Brazil and Argentina; are also increasing production and are similarly seeking alternate markets to place their product and maintain the viability of their industries.

In the export arena, although the Australian industry does possess some advantages, including its close proximity to Asia and a favourable reputation for supplying good quality produce, it also has a number of weaknesses that need to be managed.

Australia's cost of production compared to other major exporting countries, long shipping distances and lack of market access all provide challenges for the industry.

Australia's current major export markets – Singapore, the Middle East, Thailand, Hong Kong and Malaysia – have shown growth over the last five years. In Singapore, Thailand and Malaysia, Australia is the dominant supplier into the market and needs to take actions to ensure it retains this position.

Although it is known there are potentially windows of opportunity for Australian avocados in Europe, it was felt that Australian producers would need to partner with countries that hold supply arrangements with major buyers to ensure a sustainable supply position. This is to offset the risks associated with a highly competitive, complex market and lengthy shipping times that require very efficient supply chain management to ensure product quality is adequate. It is considered that UK and European markets should be pursued if opportunities arise through commercial relationships or in the medium term, with the support of increased investment in post harvest R&D and transit technologies to ensure product quality.

In the first instance, industry needs to determine its capacity to supply adequate volumes of fruit that meet export specifications (quality and size profiles). It also needs to adopt an industry export operational model that allows a coordinated and cooperative approach to export.

All of these requirements are incorporated in the *Avocado Export Road Map* in the full project report.

Project AV06010

For more information contact:
Antony Allen, Avocados Australia
T 07 3846 6566
E ceo@avocado.org.au

Avocados and food service

Food service market

The food service market is diverse and extremely fragmented. It covers a huge spectrum of needs and opportunities that provide a challenge for any company or industry. One significant trend is the size and growth. Currently over one third of all expenditure now occurs out of home. In the United States this figure is over 50 per cent.

What does this mean for avocados?

Consumers see avocados as something special and healthy but their use is mostly confined to salads and sandwiches. The penetration and use in the food service market is poorly understood due to lack of accurate, up-to-date information. Restaurants and cafes appear to be the biggest users of fresh product but they are short of new ideas. This is not dissimilar to many consumers in Australia some years ago. The availability of product is not an issue but prices fluctuate and managing ripeness for food service is an issue that needs to be addressed. Getting consistently good product to the market will require the support, effort and engagement of the whole supply chain.

What are the key factors for success in this market?

Positioning – The focus for the future must be on key product values and benefits relevant to food service. The functional nature and purpose of this sector means the commercial benefits of avocados must be stressed.

A menu strategy – The focus on meal solutions will support increased product usage, providing chefs ideas and reasons to start menuing avocados and on a more frequent basis.

Targeting – Due to the highly fragmented nature of the industry, whilst many opportunities abound, focus within market and customer segments are essential for efficient use funds and the ability to evaluate marketing activity.

Year one objectives:

- Focus on increasing penetration and share of menu, particularly for hot dishes.
- Achieve hot dish uses for fresh avocados that extends into winter and also are simple uses that diners can take back into home use.
- Launch a communication strategy that focuses on promoting hot use of fresh avocados but still supports use in cold dishes.

Project AV06029 and AV08036

For more information contact:
David Chenu, HAL Marketing Manager
T 02 8295 2300
E david.chenu@horticulture.com.au

Avocado retail price surveys

Through the Infocado project, data is collected and reported from both packhouses and individual growers on actual and forecast amounts of fruit marketed in any one week including variety, destination, size and quantities. This provides avocado marketers with improved market intelligence to assist in making marketing decisions.

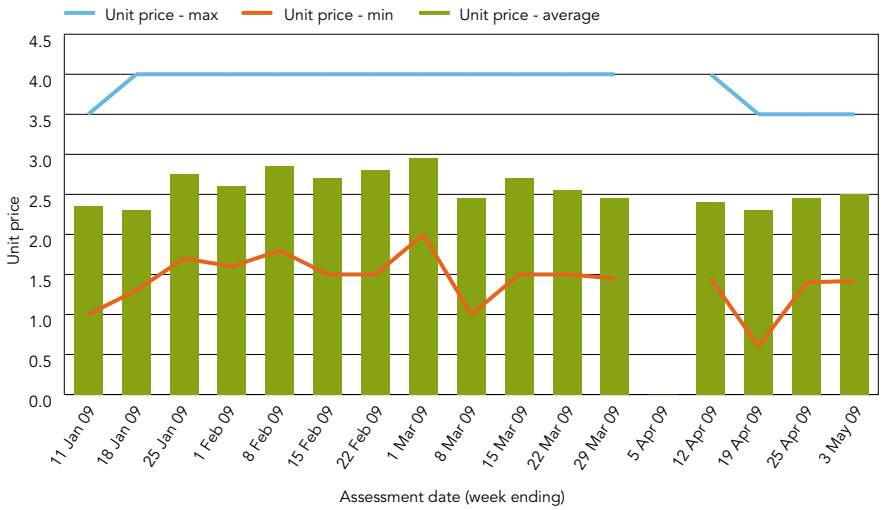
Similarly the "Avocado Retail Quality Survey Project" is providing the industry with information regarding the current level of quality of avocados at the retail level. However until now this volume and quality information has not been linked to retail prices to illustrate the relationships between volume, quality and price and provide a more transparent system for identifying the margin between what growers receive and the consumer pays for fruit of varying quality.

This project was developed in September 2008 to provide the industry with regular retail price data across major capital cities and retail outlet types. A range of information is collected on a weekly basis in Brisbane, Sydney, Melbourne and Perth including details about the avocado display, fruit weight, fruit price and whether or not fruit is on special. This data is then reported to industry via weekly Infocado reports and via a dedicated web site. So far, eight months worth of data has been collected and reported through these processes. A snapshot of the Sydney data is included here.

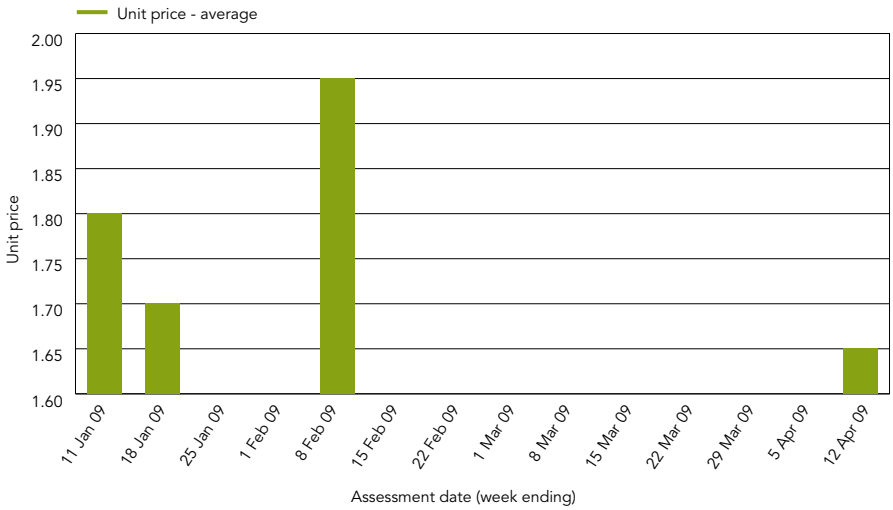
Project AV07023

For more information contact:
Joanna Embry, Avocados Australia
T 07 3846 6566
E infocado@avocado.org.au

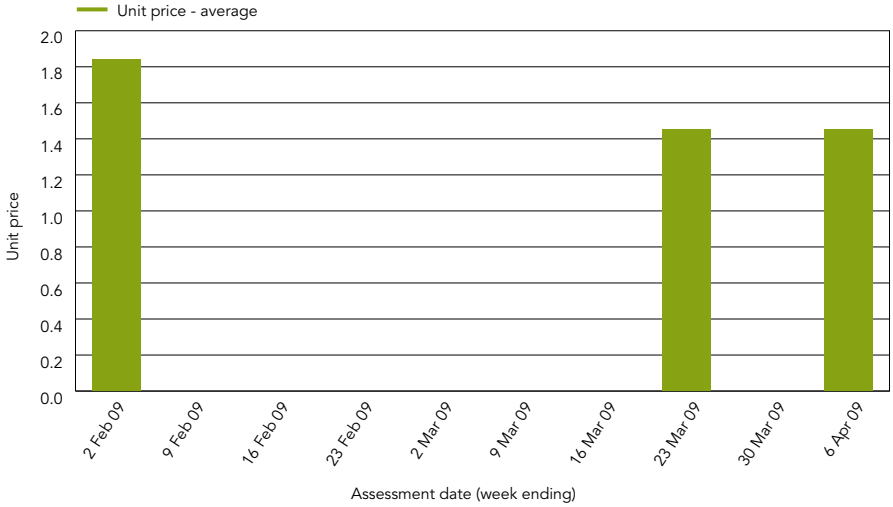
Sydney average retail prices 2009



Sydney Coles catalogue specials 2009



Sydney Woolworths catalogue specials 2009



Avocados in schools scoping study

A scoping study to develop a concept for an avocados initiative in schools is currently underway. The scoping study will allow industry to assess the opportunities and to identify the best and most cost-efficient approach to engaging with the primary school sector. It will also provide the industry with the opportunity to canvas the opinion of key stakeholders in the schools sector to ensure the acceptability of an "Avocados in Schools Initiative".

School curriculums are already crowded and it is difficult to develop a program that will be readily accepted by schools. The scoping study will help address:

- Finding 'champions' within the school sector and maintaining open communication with all levels of the sector. This includes a "top-down, bottom-up" approach.
- Clearly relating any initiative to the curriculum and to state-based learning outcomes. This is a complex situation as every state and territory has their own unique curriculum with differing language, terminology and approaches. Each curriculum is constantly evolving and changing. Some states are radically reshaping their curriculum at both the macro and micro level.
- Thinking beyond paper-based resources. The curriculum is crowded and there are a multitude of resources, programs and packages bombarding schools every day. Schools are eager for students to have purposeful, real-life learning experiences that connect them with their wider community beyond the classroom.
- Linking with, complementing and leveraging off existing school programs and initiatives.
- Sustaining support and interest in the initiative over time.

A web survey to review existing "food in schools experiences" and nutrition programs in each state and territory is currently being undertaken. Mapping of existing curriculum is occurring as well as identifying key stakeholders in each of the states and territories. "Hot Spot" opportunities for the avocado industry to engage with school students are being identified and specific targeted recommendations for an "Avocado in Schools Initiative" including a concept and timeline are being developed. The project is expected to be completed in June 2009.

Project AV08038

For more information contact:
Shelley Woodrow, Woodrow Consulting
T 03 9534 9921
E shelley.woodrow@gmail.com

Consumer tracking survey

Understanding of consumers is crucial to inform market development activities. It is essential in identifying key messages to be communicated to consumers to educate and assist them in overcoming barriers to purchase and consumption.

Both quantitative and qualitative research methodologies can be used to assist the efficient investment of industry levies in areas of greatest impact.

To this end, Horticulture Australia Limited (HAL) commissioned Brand Story to undertake an ongoing online survey of consumers to benchmark behaviours and attitudes and track the resultant impact of industry activity on consumers going forward.

The fruit and nut tracking survey is conducted six times a year, covering the key growing seasons and collects information from 1800 main grocery buyers over the year. The survey is funded by seven participating industries (apples, avocados, bananas, grapes, macadamias, mangoes and pears) to ensure cost-effective provision of a wealth of consumer information on areas such as consumer preferences, product selection criteria, the incidence, frequency and volume of purchase, consumer attitudes and reactions to assorted education materials produced.

The survey is now in its second year, meaning that year-on-year trends can be tracked.

Avocados are purchased by around half of consumers surveyed and there is wide consumer awareness that avocados are healthy, containing good, rather than bad fats and are very versatile to use in cooking. The feel of the avocado is highly important in the selection of the fruit.

An overall key finding from the tracking study is that, while consumers are not overly interested in knowing the nutritional content of different fruits and nuts, it is clear that communication of specific consumption benefits, be it around health, utility or a particular emotional context, helps each fruit and nut to occupy differentiated territory in consumers' minds. This can in turn encourage consumption of a wider range of fruits and nuts.

Project MT08060

For more information contact:
Steve Sheppard, Brand Story
T 02 8399 3850
E steve@brandstory.com.au

Avocado export program

The areas for export growth of Australian avocados are the pioneering of market development in the Asian markets where avocados are little known and the opportunities to expand exports of Australian avocados into markets where Australia can fill a market gap with significant volume. Our main southern competitors, Chile and South Africa have strong programs into USA and Europe though at times northern buyers are unable to satisfy demand.

Exports of Australian avocados continued to expand by a further 20 per cent in 2008 to 1,400 MT. This is almost double the amount exported three years ago though it still represents less than two per cent of the production and less that 0.1 per cent of avocados traded world-wide. Most of the growth is coming from Asian markets with very small levels of imported avocados overall, which means that the Australian share of the market is high on a small base as shown in below.

	Singapore	Thailand
Total imports	680 MT	412 MT
Australian imports	534 MT	356 MT
Australian share	78%	86%
Growth LY	41%	120%

The growth in Thailand from a small base has been effective through a co-operative program facilitated through Sunfresh. The program to raise the awareness of Australian avocados involved a strong supply chain education emphasis, in store activities and TV cook show exposure where avocados were featured that gave customers a greater understanding of the avocado and its uses. The results showed that the buying patterns changed; customers previously observed buying hard green fruit would only purchase a single piece whereas ripe fruit were being purchased at three or four pieces per customer.

During the promotion in July sales reached 3,000 trays per month which was more than double the previous month patterns and the sales rates held up for the months following the promotion as shown in Fig 1.

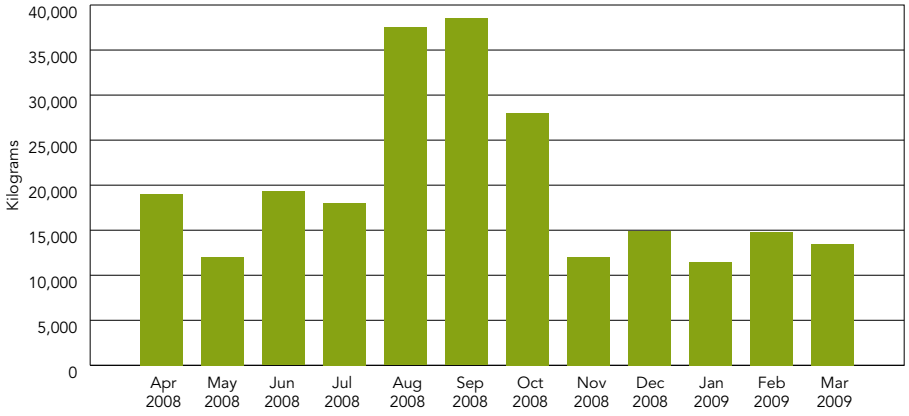
The promotion of Australian avocados within the framework of HAL's **AUSTRALIA***fresh* exhibition stands at Asia Fruit Logistica (Hong Kong Sept 08) Fruit Logistica (Berlin Feb 09) and Gulfoods (Dubai Feb 09) helped raise the profile of the product and introduce potential buyers. Having exporters on the stand enabled buyers to interact with people who can trade the product. In addition, the **AUSTRALIA***fresh* program includes advertising. Asia Fruit Logistica attracted over 5,000 visitors from the fresh produce trade and continues to grow each year. We were able to sample avocados to trade visitors at both events. At the Fruit Logistica event in Berlin avocado exporters participating on the Australian stand were able to meet many potential buyers and handlers with the aim of developing relationships and building awareness of the availability of Australian avocados in periods where Europe is in short supply.

The Australian Avocado industry has export development as a strategic goal and the expansion is heading in the right direction.

Project AV08500

For more information contact:
Wayne Prowse, HAL Export Development Manager
T 02 8295 2300
E wayne.prowse@horticulture.com.au

Fig 1 – Avocado exports to Thailand by month



Avocado consumer research is reviewing trends and attitudes

Responses to current marketing activity and trends in avocado consumption are being reviewed through a consumer research project (AV08013) scheduled for completion mid-2009.

The project is:

- Reviewing avocado usage and consumer attitudes first surveyed in 2005.
- Measuring the impact of the advertising campaign so far in terms of awareness and comprehension, as well as changes in consumption patterns.
- Providing direction for future marketing strategies – is the current campaign still relevant and compelling in terms of both message and execution? Or is a new approach required?

The research involves several phases including an initial quantitative online survey, qualitative discussion groups, an interim review, and a final qualitative phase.

Field work for the online survey is complete. It is anticipated that all phases of the research will be completed by late July 2009. An overview of findings will be presented at the annual avocado conference.

Project AV08013

For more information contact:
Anna Herron, Bread & Butter Research & Planning
T 02 9963 4600
E annah@bbutter.com.au

Goal two – Ensure consistently high quality fresh avocados at the retail level

Avocado supply chain information

As the avocado industry grows there is an increasing need for growers and the industry as a whole to understand the points at which supply and demand impact on returns. A three pronged approach has been undertaken to address this requirement.

1. The continued management of Infocado

Infocado was developed in 2005 by Avocados Australia to provide a system that collects more meaningful and timely industry supply data, specifically throughput and forecasts to assist businesses with better information on which to base their management and marketing decisions. Up until this year the system has included three tracking modules including the weekly dispatch, weekly forecast and seasonal forecast modules which all record actual and forecast production data from packhouses.

This year, a wholesale module was developed to record data including receivals, sales and stock on hand from wholesalers, which is reported to contributors.

Management of the system involves the production and distribution of a weekly and quarterly report and the management and enforcement of a protocol to encourage consistent, timely and accurate data input. Approximately 85 per cent of Australian market throughput is recorded through the system from 112 packhouses and up to 29 wholesalers.

2. Development of a system to collect productivity information

A productivity data collection system has been developed to assist individual growers and industry as a whole to track and compare productivity over time and develop a long term production forecasting model. The data is collected from growers and includes a range of variables affecting productivity. The data is submitted by growers either electronically or as a hard copy. This year the project was rolled out across all Australian avocado growing regions.

3. Management and coordination of a suite of supply chain projects addressing quality and efficiency of the supply chain

There has been an absence of quantitative, impartial information available to determine both the combined impact of price and fruit quality on consumer purchase (demand) and the structures currently available to address issues affecting quality and efficiency in the supply chain.

The supply chain project was developed to address this gap and employs a stepped approach (involving different service providers to undertake each component) to build the full picture of fruit quality and supply chain efficiency and address the issues identified.

A number of projects were completed in the last couple of years to identify consumer preferences and to bring together baseline data in terms of quality at the retail level. The projects undertaken in 2008/09 were developed to build on those, to report back to industry on an ongoing basis the current state of play in terms of avocado quality in the market and to develop processes to make quality improvements. The current projects include:

- AV07018/AV08034 Avocado Retail Quality Surveys Phase I/ II
- AV07023 Avocado Retail Price Surveys
- AV08017 Avocado Supply Chain Education Materials

Project AV06006

For more information contact:
Joanna Embry, Avocados Australia
T 07 3846 6566
E j.embry@avocado.org.au

Expanding marketing awareness post-Infocado Summit

Information on market opportunities and supply chains has been extended to avocado growers who did not participate directly in the 2008 Infocado Summit.

The Summit provided opportunity for growers, packers and wholesalers to:

- Understand how access to critical information within supply chains can help businesses with marketing and management decisions.
- Understand how new and changing supply chains will impact on the market.
- Identify where growth opportunities may exist for the industry.

Through the project growers and packers gained a greater understanding and awareness of issues impacting on the profitability of individual enterprises and the industry overall.

A newsletter and CD were produced that included interviews with presenters and key industry stakeholders, as well as findings from industry development activities and R&D. These were distributed with the spring 2008 edition of *Talking Avocados*.

The material has encouraged most growers and packers to consider their business practices.

Project AV07028

For more information contact:
Jenny Margetts, p2p business solutions pty ltd
T 07 3366 2710
E jmargetts@bigpond.com

Development of an avocado fruit robustness test

The quick and easy 'Avotest' being developed for avocado fruit quality on domestic markets is now being made more reliable, while a cold storage test is being developed for export markets.

Fruit quality is one of the major factors limiting growth in avocado retail sales. Avocado growers are often unaware of their end-use fruit quality since quality problems only manifest upon fruit ripening and growers receive limited feedback from the supply chain. If growers were aware of their expected fruit quality they would be equipped to make better marketing decisions and if necessary to take remedial actions to improve their fruit quality.

Avotest is being developed as a quick and easy method of determining expected end-use fruit quality before the start of the commercial fruit harvest. The test aims at distinguishing between blocks with robust fruit and those with less robust fruit. The test could also be used to predict the resulting fruit quality after the implementation of new farming practices.

The project is in its second season. During the 2008 avocado season an Avotest was developed for short storage conditions, such as fruit destined for domestic markets. The test was found to be a reasonably good predictor of end-use fruit quality with a 60 per cent predictability of acceptable fruit and up to 80 per cent predictability for certain rots.

Most grower collaborators have identified the benefits of the Avotest and can envisage commercial applications. A cost benefit analysis for Avotest was undertaken at the end of the 2008 avocado season and found to be highly favourable.

Several factors that contribute to poor fruit quality were identified. Heavily pruned trees and young trees with high levels of nutrition were most likely to have poor quality fruit due to excessive vegetative growth.

During the 2009 season the Avotest is being refined in order to increase its reliability and is being applied to fruit from two avocado growing regions. A prolonged cold storage Avotest is currently being developed for fruit intended for the export market or for prolonged storage of avocado fruit. The project is ongoing.

Project AV07005

For more information contact:
Danielle Le Lagadec, Queensland DPI&F
T 07 4132 5524
E danielle.lelagadec@dpi.qld.gov.au

Avocado retail quality surveys phase I and II

In 2007, work was commissioned to develop benchmarks for industry performance in eating quality (primarily maturity and freedom from internal defects) by measuring the points at which fruit quality impacts on actual consumer purchasing behaviour.

In terms of visible internal defects, results showed that the level of internal damage and incidence of defect significantly lower consumers' future purchase decision and that only the lowest levels of defect (e.g. a per cent flesh damage) at very low incidences (e.g. one in five or one in ten avocados) were acceptable in terms of not reducing consumers' purchase intent below 70 per cent ('probably buy').

In terms of maturity, there was an approximately linear increase in liking and purchase intent that occurs as DM content (as a measure of maturity) increases from 22 per cent to 28 per cent. Thus, improvements in DM in this region have the potential to stimulate consumer demand and consequently increase prices or increase volume of sales.

As the next stage in this benchmarking process, it was concluded that retail surveys were required to measure the amount of fruit at the retail level that currently meets these benchmarks at the preferred level of eating ripeness.

This project therefore included both retail quality surveys and Dry Matter content testing for avocado maturity.

It is an ongoing project that began in October 2007. Fruit is collected by assessors from retail outlets in four major capital cities on a monthly basis and then assessed for internal quality. Similarly fruit is collected from wholesalers in the Sydney markets on a monthly basis and then tested for % DM as an indicator of fruit maturity.

Phase I (AV07018) of this project was completed in September 2008. The key findings of the surveys were that:

- Incidences of the internal defects had a significant association with sampling month, state, and store type of purchase.
- Bruising was the most common defect type in both the 'Hass' and 'Shepard' varieties. Shepard tended to have lower incidences of defects than 'Hass', especially in the more severe defect categories. However, when defects were present, cheaper fruit showed larger estimated reductions in the probability of purchase compared with more expensive fruit.
- Based on the previous consumer research conducted, the cheaper fruit have a higher predicted probability of purchase. However the cheaper fruit also had the larger estimated reduction in purchase probability due to defects.
- There were clear monthly trends in DM with March 2008 to June 2008 having more low DM fruit and there was also some evidence of a regional effect.

Phase II (AV08034) of the project began in October 2008 and is focused on providing frequent updates to industry on quality on a state-by-state, store type by store type and growing region by growing region basis. These reports will also be used to monitor quality improvements expected as a result of projects initiated across the supply chain to address quality issues.

Project AV07018 and AV08034

For more information contact:
Antony Allen, Avocados Australia
T 07 3846 6566
E a.allen@avocado.org.au

Improving yield and quality in avocado through disease management

Tree health and fruit quality remain key indicators of productivity in the avocado industry. Unhealthy trees and poor quality fruit translate to lower returns to the grower, but also impact the industry as a whole.

It is important to continually evaluate and improve the disease management practices currently employed, but also to assess new approaches, so that tree health and fruit quality can be managed in an environment demanding cost-effective methods of production that are acceptable to local and international markets.

One of the promising rootstocks identified as having superior establishment and growth in replant land heavily infested with *Phytophthora cinnamomi*, is being clonally propagated for commercial release to nurseries. Seedling selections also demonstrating increased field resistance to Phytophthora root rot (PRR) will be cloned and re-evaluated under very high disease pressure. Clonal Hass rooted cuttings (ungrafted) are also performing well under high Phytophthora conditions.

It is important to monitor, refine and optimise the use of potassium phosphonate for PRR management. There is some evidence to suggest that different cultivars may require slightly different use patterns to ensure there is sufficient phosphonate in the roots and that fruit residues are not exceeded. This study is continuing.

The results of preliminary investigations of brown root rot in avocado will be completed and made available to the Industry shortly. Surveys in major production areas on the Atherton Tablelands and Bundaberg/Childers confirmed that the disease is widespread, and severe in some blocks and orchards. The disease has also been identified in avocados from northern NSW and the Sunshine Coast (QLD) hinterland, where it is known to occur in nearby rainforest and/or hoop pine plantations. Options for further trials evaluating management options will be outlined in the detailed report.

A major constraint to fruit quality is postharvest anthracnose and stem end rot disease. Reports of exposure of some species of fruit to ultraviolet-C radiation showed a reduction in postharvest disease; however this approach was not successful in avocado in this project. Similarly, dipping fruit in lower rates of acidified prochloraz fungicide did not affect disease levels upon ripening. Some newly developed products that have been commercialised overseas will be tested in the final season of the project for their effects on postharvest disease.

Project AV07000

For more information contact:
Elizabeth Dann, Queensland DPI&F
T 07 3896 9468
E elizabeth.dann@dpi.qld.gov.au

Tree decline and death caused by *Phellinus noxius* (photo) is usually very quick, compared to the slower ill-thrift and eventual death caused by Phytophthora root rot.

Creating phytophthora-resistant rootstocks for GM-free avocado production

Improved phytophthora root rot disease management strategies are being developed that will reduce avocado production costs while protecting yields.

Phytophthora root rot (PRR), caused by *Phytophthora cinnamomi*, is considered the most important and widely distributed disease of avocados. All avocado-producing areas in Australia are affected by this disease with annual losses estimated to be about $40m in lost production and fruit downgrading.

This project addresses the issue of bringing down the cost of avocado production – without compromising yield and quality – by targeting improved disease management strategies for PRR.

The cutting edge technology of 'RNA silencing' will be used to engineer avocado rootstocks for resistance to PRR. This technology, delivered by means of transgenic rootstocks, will be utilised to target essential genes in *P. cinnamomi*. Thus, when the fungus attacks the transformed rootstocks, it will be recognised by the homologous gene-silencing triggers targeting the essential genes of *P. cinnamomi*. This may kill the invading fungus or make it non-pathogenic.

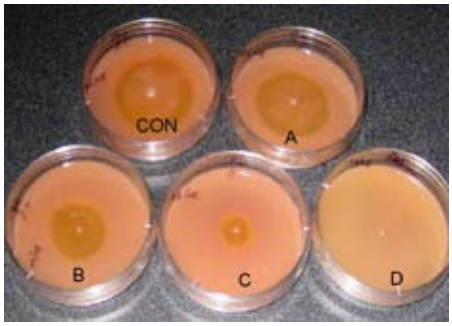
Avocado somatiic embryos

The advantage of using this approach is that, although the rootstock will be genetically modified (GM), the grafted scion will remain non-transgenic and will produce GM-free fruit.

The benefits include:

- Reduced cost of implementing various cultural practices and chemical control measures.
- Adoption of rootstocks that have good agronomic characteristics but lack resistance to *P. cinnamomi*.
- A long-term, cost effective, environmentally friendly solution to the root rot problem.
- Complementation and value-adding to ongoing rootstock improvement programs.

The spin-off from the project will be optimisation of an avocado transformation system established for other rootstock improvement applications.



dsRNA Phytophthora

The selection and screening of the candidate genes effective against *P. cinnamomi* has been completed. Hairpin constructs have been designed and constructed targeting two critical genes in *P. cinnamomi*, to ensure that minimum foreign sequences are introduced into the avocado plant.

Somatic embryos of selected avocado rootstocks have been generated for transformation.

The model plant Arabidopsis has been transformed using these constructs, and disease resistance and small RNA analysis will be done in the coming months.

Project AV08002

For more information contact:
Neena Mitter, Queensland DPI&F
T 07 3346 6513
E neena.mitter@dpi.qld.gov.au

Ongoing market access R&D initiatives

In support of market access the horticultural industries and government invested $3.2 million for market access related R&D projects as part of the 2006 HAL Market Access R&D Plan. As a successor to the 2006 R&D Plan, the 2009-2013 Market Access R&D Plan has been developed. Importantly, the Plan provides even greater focus on direct market access outcomes through a multi industry approach. The next step in the implementation of the 2009–2013 R&D Plan will be identification of industry market access project priorities.

A short summary of current market access R&D projects relating to the avocado industry follows:

Project MT06022 – Generation of dimethoate and fenthion samples to maintain market access

HAL has commissioned a number of residue trials for dimethoate and fenthion. Initial indications suggest that it should be possible to retain most, if not all pre-harvest uses. The only caveat is that to achieve this may require some changes in use patterns, i.e. possible extension of withholding periods. It is intended that once the results of the 2007/08 foliar application trials have been evaluated they will be discussed with relevant industry groups prior to any further trial work being initiated.

It is understood that the APVMA is still in the process of finalising elements of the review associated with fenthion and dimethoate. It has also been indicated that the APVMA intends to finalise the reviews once an assessment of all available data has been completed, i.e. once the results from HAL trials have been submitted and taken into consideration.

MT08035 – Providing data packages for new fruit fly control technology

A confidential project to test the Syngenta product, Lufenuron, for its potential to be used in field control of fruit fly species endemic to Australia.

Lufenuron is a potent insect growth regulator that interferes with the formation and deposition of cuticle chitin in a wide range of insect groups, thereby acting mainly as an ovicide and/or larvicide. Laboratory tests conducted in both Spain and Brazil have shown that lufenuron is able to sterilise adult Mediterranean fruit flies, but does not have significant effects on the survival and behaviour of adult flies. This project aims to evaluate the sterilising efficacy of the Syngenta product against Queensland fruit fly and another two fruit fly species.

MT08036 – Ecology and pre harvest control of fruit flies for systems approaches to market access for fruit fly host commodities

This project will conduct a formal study of Queensland fruit fly movement at different scales as it relates to the improved use of Male Annihilation Technology (MAT) and bait sprays for pre-harvest control. This will help to develop systems approaches to control Queensland fruit fly.

It is generally accepted that maximising the effects of pre-harvest treatments for fruit flies will be an essential component in phytosanitary management systems in the future. This project will look at the refinement of pre harvest control strategies for Queensland fruit fly.

Project MT06020

For more information contact
Kim James, HAL Biosecurity & Market Access R&D Manager
T 08 6389 1407
E kim.james@horticulture.com.au

Improving the management of spotting bugs in avocados

A recently concluded series of workshops have identified opportunities for better monitoring of spotting bugs and facilitated improved management processes for the pest.

Spotting bugs are persistent pests of avocados in Queensland and New South Wales.

They have a wide range of native and exotic hosts from which they can migrate into avocado orchards. Their feeding results in fruit drop and reduced quality of fruit.

The project incorporated workshops that highlighted the opportunities to monitor spotting bug incidence and immigration, and the decision-making process for implementing control measures.

Non-chemical options to reduce the attractiveness of the crop habitat were discussed but current control measures depend heavily on insecticide sprays.

The workshops also addressed the main variables of airblast sprayer calibration to achieve even coverage throughout the canopy, and the calculation of pesticide mixing rates to achieve optimum dose based on target canopy characteristics. The new label concepts of 'dilute' and 'concentrate' sprays and rates were fully discussed.

Field demonstrations highlighted the need to assess coverage in all parts of the canopy using dyes or water-sensitive papers, rather than relying on visual assessment of the spray cloud.

Overall 11 workshops were completed in Queensland (5), New South Wales (4) and Western Australia (2). Seven workshops were held in 2007 and four in 2008.

A total of 154 participants attended – 27 from WA, 45 from NSW and 82 from Queensland. The majority of these were growers, plus representatives of local state departments of agriculture or primary industries, and spraying equipment or chemical suppliers.

Local department of primary industries officers attended workshops at Peats Ridge and Mareeba (Qld), and Alstonville (NSW).

Avocados Australia Ltd estimated that, while only 14 per cent of the total number of growers attended, those attending represented 62 per cent of total avocado production in Australia.

Each workshop participant received a comprehensive 52-page workshop manual. Evaluation sheets were distributed to all participants and returned by 60 respondents. A limited number of workshop manuals are still available from Avocados Australia.

Project AV06001

For more information contact:
Dr Henry Drew, Growing Greener Growers
T 07 5445 0032
E henry.drew@bigpond.com

Rootstock improvement

The 'Rootstock Improvement for the Australian Avocado Industry' project has been developed to address a number of key issues important to the long-term sustainability of avocado production in Australia.

Australian avocado orchards are currently planted on seedling rootstocks, which are genetically diverse. This diversity increases the difficulty in getting a uniform outcome from standard management practices. For example, over a 6-year period a 400 per cent difference in yield was measured among 'Hass' trees in the same orchard under identical management. Additionally, large differences have been recorded between trees in the susceptibility of fruit developing postharvest rots which negatively impacts on consumers. These differences have been attributed to different rootstocks exerting changes on scion physiology.

Results from the last three years of this project have demonstrated that for clonal propagation increasing the post-etiolation temperature during the rooting phase from 21°C to 27°C improved the success of rooting for a number of rootstock varieties. It was also noted that when establishing 'Hass' trees on replant sites 'SHSR-02', 'Velvick' and 'Barr Duke' and 'Rigato' had higher Phytophthora root rot resistance than most of the other rootstocks used. Additionally, the results indicate that Mexican race rootstocks and their hybrids have greater susceptibility to Phytophthora trunk canker than rootstocks of Guatemalan and West Indian race origin.

With respect to the affect of avocado rootstocks on production results from the warm subtropical sites of the Atherton Tablelands and the central Burnett indicate that the two most successful clonal rootstocks are 'Duke 7' and 'Velvick' when grafted to 'Hass', while from the seedling rootstock population 'Velvick' is consistently the highest yielding rootstock. However, when 'Shepard' is the scion variety 'Velvick' and 'SHSR-03' are the best performing rootstocks from both production and yield efficiency aspects. However, with 'Hass' grown in the cooler, elevated subtropics 'SHSR-03' is the most successful rootstock overall in terms of production and yield efficiency.

When comparing the performance of cloned rootstocks against those grown as seedlings (grafted to 'Hass') results from the central Burnett indicate that seedling rootstock have cropped better than those propagated as clones however, from the cool, elevate subtropics the cloned rootstocks are marginally higher in production after two years of cropping.

The above results are early in the production life of trees and it is a little early to be fully confident that current data will be a reflection of future performance.

Ongoing research in this programme aims to continue recording rootstock performance in each of the districts where experiments have been planted along with studying the effect of rootstocks on postharvest quality (storage life and anthracnose susceptibility) of fruit. Additionally, the performance of potentially elite rootstocks that have been recovered and planted out for evaluation will be monitored for beneficial traits useful to the Australian avocado industry.

A new project (AV08000) has commenced to continue the work being undertaken in this program.

Project AV04007

For more information contact
Tony Whiley, Sunshine Horticultural Services Pty Ltd
T 07 5441 5441
E whileys@bigpond.com.au

Development of an international standard for mobile elevating work platforms

This project is the final of a series to represent orchard growers interests in the development of standards for mobile elevating work platforms (MEWPs) used in orchards.

The work has covered the operating and maintenance standard AS 2550.10 (published late 2007), the design standard AS 1418.10 (expected to be published 2009), and the international design standard ISO 16653-3, which is currently in draft.

Prior to this cross-industry initiative, orchard growers were not represented on the standards committees. The standards therefore tended to cover the needs of industrial users and did not recognise important innovations necessary to ensure MEWPs could operate efficiently and safely in orchards.

For example, an orchard MEWP operator may pick up over 14,000 avocados in a shift repositioning the platform perhaps 5,000 times. The controls needed to provide for this high-speed picking are quite different from those required for an industrial MEWP which may be repositioned less than 20 times in a shift. Similarly, orchard MEWPs are generally smaller than industrial counterparts and need to travel faster to ensure efficient operation.

The omission of orchard grower input to the standards had left orchard MEWPs non-complying. Growers were at risk of dispute and prosecution from safety regulators and civil litigation in the event of an injury involving an orchard MEWP.

The current and final part of the project has been to develop an international standard for orchard MEWPs. The international standards did not recognise orchard MEWPs and their special requirements. Courts have been known to reference higher-level standards in injury litigation and on that basis it was judged prudent to gain recognition at an international level.

A valuable outcome of the project is that a commentary has been included in AS 1418.10 covering the use of MEWPs in orchards. The document has been written from input by orchard MEWP manufacturers and users. As the only published document covering the subject, it may serve to help growers and manufacturers explain why efficient orchard MEWPs must be different from MEWPs used in general industry.

Project MT08013

For more information contact:
Keith Batten, Keith Batten and Associates
T 07 3348 2104
E batten@bigpond.net.au

Canopy management manual released

A manual has been produced to assist avocado growers across Australia to develop cost-effective strategies to optimise light penetration, maximise and maintain fruit quality and yield, and improve efficiency of harvesting and spraying operations.

The manual covers a range of canopy management options for new plantings, young trees (prior to crowding) and large trees (where orchard crowding becomes a problem). For each strategy, details on the procedure, costs involved and other considerations were also outlined.

The project was completed in August 2008. As a result:

- Growers are using a range of canopy management strategies depending on tree age, planting density and extent of orchard crowding. In young trees, strategies to prevent crowding are used including selective and mechanical pruning and selective limb removal. In older orchards where crowding is a problem, techniques used include major limb removal, staghorning and tree removal.
- In warmer sub-tropical climates, where the crop can be harvested up to several months prior to flowering pruning, operations can be implemented after harvest and prior to flowering. Growers in these regions are using selective limb removal, mechanical and selective pruning techniques.
- In cooler, temperate climates it is normal for the tree to carry two crops for a period of time (mature fruit from the previous season as well as current season's fruit). Growers in these regions typically adopt a selective limb removal strategy.
- Canopy management costs were found to be highest at sites involving tree removal, staghorning and selective pruning where the costs of mulching and removal of limbs was a major component. Costs were least in those systems involving mechanical pruning.
- The highest productivity was achieved using various methods of selective limb removal and selective and mechanical pruning. Productivity was lowest at sites involving staghorning and tree removal techniques.
- Results of plant growth regulator trials indicate that naphthalene acetic acid (NAA) reduced regrowth in pruned branches; uniconazole (Sunny®) and paclobutrazol (Austar®) reduced vegetative growth, increased flowering and tended to improve yields in staghorned trees; and prohexadione-calcium (Regalis®) reduced the spring growth flush and improved fruit quality when applied at flowering.

Major limb removal

Project AV04008

For more information contact:
John Leonardi, Avocados Australia
T 07 3846 6566
E j.leonardi@avocado.org.au

Goal four – Provide avocado producers with a range of benefits to achieve their business goals

Study groups harness knowledge to achieve globally competitive avocados

A project scheduled for completion early next year is harnessing the valuable existing knowledge resource residing in the avocado industry's broad community of growers, consultants, suppliers and technical service providers.

For its long term viability, the Australian avocado industry needs to become more internationally competitive in terms of cost of production and fruit quality. Among Australian avocado growers, consultants, resellers, research, development and extension officers, there already exists a valuable source of knowledge, experience, practical know-how and solutions to production and quality problems.

This project is bringing these people together to share, learn from each other, receive new information, observe and debate in order to implement better production techniques across the industry and achieve improved productivity, fruit quality and competitiveness at a global level.

Study groups were established in the nine main production regions of Australia and each group meets either three or six times over the three year life of the project to address production and fruit quality issues that they have identified as relevant for their region.

To date, 27 of the 42 proposed workshops have been held and by mid-2009 34 will have been held, leaving eight to conduct before the project finishes in early 2010.

After each event, growers evaluate how useful the day has been for them; to date, feedback has indicated a high level of satisfaction. Many attendees have indicated that they are going to make changes to how they manage their orchards as a result of what they have learned.

There were 38 different speakers present at these workshops. Attendance at workshops has been steadily growing.

The number of producers on the project's mailing list is now 585.

Detailed illustrated minutes are prepared after each workshop and, together with copies of MS PowerPoint® presentations, are distributed to all growers known to the project for that area. In addition, all the minutes are now available via the growers' section of the Avocados Australia Ltd website so producers have access to the minutes for workshops in all regions.

The industry is kept informed of the general progress of the project through regular articles in the industry magazine *Talking Avocados*.

Project AV06003

For further information contact:
Simon Newett, Queensland DPI&F
T 07 5453 5800
E newetts@dpi.qld.gov.au

The North Queensland study group gathered at Sam and Kylie Collins shed near Dimbula to learn about critical irrigation.

Shepard avocado grower David Adil discusses a production issue with guest speaker Graeme Thomas.

Avocado industry capacity building study tour, USA and Mexico

Growers and packers had the opportunity to learn from the world's two largest avocado producing countries, Mexico and the USA, during a capacity-building study tour to those two countries in October 2008.

The ability to recognise and absorb learnings from the world's leading producers of avocados is regarded as essential to the Australian industry's survival.

Delegates completed a 10-day study tour of Mexican and Californian avocado industries and attended the 2008 PMA Fresh Summit from 24 to 27 October.

The PMA Fresh Summit was attended by more than 18,000 delegates from over 65 countries. The educational program featured 10 different tracks developed to address the key leadership, management, and operational challenges facing the fruit and vegetable business.

More than 800 companies, including the industry's leading suppliers, smaller companies showcasing specialty products, and international trade pavilions, exhibit at Fresh Summit.

The Mexican avocado industry is concentrated around the city of Uruapan in central western Mexico. The industry produces more than 1,000,000 tonnes of avocados per year. Over 220,000 tonnes are exported to the USA each year during the period November to April. Mexico has the highest per capita consumption of avocados in the world at around 10kg per person per year. This results in Mexico also being one of the highest value markets for avocados as the strong demand equates to good returns for growers.

Mexican growers sell the fruit on the tree at a per kilogram rate. Packing houses buy the fruit on the tree, pay for harvesting, transport, packing and marketing. The growers are generally paid within seven days of harvest.

California is a well-organised cohesive industry, with the Californian Avocado Commission (CAC) collecting levies and managing an extensive and very successful marketing program along with a range of R&D projects. The industry has been developing for more than 90 years.

The Californian industry has grown over the last 30 years from 50,000 tonnes to 180,000 tonnes. Over this time the USA market has been opened to a range of imported fruit. The industry also manages a larger marketing program for the generic promotion of all avocados including all imported fruit.

Project AV08027

For more information contact:
Antony Allen, Avocados Australia
T 07 3846 6566
E a.allen@avocado.org.au

Evaluating and prioritising biosecurity activities and investment

An economic model has now been completed to assess various inputs and benefits for different biosecurity scenarios within the avocado industry

Many different activities can be undertaken at each stage of the biosecurity continuum (pre-border, border and post-border) to prepare for, or assist in preventing, incursions of new plant pests that would significantly impact on production and/or market access for the avocado industry. However all of these biosecurity activities cannot be implemented at once. A framework is required to determine how funding should be best directed to provide the best return on investment.

The model was therefore developed to assess various inputs and benefits for different biosecurity scenarios within the avocado industry. This model will help evaluate the effects of implementing biosecurity activities both on-farm and in the industry, thereby providing a comparison of the cost-effectiveness of different activities.

The model is now ready for specific industry data to proof the cost-benefit outputs.

Project MT08010

For further information contact:
Sharyn Taylor, Plant Health Australia
T 02 6260 4322
E staylor@phau.com.au

Asian markets avocado industry trade tour to Hong Kong, Singapore and Dubai

As Australian production and global competition increases, the industry's reliance on the domestic market poses increasing risk for the sector. In the 2007/08 season Australia exported approximately three per cent of its production.

One strategy identified by Avocados Australia to mitigate this risk is to increase sales into existing markets and find alternate export markets for avocados.

In 2008 the industry completed project AV06010, which looked at the export market opportunities and strategies for realising these opportunities. The recommendations from this project included a more focused and planned approach to export marketing through the development of appropriate industry structures. It also highlighted the key markets where further or new export growth might be possible and indicated the need for industry to gain a better understanding of these export market opportunities through in-country visits. This trade tour visited four markets – Hong Kong, Singapore, Bangkok and the United Arab Emirates (UAE). These markets were identified in earlier research as having the potential to support further export growth for the Australian avocado industry.

The study tour provided the opportunity for industry participants to develop useful networks and undertake in-country research, which is necessary to understand what further export development activities are required. The study tour also coincided with Gulfoods 2009, the Middle East's largest food and hospitality trade event, which gave industry participants the opportunity to gain a broader understanding of the Middle East market.

Indications from all markets visited are that there is strong demand for Australian avocados; however this needs to be supported by market development initiatives.

Importers, retailers and food service businesses in all markets indicated that quality, value for money, and continuity of supply were the most critical elements for driving growth and demand for Australian avocados. Nearly all businesses currently handling Australian avocados mentioned the frustration of not being able to access supply during Australia's low season from November to March.

Increasing competition in all markets visited was evident. There were a number of countries that were attempting to increase their presence in the Asian markets. Kenya was also very active in the UAE markets and could potentially improve their fruit quality to compete at the premium end of the market with Australian product.

This project was primarily funded by matched R&D voluntary contribution.

Project AV08026

For more information contact:
Antony Allen, Avocados Australia
T 07 3846 6566
E a.allen@avocado.org.au

Goal five – Organisation, resourcing and management of the affairs of the Australian avocado industry

Avocado industry's environmental practices being profiled

Information is still being gathered from the Australian avocado industry on the current level of good agricultural practice currently employed in terms of environmental impacts.

Retailers, consumers and the wider community are increasingly concerned with the impacts that farming practices have on the environment. In recognition of this, Avocados Australia and HAL implemented an 'environmental stocktake' of the avocado industry to identify any gaps in the skills and knowledge of avocado growers with regard to the way that they manage the environment.

The project is being completed in several stages:

1. An extensive grower e-survey was developed to gain an understanding of the level of adoption of good agricultural practices that have positive outcomes for the environment.
2. Based on the results of this survey, a much shorter, paper-based grower survey was developed to capture more responses on key issues. This data is still being collected.
3. In order to gain qualitative information, interviews are being completed across all mainland states of Australia. In addition to speaking directly with more than 50 growers, interviews will be conducted with Department of Primary Industries staff, consultants and other industry service providers to gain their perspective on the environmental issues faced by the industry. Ways of gathering information on the attitudes that the wider community has towards avocado growers are also being considered.

So far, information has been collected from almost 200 individual growers, and much more information will be collected via the face-to-face interviews.

All data from the e-survey has been collated. Mail survey results are still flowing in. Five face-to-face interviews have been conducted and the remaining interviews are being scheduled. Suitable candidates are also being identified for a series of case studies that can be used to promote best practice within the industry.

Project AV08001

For more information contact:
Daryl Connelly, Tasmanian Quality Assured Inc
T 03 6423 6008
E daryl.connelly@tqainc.com.au

Evaluating the avocado program

A recently commenced evaluation of the avocado program is part of a series of economic impact assessments being completed by HAL on an industry basis to comply with Australian Government requirements.

In 2007 the Australian Government requested that all rural research and development corporations and companies work collaboratively and on a consistent basis to provide objective evidence of the return to growers and taxpayers from matched R&D. The first tranche of HAL industry program evaluations includes the avocado industry.

The project will be discharged using guidelines produced by ACIL-Tasman on behalf of the Council of Rural R&D Corporation Chairs. Ultimately the evaluation will detail:

- The programs and projects that were evaluated and the methods used.
- The key assumptions made in conducting the evaluation.
- Any difficulties encountered and how they were resolved.
- A list of all sources of information.
- Key findings and recommendations.

Project AV08029

For further information contact:
Michael Clarke, AgEconPlus Pty Ltd
T 02 9817 5888
E clarke@AgEconPlus.com.au

Two way avocado consultation through partnerships

Avocados Australia and Horticulture Australia Ltd (HAL) have entered into an annual partnership to identify, develop and facilitate industry-focused projects that will benefit the avocado industry. The partnership and agreed funding support includes the Avocado Industry Advisory Committee (IAC), avocado and across industry program consultation.

Consultations between Avocados Australia and HAL staff members, Avocados Australia Chair, IAC Chair and the HAL Board ensured appropriate business arrangements and management of marketing and research and development operations. Consultation on levy funded programs is maintained with HAL's Industry Services Manager John Tyas and other HAL personnel.

Avocados Australia during 2008/09 has delivered in-person presentations and reports to over 24 grower meetings and 18 supply chain partners across Australia. We have initiated nine avocado levy projects with six of those projects being undertaken by outside service providers. We have had over 140 meetings with project service providers to provide essential industry information ensuring the levy investment program continues to deliver to growers.

The Avocados Industry Advisory Committee (IAC) met four times during 2008/09. Each meeting was critical to the decision-making process to ensure the industry programs were effectively carried out. In September 2008 Avocados Australia coordinated the Annual Avocado Levy Payers Meeting in Mareeba, Queensland.

Project AV08910

For more information contact:
Antony Allen, Avocados Australia
T 07 3846 6566
E a.allen@avocado.org.au

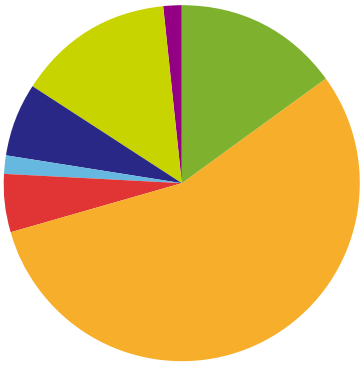
Investing in Australian horticulture

Australian Government priorities

As part of the Australian Government's commitment to rural research and development, horticulture industries can access matching Commonwealth funding through HAL for all research and development activities.

The Australian Government's Rural Research and Development 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 proportion of projects in HAL's avocado R&D program against each of the Australian Government priorities for rural research and development. Full details across all industries are available in HAL's annual report at www.horticulture.com.au



- Productivity and Adding Value (15%)
- Supply Chain and Markets (55.6%)
- Natural Resources Management (5.4%)
- Climate Variability and Climate Change (1.6%)
- Biosecurity (6.6%)
- Innovation Skills (14.4%)
- Technology (1.4%)

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 market 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 mitigate 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.

Relationships and roles relating to HAL programs

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.

HAL invests $85 million annually 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 IAC is a subcommittee of the HAL Board. It makes recommendations to HAL on the expenditure of funds.

Avocados Australia Limited recommends membership of the IAC to HAL and ensures the skills required on an IAC are met by the persons they recommend for appointment to the committee. Avocados Australia Limited is responsible for recommending to HAL the establishment of, and any changes to, statutory levies.

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

In 2008/09 Avocados Australia Limited acted as the service provider on 17 projects.

Full details can be found on page 25–26 of this report.

Consultation funding

Consultation funding is paid by HAL to cover costs for IAC meetings, annual levy payers' meetings and costs within the partnership agreement between HAL and the member industry that are specified as consultation, for example R&D program consultation. In 2008/09 $293,762 of consultation funding was budgeted to be provided to Avocados Australia Limited.

Across Industry Program

The avocado 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/industry/acrossindustry.asp.

Project No	Title	Project start	Project completion	Organisation	Contact
Outcome 1	**Enhance the efficiency, transparency, responsiveness and integrity of the supply chain for the total industry to provide clear market signals**				
AH04007	Pesticide regulation coordinator	5 Jul 04	1 Jul 09	AKC Consulting	Kevin Bodnaruk 02 9499 3833
AH07033	Incident Response Protocol – development and training for horticulture	21 Apr 08	30 Sep 09	Control Risks	Julian Heath 02 9279 0099
AH08011	A baseline survey of knowledge, attitudes, approaches and aspirations regarding contamination management	31 Jul 08	31 Jan 09	Instinct and Reason	David Donnelly 02 9283 2233
AH08012	Country of origin labelling research project	1 Oct 08	31 Oct 08	Horticulture Australia Limited	David Chenu 02 8295 2300
MT07029	Managing pesticide access in horticulture	1 Jul 07	30 Jun 10	AgAware Consulting Pty Ltd	Peter Dal Santo 03 5439 5916
Outcome 2	**Maximise the benefits of horticultural products in the eyes of consumers, influencers and government**				
AH07006	Promoting the health advantage of fruit and vegetable to increase their consumption	1 Jul 07	30 Jun 10	Horticulture Australia Limited	Chris Rowley 02 8901 0329
Outcome 3	**Position horticulture to compete in a globalised environment**				
AH07002	HAL market access coordination	1 Jul 07	30 Jun 09	Stephen Winter & Associates Pty Ltd	Stephen Winter 03 9832 0787
AH07003	Market access support program	30 Jun 08	30 Jun 09	Horticulture Australia Limited	Kim James 08 6389 1407
AH08010	Workshop on quantitative methods applied to horticultural improvement	16 Jul 08	30 Sep 08	Australia Crop Genetic Services	Craig Hardner 07 3346 9465
Outcome 4	**Achieve long term viability and sustainability for Australian horticulture**				
AH07031	Peri-urban horticulture and land use planning: literature review and 'tool-kit'	1 Apr 08	31 Oct 08	GHD	Luke Jewell 02 9241 5655
AH08002	Horticulture Water Initiative 2008/09	1 Jul 08	30 Jun 09	Horticulture Australia Limited	Alison Turnbull 02 8295 2300
AH08003	Analysis of horticulture's carbon footprint	15 Jan 09	31 May 09	Horticulture Australia Limited	Alison Turnbull 02 8295 2300
AH08014	Horticulture industry consultation on Award modernisation	17 Nov 08	30 Apr 09	Horticulture Australia Limited	Ravi Hegde 02 8295 2300

Avocado Program

Project No	Project title	Levy or VC	Project start	Project completion	Organisation	Contact
AV04007	Rootstock improvement for the Australian avocado industry – phase 2	Levy	1 Jan 05	30 May 08	Sunshine Horticultural Services Pty Ltd	Tony Whiley 07 5441 5441
AV04008	Extension to canopy management AV04008	Levy	1 Jul 04	31 Aug 08	Avocados Australia Limited	Antony Allen 07 3846 6566
AV06001	Improving spraying and management of spotting bugs in avocados	Levy	1 Jul 06	1 Oct 08	Growing Greener Growers	Henry Drew 07 5445 0032
AV06002	Improving technology uptake in the WA avocado industry	VC	1 Nov 06	1 May 10	Western Australian Avocado Growers Association	Alec McCarthy 08 9780 6273
AV06003	Study groups to achieve globally competitive avocados	Levy	15 Dec 06	31 May 10	QLD Department of Primary Industries & Fisheries	Simon Newett 07 5453 5800
AV06006	Scoping of a national avocado quality system and management of avocado industry information systems	Levy	1 Oct 06	30 Sep 09	Avocados Australia Limited	Joanna Embry 07 3846 6566
AV06010	Export development for the Australian avocado industry	Levy	4 Jun 07	29 Aug 08	Avocados Australia Limited	Antony Allen 07 3846 6566
AV06029	Investigation, analysis and development of a strategic plan to maximise avocado sales in the food service markets	Levy	2 Jun 07	17 Oct 08	Horticulture Australia Limited	David Chenu 02 8295 2300
AV07000	Improving yield and quality in avocado through disease management	Levy	2 Jul 07	30 Sep 10	QLD Department of Primary Industries & Fisheries	Elizabeth Dann 07 3896 6468
AV07001	Investigation of the distribution and incidence of avocado sunblotch viroid in Australia	Levy	10 Jul 07	30 Mar 10	QLD Department of Primary Industries & Fisheries	Andrew Geering 07 3896 9353
AV07003	Determination of health-promoting bioactives in Australian avocados	Levy	31 Jan 08	19 Dec 08	Food Science Australia	Dimitrios Zabaras 02 9490 8352
AV07005	Development and commercial application of an avocado fruit robustness test	Levy	4 Jan 08	31 May 11	QLD Department of Primary Industries & Fisheries	Danielle Le Lagadec 07 4132 5524
AV07007	Competitor analysis – economic competitiveness of imported avocados	Levy	30 Oct 07	30 Nov 08	p2p business solutions pty ltd	Jenny Margetts 07 3366 2710
AV07018	Avocado retail quality surveys	Levy	10 Sep 07	28 Nov 08	Avocados Australia Limited	Antony Allen 07 3846 6566
AV07023	Avocado retail price surveys	Levy	25 Jun 08	30 Aug 12	Avocados Australia Limited	Joanna Embry 07 3846 6566
AV07024	Market opportunities for avocados beyond fresh fruit sales	Levy	25 Apr 08	19 Jun 09	p2p business solutions pty ltd	Jenny Margetts 07 3366 2710
AV07025	Benchmarking the usage and attitudes of health professionals	Levy	1 Apr 08	4 Jul 08	Consumer Insights	Joseph Ebbage 0407 543 340
AV07028	Marketing awareness program	Levy	15 Apr 08	1 Dec 08	p2p business solutions pty ltd	Jenny Margetts 07 3366 2710
AV08000	Rootstock improvement for the Australian avocado industry – phase 3	Levy	1 Jan 09	1 Dec 12	Sunshine Horticultural Services Pty Ltd	Tony Whiley 07 5441 5441
AV08001	Environmental stocktake of the avocado industry	Levy	4 Jul 08	31 Jul 09	Tasmanian Quality Assured Inc	Daryl Connelly 03 6423 6008
AV08002	RNA silencing based phytophthora root rot resistant avocado rootstocks for improved production of GM free fruit	Levy	28 Nov 08	30 Oct 11	QLD Department of Primary Industries & Fisheries	Neena Mitter 07 3346 6513
AV08013	Avocado consumer research	Levy	16 Mar 09	31 Jul 09	Bread & Butter Research & Planning	Anna Herron 02 9963 4600
AV08017	Avocado supply chain education materials	Levy	28 Nov 08	31 Dec 09	Avocados Australia Limited	Joanna Embry 07 3846 6566
AV08018	Development of avocado ripening manual	Levy/ VC	30 Jun 09	31 Jan 11	QLD Department of Primary Industries & Fisheries	Terence Campbell 0427 602 007
AV08020	Evaluation of sustainable orchard management practices for extension into general industry standards to reduce costs	Levy	30 Jan 09	30 Nov 12	Avocados Australia Limited	John Leonardi 07 5444 9633
AV08021	Refinement of guidelines for avocado irrigation management	Levy	6 Mar 09	31 May 09	RMCG	Anne-Maree Boland 1300 306 043

Project No	Project title	Levy or VC	Project start	Project completion	Organisation	Contact
AV08022	Avocado quality monitoring via library tray system	Levy	20 Mar 09	31 May 09	The New Zealand Institute for Plant and Food Research Ltd	Dan Ryan 02 4382 6379
AV08023	Avocado germplasm maintenance	Levy	1 Jun 09	2 May 11	Avocados Australia Limited	Antony Allen 07 3846 6566
AV08025	Avocado resource audit web database	Levy	15 May 09	31 Dec 11	Avocados Australia Limited	Antony Allen 07 3846 6566
AV08026	Avocado capacity building study tour to Asian export markets	Levy/ VC	5 Feb 09	31 May 09	Avocados Australia Limited	Antony Allen 07 3846 6566
AV08027	Avocado industry trade and capacity building tour to the US and Mexico including PMA Fresh Summit	Levy/ VC	27 Feb 09	22 May 09	Avocados Australia Limited	Antony Allen 07 3846 6566
AV08029	Avocado program evaluation	Levy	23 Feb 09	30 Sep 09	AgEconPlus Pty Ltd	Michael Clarke 02 9817 5888
AV08031	4th Australian and New Zealand Avocado Conference 2009	VC	11 May 09	30 Sep 09	Avocados Australia Limited	Antony Allen 07 3846 6566
AV08034	Avocado retail quality surveys Phase II	Levy	1 Apr 09	31 Oct 11	Avocados Australia Limited	Antony Allen 07 3846 6566
AV08036	Avocado food service action plan – stage 2	Levy	22 Dec 08	20 Feb 09	Inovact Consulting	Brian Ramsay 02 6140 3900
AV08038	Avocados in primary schools – scoping study	Levy	12 Jan 09	30 Jun 09	Woodrow Consulting Pty Ltd	Shelley Woodrow 03 9534 9921
AV08044	Implementation of avocado food service product performance panel and national menu survey	Levy	1 Mar 09	30 Jun 09	Inovact Consulting	Brian Ramsay 02 6140 3900
AV08045	Avocado industry communications strategies	Levy	15 May 09	1 Mar 11	Avocados Australia Limited	Antony Allen 07 3846 6566
AV08046	Real-time freight container trials to assess impact of long-term storage of Australian avocados exported to Europe	VC	1 May 09	31 Aug 09	Sunfresh Marketing Co-op	Brian Prosser 0438 467 069
AV08500	Domestic marketing program	Levy	1 Jul 08	30 Jun 09	Horticulture Australia Limited	Gunjan Tandan 02 8295 2300
AV08500	Export marketing program	Levy	1 Jul 08	30 Jun 09	Horticulture Australia Limited	Wayne Prowse 02 8295 2300
AV08910/ 000	Avocado 2008–2011 Partnership Agreement – consultation funding	Levy	1 Jul 08	30 Jun 11	Avocados Australia Limited	Antony Allen 07 3846 6566
MT06020	Improving market access R&D for the Australian horticultural industries	Levy	1 Jul 06	1 Jul 10	Horticulture Australia Limited	Kim James 08 6389 1407
MT06022	Generation of dimethoate and fenthion residue samples to maintain market access	Levy	6 Jun 07	30 Sep 09	Agronico Research Pty Ltd	Dale Griffin 03 5976 4511
MT07065	Consumer tracking study	Levy	1 Jul 07	30 Nov 08	Brand Story Pty Limited	Steve Sheppard 02 8399 3850
MT08010	Prioritising biosecurity activities and investment	Levy	1 Jul 08	1 Jul 09	Plant Health Australia	Ryan Wilson 02 6260 4322
MT08013	Development of an international standard for Mobile Elevating Work Platforms (MEWP's) used in orchards	Levy	15 Jul 08	19 Dec 08	Keith Batten & Associates	Keith Batten 0418 738 969
MT08015	Data collection program	Levy	15 Sep 08	31 May 10	Horticulture Australia Ltd	Roger Bramble 02 8295 2300
MT08016	Protecting pollination for the Australian horticultural industry	Levy	1 Nov 08	1 Jul 09	RIRDC	Margie Thomsom 02 6272 4152
MT08035	Providing data packages for new fruit fly control technology	Levy/ VC	1 Jul 08	25 May 10	QLD Department of Primary Industries & Fisheries	Hainan Gu 0401 676 360
MT08036	Ecology and preharvest control of fruit flies for systems approaches to market access for fruit fly host commodities	Levy	1 Jul 08	30 Apr 12	CRC for National Plant Biosecurity	Anthony Clarke 07 3864 5023
MT08038	Development of a business case for market access R&D	Levy	15 Sep 08	15 Dec 08	IDA Economics Pty Ltd	Greg Martin 02 6227 5502
MT08060	Consumer tracking study	Levy	1 Dec 08	1 Dec 11	Brand Story Pty Limited	Steve Sheppard 02 8399 3850

Financial Report

Avocado Investment Summary

Ten months ended 30 April 2009

	Marketing 2008/09	R&D 2008/09	Combined 2008/09
Funds available 1 July 2008	**507,213**	**836,834**	**1,344,047**
INCOME			
Levies Received	1,554,779	1,275,243	2,830,022
Commonwealth Contributions		696,819	696,819
Other Income	3,140	65,483	68,623
Total Income	**1,557,919**	**2,037,545**	**3,595,464**
Budget	1,654,391	2,615,271	4,269,662
Variance to Budget	*(96,472)*	*(577,726)*	*(674,198)*
PROGRAM INVESTMENT			
Levy Programs	1,263,267	1,226,579	2,489,846
Service Delivery Programs by HAL	172,057	167,060	339,117
Across Industry Funding		14,228	14,228
Levy Collection Costs	30,901	29,670	60,571
Total Investment	**1,466,225**	**1,437,537**	**2,903,762**
Budget	1,499,070	2,799,609	4,298,679
Variance to Budget	*32,845*	*1,362,072*	*1,394,917*
Annual Surplus/Deficit	91,694	600,008	691,702
Funds available 30 April 2009	**598,907**	**1,436,842**	**2,035,749**

Avocado Industry Advisory Committee (IAC)

Bob Granger (Chair)
Daryl Boardman
Lachlan Donovan
Colin Fechner
Jennie Franceschi
Jim Kochi
Henry Kwaczynski
Chris Nelson
Tom Silver
John Walsh
Antony Allen (ex-officio)
John Tyas (ex-officio)

FOR MORE INFORMATION CONTACT:

John Tyas
Industry Services Manager
Horticulture Australia Limited (HAL)
Suite 329, 433 Logan Road
Stones Corner QLD 4120
T 07 3394 8220
E john.tyas@horticulture.com.au