

Cherry

INDUSTRY ANNUAL REPORT 2009/10

Overview

The national cherry harvest in 2009/10 experienced good late spring and summer rainfall compared to recent spring and summer drought conditions. This provided a good finish in later areas such as Tasmania and when followed by hot temperatures created issues of cherry cracking in SA and NSW. Fruit size was affected with many crops falling into the 24–26mm category. Despite the variation in weather conditions the national crop figure estimates are between 9,000Mt and 10,000Mt.

Market access has been the main strategic objective for 2009/10 for the Australian cherry industry. Tasmanian cherries have access into Taiwan again and China market access is emerging with good potential for 2010/11. Australian cherry industry representatives attended the China World Fruit and Vegetable Trade Fair in

Guangzhou in November 2009 where the Australian cherry industry made a significant impression on Chinese government officials, wholesalers, retailers and the general public.

Another significant activity in 2009/10 is the development of a joint research project between Washington State University (WSU), Tasmanian Institute of Agriculture Research (TIAR) and HAL. This is a positive step for future Australian sweet cherry yield R&D using the expertise of Dr Matt Whiting, the head cherry researcher from WSU.

The Cherry Industry Advisory Committee (IAC) met in early March 2010 to review the current projects and assess and to decide on which projects to endorse for 2010/11. From this meeting the IAC is due to review the Cherry Strategic Plan moving forward. One key challenge identified was that the industry must not only focus on

market access but should also give the same priority to increasing domestic consumption. This will be particularly important with the national crop increase forecasted over the coming seasons.

Levy-funded R&D and marketing projects in 2009/10 were aimed at identifying quality issues at a retail level and lifting domestic consumption. The marketing program is building on previous projects to increase national consumer consumption and to build ongoing communication through the new national cherry website and the “love summer, love cherries” branding.

Along with these activities, AC Nielsen Homescan data is providing information on cherry consumption. This will provide a strong planning tool for future promotional and R&D activities focused on domestic consumption.

All current and new projects are made possible through the national cherry levy. A three year levy review was held during late May into early June to consult with levy payers through regional meetings to confirm if the rate of seven cents per kilogram will continue – three cents goes to funding marketing activities and four cents to R&D.

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Climate change research is not new, but the urgency of information for growers to understand and be able to respond to the threats of climate change is. Since 2007 HAL's climate RD&E investment, through industry levies, voluntary contributions and matched Australian Government funds, has increased by 30 per cent. Achievements include: empowerment of industry leaders, through forums and presentations; partnerships, through cross-collaborative programs; and adoption, through grower workshops and fact sheets.

Further climate RD&E is planned in 2010, including generation of information on the critical temperature thresholds of a number of horticulture crops, identification of best management practices on-farm for reducing emissions and linkages with the Climate Change Research Strategy for Primary Industries (CCRSPI). Information on Climate RD&E and links to various tools for industry are available at www.horticulture.com.au/climate.

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



Cherry Growers
of Australia



Know-how for Horticulture™

Improving cold disinfestation

Queensland fruit fly (Q-fly) is a major quarantine pest for many Australian cherry producers, particularly as treatment to combat infestation can often affect fruit quality and marketing flexibility.

Commencing in the 2009/10 season, this project follows on from a previous HAL project that showed that the use of a short-term high carbon dioxide (CO₂) treatment in combination with cold treatment increased the mortality of larvae and hence reduced the time in cold storage.

This new project assesses and identifies the most effective and practical cold/CO₂ treatment for the disinfestation of Q-fly in cherries that can be integrated in to the current handling system.

A range of disinfestation and fruit quality trials were conducted last season. The effects of different timings of CO₂ treatment were assessed on Vans cherry fruit. It was thought that a CO₂ treatment at the end of the cold disinfestation period would assist in killing the larvae, but there was no difference in treatment times and timing. Fruit quality assessments were also conducted during and after storage and showed

there were no consistent adverse effects of CO₂ treatment.

Most cherry fruit are packaged into modified atmosphere (MA) bags for storage and marketing. An experiment was conducted to examine the feasibility of using high CO₂ treatment using existing industry MA bags. The results showed that the MA bags were permeable to the very high levels of CO₂ treatment used for disinfestation, and further treatment combinations need to be developed.

A final disinfestation experiment assessed the possible use of Vapormate™, which is already registered in Australia for use in stored grains. The active ingredient, ethyl formate, has been used as a fumigant of dried fruit for many years. A preliminary disinfestation trial with Sweetheart cherries showed some promise against Q-flies and this work will continue again next season.

Project CY09006

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Infesting cherry fruit with Queensland Fruit Fly before disinfestation treatments and cold storage at I&I NSW



Measuring cherry firmness after storage



Optimal irradiation for sterilising Q-flies

Millions of Queensland fruit flies (Q-flies) are mass-reared, sterilised by irradiation and released in the field to disrupt reproduction of wild populations (the Sterile Insect Technique or SIT). Irradiation procedures are being refined to enhance quality assurance and to produce more effective sterile flies.

New activity-based assays for testing fly quality have been developed and development of an automated system that will quantify locomotion of dozens of flies simultaneously is underway. This will be a valuable tool for assessing the effects of mass rearing and any damage caused by irradiation.

Numerous experiments dealing with diverse aspects of irradiation for sterility induction have been carried out, and in particular, to address the question of whether lower doses might produce superior flies.

The researchers carried out the first experiments to confirm that irradiated flies do not regain fertility later in life, a finding that provides valuable new assurance of safety in SIT.

Project HG06040

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Advances in Australian cherry breeding

The current breeding project is developing large, well-adapted cherry varieties with improved rain cracking resistance for Australian cherry growers.

A mild winter and reduced chill accumulation lead to a protracted and in some cases a staged bloom in some varieties, with trees carrying a wider than normal range of fruit maturities. Unseasonal heat in early November coupled with a series of regular rainfall events during fruit development and harvest made it difficult for growers to produce quality fruit during the 2009/10 season.

While unusually difficult, the conditions provided an excellent opportunity to obtain good differentiation of the relative rain cracking susceptibility and the general robustness of lines within the breeding program.

In 2009, the breeding program contained 11,000 different genotypes, with 930 cropping. Of the cropping trees, 64 were considered promising and a further 413 of sufficient standard to require further evaluation. During winter, 1,200 genetically inferior trees were removed based on the previous season's results to focus on those with greater potential.

In 2010, 930 cropping trees were assessed, 38 were considered promising and a further 267 will require further evaluation.

All promising lines have been grafted for further evaluation on Mazzard F12-1 rootstock.

Good progress was made this season, especially in weeding out those lines susceptible to rain cracking. Overall

fruit firmness was good and now being quantitatively measured using a Firmtech2 device. There were many quality fruit lines identified displaying good levels of reduced rain cracking susceptibility.

Fifteen new lines were distributed to the national evaluation network field trial sites in mid-2009, a further two lines are being added in winter 2010. The future is looking bright for the release of new varieties with reduced rain cracking susceptibility in the near future.

Project CY07000

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Ecology and preharvest control of fruit flies for systems approaches to market access

Fruit flies directly impact on crop quality and are the single most significant phytosanitary barrier for domestic and international market access.

In the near future, some of the common chemicals currently registered for fruit fly pre-harvest and postharvest treatments are likely to have their usage significantly reduced for crops with edible peel, such as cherries.

Alternative treatments, especially Queensland fruit fly (Q-fly), need to be developed in order to maintain crop protection and market access.

Systems approaches, which link two or more independent management techniques, offer a promising alternative. Unfortunately, however, much of the underpinning science is not available.

This project aims to identify these knowledge gaps in Q-fly biology and ecology pertinent to the development and/or refinement of management tools. A formal scientific literature review of Q-fly biology and ecology – the first ever produced for this pest – has been completed.

The review identified key areas of scientific weakness including knowledge of how and why the fly moves within and between crops, and how and why it forages for protein and the chemical attractant, cue-lure.

Knowing such information is vital for the development and refinement of the pre-harvest controls, protein bait sprays and the Male Annihilation Technique (MAT).

Having identified the gap, research is pursuing these areas by quantifying where flies occur and where flies forage for protein on individual plants

within orchards to allow better placement of protein and MAT.

Preliminary results on protein foraging show that the Q-fly searches for protein at heights greater than 1.3m above the ground, implying that protein should preferentially be applied to the mid and upper canopy of orchards.

The project has completed its first field season and will run for two more seasons – 2010/11 and 2011/12.

Project MT08036

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Support for Australia-China two way trade

The Australia-China Workshop on Horticultural Cooperation held in Guangzhou, China in November 2009 was organised by HAL and the China Entry-Exit Inspection and Quarantine Association (CIQA).

Members of five Australian fruit industries attended the workshop, including three representatives from Cherry Growers Australia (CGA). They were supported by representatives of DAFF, Austrade, State Governments and HAL. 35 Chinese industry and official representatives attended.

The workshop focused on inspection and quarantine issues and pushed for more work and progress in market access by the quarantine authorities.

From an Australian perspective, the workshop's primary objective was to provide Australian industry views to the Chinese in support of speedier timelines and realistic conditions for Australian market access. As a result CIQA commented that they will expect more Australian horticultural produce and progress of market access for Australia into China.

CIQA described the workshop as very successful with good

Australian presentations in each of the five commodity sessions. CGA's presentation, 'Support for Two Way Cherry Trade between Australia and China', was very well received and supported closer links between the Australian and Chinese cherry industries to further trade outcomes. The cherry presentation was given by Ian Hay, CGA Board Member for Market Access.

The Workshop was held on the final day of the three-day China World Fruit and Vegetable Trade Fair, at which the

Australian cherry industry and others exhibited their produce. Potential customers were enthusiastic at the future prospect of Australian cherries entering China.

Project MT09073

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Maintaining dimethoate and fenthion use

Dimethoate and fenthion were registered many decades ago and existing registrations may be based on residue data that is now considered insufficient, out-dated, or inconsistent with current use patterns.

Efforts are progressing to maintain as many registered uses of dimethoate and fenthion as possible following a review by the Australian Pesticides and Veterinary Medicines Authority (APVMA).

The review requested that extra data be generated for most of the crops that appear on the label of products that

contain dimethoate or fenthion to ensure that pesticide products meet improved safety and performance standards.

The review generated data on the residues that remain in produce following pre-harvest sprays and post-harvest dips.

Agronico Research Pty Ltd was engaged by HAL to conduct a large, multi-industry project aimed at generating the data that APVMA require, which began in 2007 and was completed in June 2010.

A Good Laboratory Practice (GLP) residue report was submitted to the APVMA so that they can complete their review.

Once the APVMA completes this process, the maximum residue level (MRL) of these pesticides for each crop will be determined. The acceptable MRL will then determine which uses will remain registered on product labels.

Project MT06022

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Structured approach to fruit fly research and management

Fruit flies are a large and important group of insect pests that globally attack a wide range of fruit and vegetables and can have a major impact on Australia's capacity to trade in domestic and international horticultural markets that have an average annual value of \$4.8 billion.

In November 2008, the Federal Minister of Agriculture, Fisheries and Forestry, Hon. Tony Burke MP, released a draft National Fruit Fly Strategy (NFFS) as an initiative to implement an effective national management strategy for the control of all fruit fly species in Australia.

To direct the implementation of the draft, this project was initiated to provide support, in partnership with the Australian

Government and the states, for the formation and work of an expert-based NFFS Implementation Committee (IC).

With reference to an analysis of the commodity supply chain, the committee reviewed and prioritised the initiatives within the draft and developed a comprehensive implementation Action Plan. It outlines 15 key projects, together with a governance structure, that are designed to facilitate an enhanced and sustainable national approach to the management of fruit flies in Australia.

After the release of the draft NFFS Action Plan in October 2009, followed by a two month period for public consultation, the NFFS Action Plan was finalised and released in May 2010.

To compliment the draft Action Plan, the committee proposes to commission further economic analysis of the specific projects in 2010. This will outline general benefits to growers, government agencies and the wider community and form the basis of an investment plan that will match actions with costs and benefits.

Project MT08080

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Cherry industry and HAL partnership agreement

The partnership agreement between CGA and HAL sets out the tasks each organisation will perform to enable the other to discharge its responsibilities related to levy payers and industry services.

Partnership agreement activities are funded by HAL using the cherry R&D levy and matched funds from the Australian Government as well as cherry marketing funds.

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

These costs are reviewed by CGA and HAL at least annually.

Project CY09900/10

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Market access R&D projects and alignment of R&D Plans

Gaining and maintaining market access continues to be a key priority for Australia's cherry industry and a science based strategic approach to market access R&D is essential to support these initiatives.

Horticultural industries and government invested \$3.2 million in market access related R&D projects as part of the 2006 HAL Market Access R&D Plan. There are currently 13 projects underway as a result of this funding. It is anticipated that the majority of these projects will be completed by the second half of 2010. Project results will then be compiled, analysed and distributed to industry.

The plan has now been revised under a strategic framework termed Pathways to Market 2009–2014 to better align with the recommendations of the National Fruit Fly Strategy (NFFS) and to keep pace with changes in the international market access environment.

The dynamic nature of domestic and international market access

requirements clearly indicate that both pre and postharvest projects remain essential to gaining and maintaining markets. Development and refinement of pest free areas, pest monitoring and surveillance techniques, alternative pest management and treatment techniques and alternatives to some chemical treatments have been identified as key market access R&D investment areas.

The plan outlines proposed projects to the value of \$15 million over five years. Importantly, the plan provides even greater focus on direct market access outcomes through a multi-industry approach and has been endorsed by the recently established Office of Horticultural Market Access.

Copies of the 2009–2014 HAL Market Access R&D Plan are available on request.

Project MT06020

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IDO activities for Fruit Growers Tasmania and Cherry Growers of Australia

Over the past year, the Industry Development Officer's (IDO) national focus has been on improving the awareness of issues surrounding export, in particular maximum residue limits (MRLs), chemical use and protocols.

The 2009 edition of the *Cherry export manual* was distributed to all cherry levy payers in September 2009 and included export spray guides, MRL and export interval guides, export protocols, state requirements and the permits needed to assist growers in meeting the requirements of various export markets. The manual will be reviewed and updated on an annual basis.

In addition, the project is committed to addressing national extension requirements. The 'Elements to success' seminar series for 2009, held in Victoria, New South Wales, South Australia and Tasmania, was concluded in November by cherry researcher Dr Matthew Whiting from Washington State University, USA. His presentations included an update from the university, counter-season research in Australia and an assessment of a crop load management trial.

The Cherry Growers of Australia 2010 seminar series 'Harvesting Success' will commence in June with cherry grower and consultant Nic Hansen presenting on fertigation and nutrient delivery, followed by a one day workshop, 'Marketing your fruit growing business' in August.

At local and state level the IDO is dedicated to issues such as: export market access, development and maintenance; increasing production and profitability; maintaining protection from quarantinable pests and diseases; facilitation of R&D; maintenance of an adequately skilled workforce; and encouraging industry alliances.

The IDO continued to support the implementation of industry best practice through organising training, field days, newsletters and conferences. Relevant information was provided for the control of pest and diseases – particularly in relation to export market requirements through the development of spray programs, organised residue testing, and applications to the APVMA for relevant permits needed by industry.



Project MT07058

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Tour learnings from Argentina and Chile

In November 2009 a group of Australian cherry growers, administrators and researchers travelled to Argentina and Chile – two of our four major Southern Hemisphere competitors – to share the knowledge gained with Australian industry.

Participants also attended the 6th International Cherry Symposium in Chile and participated in the International Society for Horticultural Sciences (ISHS) Cherry Technical Day.

Participants had the opportunity to visit orchards, packing facilities, nurseries and allied businesses to learn about their practices and learn

about what research and extension is being undertaken throughout the world by leading cherry researchers. Participants came back with a range of ideas, initiatives, programs and research recommendations to make the Australian industry more internationally competitive and current.

Participants suggested that scientists working on cherry-related and funded projects be encouraged to attend international cherry symposiums in the future. Participants also suggested that persons who receive levy funding for R&D projects should produce papers for inclusion in future symposiums and that

the industry should continue to support overseas study tours to keep abreast of the most up-to-date technology.

It was evident on the trip that some Australian-grown varieties are clearly not of export standard and that to protect Australia's markets and reputation internationally, R&D into new varieties and enforcing export standards committed to by the Australian industry is recommended.

Project CY09027

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2009/10 marketing program

Following the introduction of the cherry marketing levy in September 2007, marketing activity evolved rapidly building a good foundation for future marketing campaigns.

The 2008/09 marketing program saw the establishment of the cherry industry's own brand positioning, 'Love summer. Love cherries', which was developed based on insights gained from consumer research conducted in season 2007/08. This tagline has continued in the 2009/10 program.

Point-of-sale (POS) material, a national sampling program, print, broadcast and online media were used and significant coverage was generated.

Based on experiences gained through previous years, the resulting 2009/10 program's strategies include a public relations program and a consumer management program.

Public Relations (PR) program

The PR/media strategy ensured:

- the announcement of the season's arrival
- health, nutrition and lifestyle benefits associated with cherry consumption were promoted
- the cheeky and fun character of cherries was highlighted
- the cherry media coverage was sustained throughout the Australian season.



The return on investment of the PR program was conservatively valued at in excess of 1:10 based on the advertising dollar value obtained from coverage that could be directly attributed to the national PR program. The media coverage was across various media including print, broadcast and online. PR coverage evaluation revealed that it hit on the key messages that cherries are in store and the health benefits associated with cherry consumption.

The cherry industry now has a spokesperson, the nutritionist ambassador, Kathleen Alleaume. Kathleen was very successful at advocating the key health, nutrition and lifestyle benefits associated with cherry consumption.

Consumer engagement program

Cherry consumer website:

the www.lovesummerlovecherries.com.au website provide consumers with:

- the health and beauty benefits of cherries
- guidance on how to select and store cherries
- inspiration through lifestyle photography
- a consumer competition
- a showcase of media coverage

National merchandising program

The program was rolled out to over 300 stores throughout Australia twice during the season to encourage impulse purchases. Store uptake of merchandising was high, with over 90 per cent accepting point-of-sale material. Cherry paper bags were extremely popular and retailers were requesting more than the allocated quantity.

Consumer competition

A cherry-themed competition was conducted using the consumer website as the platform. Entry was simple, with the competition entrants going to the cherry website, providing their details and describing in 25 words or less their best cherry experience. The main prizes were five cherry-coloured iPods® and the



The consumer website

www.lovesummerlovecherries.com.au

secondary prizes were 10 one kilogram boxes of fresh cherries. The competition entrants found out about the competition via online media channels and the competition ran in the peak supply months. The consumer competition hit the target profile, main female grocery buyers aged 25–49, accurately. The level of entries received was high.

Project CY09500

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Point-of-sale material

National cherry conference

The National cherry conference is an important part of the Australian cherry industry's communications strategy. Held annually, the conference links the CGA Annual General Meeting (AGM) and the Annual Levy Payers Meeting (ALPM) with a range of technical presentations and activities.

Every year one of the state affiliates is selected to organise the conference on behalf of CGA.

The 2009 Conference, held in Hobart, was a combined National Cherry Conference and National Apple and Pear Conference with over 500 registrations across the two industries. The back-to-back conferences worked extremely well given that there are growers who grow both apples and cherries, or cherries and pears.

Sponsors were strongly supportive of the combined conferences as they can attend just one conference with access to over 500 delegates.

The conference encompassed the ALPM, at which the activities related to levy expenditure for the past 12 months were detailed.

Because of the levy increase a few years ago, the industry has had more

resources to work with. Reporting on annual marketing and promotions over the last two years and detailing the overall 2009/10 program were essential parts of the meeting.

The R&D aspects of the levy, which have been important for the implementation of research that supplements the market access push, were also reported.

The main objectives of the annual conference are to:

- Present a range of industry reports and technical presentations to a large number of cherry growers and linked organisations
- Ensure strong representation from the Australian cherry industry
- Undertake the relevant industry meetings including the AGM, ALPM and associated Executive and Industry Advisory Committee (IAC) meetings.

From these objectives, the Australian cherry industry seeks a number of outcomes including conducting technical sessions, a trade expo and a field walk in a single venue; allowing a greater number of growers to participate and network with the speakers, sponsors

and other growers; and to use the conference to allow growers to learn from researchers, practitioners and service providers.

Projects CY08012, CY08025, CY09017

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Consumer and retail data collection

A project provided the cherry industry with an understanding of domestic retail trade volumes and values and consumer purchasing behaviour.

Retail Scan data from a major domestic retail chain and Homescan data on the produce purchased and taken home by a panel of over 10,000 people across Australia was collected.

Homescan provides information on the demographics of the purchasers, their buying frequency, purchase values and their retail channel of purchase. The information is best used as a trend analysis displaying market impacts.

Through having a much improved understanding of the real actions consumers of cherries are taking across a range of market outlets, the cherry industry is able to drive better market supply and marketing decisions. This research can also be used to guide and improve market supply relationships and build improved supply chain transfer to the end market.

Reports for both Retail Scan and Homescan data have been provided to the cherry industry.

Project MT08015

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Communicating via *Tree Fruit* magazine

Communication is an important part of the cherry industry's strategic plan. The most cost effective way to reach the industry's 700 growers/levy payers is through the monthly publication *Tree Fruit*.

Each month, two pages in the magazine are reserved by the cherry industry to communicate its activities. Articles for these 'Cherry Focus' pages are sourced from the President and CEO of CGA and state affiliates. Through this communication, growers gain a better understanding of the Australian cherry industry, its activities and programs, R&D projects and results, promotional and marketing

programs and export/market access. This increases grower awareness and encourages greater grower participation in industry activities.

Tree Fruit also sources and publishes a range of additional information for the cherry industry including technical information from cherry R&D projects, HAL reports, orchard management issues from local and international experts, and information from relevant bodies such as Plant Health Australia.

Project CY08038

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Protecting Australia's pollination

Three multi-industry-funded projects have invested significant research to secure the pollination of Australia's horticultural and agricultural crops into the future on a sustainable and profitable basis.

Future surveillance needs for honeybee biosecurity

A risk-based framework has been sought for considering the costs and benefits of surveillance systems for honeybee pests and diseases. The use of sentinel hives in monitoring exotic pest incursions has been clarified and could deliver positive cost-effective outcomes to detect exotic bee mites (notably *Varroa* and *Tropilaelaps* spp).

However a lack of knowledge as to how sensitive they are at actually detecting the mites is undermining their use as a surveillance method.

The risk-based framework developed can be used in future studies to determine how the National Sentinel Hive Program (NSHP) can be improved. There is scope to optimise the current NSHP and, while sentinel hives are beneficial in the early detection of exotic bee mites, the current surveillance for the early detection of Asian honeybees (*A. cerana*) is ineffective and needs to be re-examined.

Pollination simulation: a report on two scenario driven workshops

These workshops tested and recommended improvements to emergency response arrangements for a honeybee disease/pest incursion that have implications for the pollination sector. It also re-appraised pollination transition arrangements that would be used following the establishment of a honeybee disease or pest.

The workshop considered the containment or management of *Varroa* if eradication using the arrangements in the Emergency Animal Disease Response Agreement (EADRA) are not feasible. Containment and management are not covered by any formal arrangements at this stage. From the workshop there was:

- recognition that eradication may not be possible
- exploration of possible transition arrangements and implications regarding cost sharing
- discussion on potential projects for developing business continuity strategies and a broader level of preparedness
- knowledge of pesticide registration processes and a decision that HAL will work with Pollination Australia on this.

The eradication response strategy is outlined in the AUSVETPLAN Disease Strategy for eradication but there are no guidelines for management.

The importance of being 'Pollination Aware'

The value and importance of pollination to Australian rural industry production, and key pollination management issues from enterprise to national level, were considered through a case study-based approach.

The project considered the need for defined standards for the collection, recording and reporting of pollination data, and identifying opportunities for improving the effectiveness and efficiency of pollination in Australia.

The report is expected to be published in August 2010.

Projects MT08044, MT08048, MT08079

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Biosecurity preparedness

A project to ensure that the Australian cherry industry is prepared and able to implement their roles and responsibilities in relation to biosecurity was undertaken.

CGA is an Industry member of Plant Health Australia (PHA) and a signatory to the Emergency Plant Pest Response Deed (EPPR Deed). As a result CGA has some legal responsibilities that need to be understood and appropriately implemented.

The Australian cherry industry has produced a Cherry Industry Biosecurity Plan that needs to be implemented at an industry and grower level as required under the EPPR Deed and the Cherry Industry Biosecurity Plan.

CGA liaised with PHA to establish the industry's roles and responsibilities under the EPPR Deed, through its membership to PHA and within the Cherry Industry Biosecurity Plan.

From this audit process, the project team, in liaison with PHA, developed the Cherry Industry Biosecurity Preparedness Plan, which was used to prepare and undertake training of national, state, regional and technical industry representatives at the Cherry Industry Biosecurity Summit and Workshop held in May 2010.

In addition CGA prepared an on-farm biosecurity training program for implementation in 2010/11.

Project CY08033

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Facilitating counter season research

International cherry researcher, Dr Matthew Whiting from Washington State University (WSU), was based in Southern Tasmania for seven months over the 2009/10 cherry season to build on international cherry research, address Australian cherry research priorities and investigate a long-term relationship between the Australian industry and WSU.

Dr Whiting investigated variability in fruit quality, timing of thinning, thinning targets and chemical thinning modes of action. Although two of the trials did not yield results due to water logging, variability in fruit quality and chemical thinning are undergoing final analysis. Dr Whiting also presented at field days, presentations and workshops in various states and led a grower tour to New Zealand.

Project CY09005

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Improving stem retention to boost cherry quality and sales

Work is underway to improve the quality and saleability of Australian cherries by identifying treatments that will improve stem retention.

Cherries without stems are hard to market and prices received are often discounted. This is a serious problem for industry in domestic and export markets. Both wholesale buyers and consumers use the stem condition – particularly the green colour – as an indicator of freshness; when stems are missing fruit quality is perceived as lower.

The project, initiated through Australian Fresh Fruit Company's (AFFCO) Cherrynet, saw a literature review completed and presented to Cherrynet members in August 2009. Test protocols were developed and small plot studies conducted on 'Van' and 'Lapins' in the Goulburn Valley for that season. Further trials will be conducted in three different climatic growing regions in the 2010 season.



Project CY08003

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Improving marketable yield of premium quality cherries

Predicting marketable yield of premium sweet cherries in Australia is essential to increasing market access. Currently, the incidence and extent of yield loss due to cracking in cherries is unpredictable.

This project aims to mitigate yield loss associated with rain-induced cracking through the development of targeted management techniques and an understanding of the climatic factors under which they will be most effective.

Manipulation of crop load for each crack type, various spray applications for cuticular cracks and selective pruning and irrigation management for side cracks will be investigated

and targeted according to crack type (cuticular cracks and side cracks) based on the knowledge and understanding of different crack type mechanisms gained through a previous project (CY06001).

The 2009/10 season, field trials were undertaken in order to assess the relationship between crop load and crack type and to assess the impact of spray treatments on the development of cuticular cracks.

During the course of some trials, many trees suffered due to heavy rainfall and water logged soils. Initial observations include no visible difference between fruit that had received either a water

spray control or no treatment control, however fruit which had received a milk treatment appeared softer than other untreated fruit. No significant difference between the spray treatments in the development of cracking was found.

Laboratory tests are currently underway. These will provide an indication of any impact of crop load on solute accumulation in the fruit and of any calcium uptake by the fruit from the milk treatment.

Project CY09002

For more information contact:

Penny Measham, TIAR
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E penelope.measham@utas.edu.au

Taking a new view of cherry cracking

Significant advances have been made in the understanding of rain-induced cracking of sweet cherry fruit through a recently completed project – the first study to show the links between fracture type and the mode of water entry.

Rain-induced cracking remains one of the most significant concerns and limit to profitability for sweet cherry growers, packers and investors alike. No cost-effective, reliable methods of control currently exist. The lack of cost-effective control options has been partly due to the unpredictable nature of rainfall events and the limited knowledge of the cracking process. This project was therefore initiated to further understand the process by which water enters cherries during and following rainfall.

The study showed that different pathways exist by which water can enter the fruit, thereby causing it to crack, and how cracking propensity interacts with the time of rainfall, cherry variety, seasonal conditions and crop load.

Rain-induced fruit cracking in sweet cherries takes three distinct forms – stem end cuticular fractures, calyx end cuticular fractures and large cracks usually deep into the pulp on the

cheek of the fruit. All three crack types developed in the three week period prior to commercial harvest with visible signs of stem and calyx end cuticular fractures beginning to develop before deep side cracks.

Cracks at the two ends of the fruit (apical and stem) are caused by water moving directly across the skin of the cherry, whereas the large side cracks are caused by water moving from the soil via the internal system of the tree.

Increased understanding of the process of cherry cracking should permit better risk assessment and provide the potential for the development of effective integrative prevention strategies.

Further work on incidence of cracking has confirmed varietal differences in propensity to particular types of cracks, suggesting that varietal-specific management strategies need to be considered in combating the problem.

Project CY06001

For more information contact:

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Improving European earwig management

This three-year project aims to understand the beneficial impact of earwigs in cherry and pome fruit orchards and to manipulate numbers by identifying the aggregation pheromone used by earwigs.

Eighteen weeks of field season monitoring has been completed. Preliminary observations suggest that significant fruit damage only occurred where fruit was heavily bunched. The impact earwigs have as biological control agents is yet to be analysed.

The researchers successfully isolated several previously unidentified volatile compounds, known pheromone components in numerous insect species, that are consistently emitted by all earwig life stages during aggregation. Laboratory testing on these compounds has commenced.

Project MT09006

For more information contact:

Geoff Allen, TIAR

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Improving retail displays and sales

Cherries are often poorly displayed and maintained by Australian retailers resulting in lower than anticipated sales. Often the 'poor experience' for consumers is as a result of how the product is displayed – most retail staff are poorly trained in displaying and maintaining cherries.

The cherry industry felt that one of the important aspects to cherry sales was to ensure that the retail sector of the marketing chain has the knowledge and expertise to promote and sell cherries.

The successful sales of USA cherries in the off-season highlighted the value in educating retailers and their

staff in the display and sales of cherries. The Australian cherry industry is in a position to build on the work undertaken by the USA industry and such work will strengthen cherries as a major retail item during the Australian season.

The industry has focused on developing and implementing a training program for retailers to improve their knowledge and skills in storing and handling cherries.

To achieve better displays and improved retail information, a review of the material currently prepared and distributed to retailers by the state cherry organisations and a review of past consumer research to ensure the appropriate consumer

comments and requirements are presented to the retail sector was conducted.

New retailer material was then prepared for distribution and a retailer training program was developed. These programs were conducted in each of the major cherry markets for the major retail chains and independent retailers. A review of the material and programs at the end of the season will be conducted.

Project CY09019

For more information contact:

Trevor Ranford, CGA

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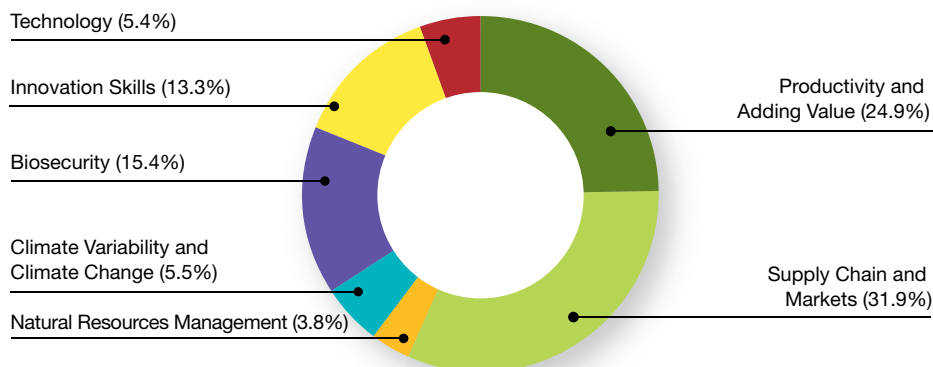
Investing in Australian horticulture

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 percentage of expenditure in HAL's cherry R&D program against each of the Australian Government priorities for rural research and development. Full details of expenditure across all industries is available in HAL's annual report at www.horticulture.com.au



Productivity and Adding Value

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

Supply Chain and Markets

Better understand and respond to domestic and international 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.

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 2009/10 \$101,633 of consultation funding was budgeted to be provided to the Cherry Growers of Australia Inc (CGA).

In 2009/10 the Cherry Growers of Australia Inc (CGA) acted as the service provider on five projects.

Full details can be found on page 14 and 15 of this report.

Relationships and roles relating to HAL

Horticulture Australia Limited (HAL) is a not-for-profit industry owned company. Its role is to manage the expenditure of funds collected by the Australian Government on behalf of horticulture industries.

In 2009/10 HAL will invest more than \$82 million in projects to benefit horticulture industries.

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

It makes recommendations to HAL on the expenditure of funds.

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

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

Across Industry Program

The cherry 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 http://www.horticulture.com.au/industries/across_industry_program.asp

Project No.	Project title	Levy or VC	Project start	Project completion	Organisation	Contact
Objective 1: To enhance the efficiency, transparency, responsiveness and integrity of the supply chain						
AH09009	Food security discussion paper	Levy	1 Apr 10	28 May 10	Horticulture Australia Limited	Richard Bennett 03 5825 3753
MT09043	Enhancing confidence in product integrity in domestic and export markets	Levy/VC	30 Sep 09	31 May 11	Horticulture Australia Limited	Richard Bennett 03 5825 3753
Objective 2: Maximise the health benefits of horticulture products						
AH07006	Promoting the health advantage of fruit and vegetable to increase their consumption	Levy	1 Jul 07	30 Jun 10	Horticulture Australia Limited	Chris Rowley 02 8901 0329
Objective 3: Position horticulture to compete in a globalised environment						
AH09011	Market Access support program	Levy	2 Nov 09	28 May 10	Horticulture Australia Limited	Warwick Scherf 02 8295 2300
AH09012	Codex participation 2009/10	Levy	1 Oct 09	28 May 10	Horticulture Australia Limited	Richard Bennett 03 5825 3753
Objective 4: Achieve long term viability and sustainability for Australian horticulture						
AH04007	Pesticide regulation coordinator	Levy	5 Jul 04	31 Jul 09	AKC Consulting Pty Ltd	Kevin Bodnaruk 02 9499 3833
AH09003	Plant protection: Regulatory support and coordination	Levy	1 Jul 09	30 May 14	AKC Consulting Pty Ltd	Kevin Bodnaruk 02 9499 3833
AH09005	Horticulture Water Initiative – 2009/10 program	Levy	1 Sep 09	30 Jun 10	Horticulture Australia Limited	Alison Turnbull 02 8295 2300
AH09014	Across-industry climate research, development and extension (RD&E) activities	Levy	13 Apr 10	31 Mar 11	Horticulture Australia Limited	Alison Turnbull 02 8295 2300
MT07029	Managing pesticide access in horticulture	Levy	1 Jul 07	30 Jun 10	AgAware Consulting Pty Ltd	Peter Dal Santo 03 5439 5916
Objective 5: Other						
AH09015	Contingency allocation – for key issues as they arise	Levy	1 Feb 10	28 May 10	Horticulture Australia Limited	Warwick Scherf 02 8295 2300
AH09016	Across industry annual report	Levy	26 Feb 10	28 May 10	Horticulture Australia Limited	Barbara Knezevic-Marinos 02 8295 2300
AH09017	Across industry program admin	Levy	1 Jul 09	30 Jun 10	Horticulture Australia Limited	Warwick Scherf 02 8295 2300

Cherry Program 2009/10

Project No.	Project title	Levy or VC	Project start	Project completion	Organisation	Contact
CY06001	A new view of cherry cracking	Levy	22 Mar 07	31 Jul 09	Tasmanian Institute of Agricultural Research	Alistair Gracie 03 6226 7468
CY07000	Developing high quality Australian sweet cherries for export and domestic markets	Levy	10 Apr 08	31 Mar 11	South Australia Research & Development Institute	Darren Graetz 08 8303 9362
CY07011	New ways to disinfest and maintain cherry fruit quality	Levy	1 Oct 07	1 Oct 09	Industry & Investment NSW	Dr John Golding 02 4348 1926
CY08003	Cherrynet – Improving stem retention in sweet cherries to meet quality specifications	VC	30 Jun 09	30 Apr 12	Australian Fresh Fruit Company Pty Ltd	Andrew Dick 03 5420 7444
CY08005	AFFCO well informed cherry and summerfruit supply chain application	VC	1 Aug 08	30 Apr 11	Australian Fresh Fruit Company Pty Ltd	Andrew Dick 03 5420 7444
CY08012	CGA Annual Conference 2009	VC	19 May 09	31 Oct 09	Fruit Growers Tasmania Inc	Anna Steinhauser 03 6231 1944
CY08025	39th National Cherry Conference	VC	1 Jul 08	30 Sep 09	NSW Cherry Growers Association	Joanne Wells 02 6384 3285
CY08033	Cherry industry biosecurity preparedness	Levy	7 Mar 09	15 Jun 10	Cherry Growers of Australia Inc	Trevor Ranford 08 8349 5073
CY08038	Facilitating cherry industry communications via the <i>Tree Fruit</i> publication 2009/10	Levy	1 Jun 09	30 Sep 10	Fruit Tree Media	Nick Morenos 0417 145 452
CY09000	Improved communication within the Victorian cherry industry	VC	1 Oct 09	30 Jun 11	Victorian Cherry Association	Anthony Allen 03 5628 1717
CY09002	Improving marketable yield of premium quality cherries	Levy	24 Dec 09	30 Nov 12	Tasmanian Institute of Agricultural Research	Penny Measham 03 6226 1870
CY09005	Facilitating counter season research opportunities for the cherry industry	Levy/ VC	30 Sep 09	1 Sep 10	Fruit Growers Tasmania Inc	Anna Steinhauser 03 6231 1944
CY09006	Improving cold treatment for disinfesting cherries for Queensland fruit fly	Levy	1 Jul 09	31 May 12	Industry & Investment NSW	Dr John Golding 02 4348 1926
CY09012	Investigating and overcoming negative effects of global warming on cherry dormancy	VC	21 Aug 09	1 Aug 11	Scientific Horticulture Pty Ltd	Dr Gordon Brown 03 6239 6411
CY09013	Consumer and customer research in cherry export markets	Levy	22 Feb 10	30 Jun 10	Rural Solutions SA	Duncan Tullett
CY09017	41st Annual Cherry Growers of Australia Conference – 2010	VC	1 Feb 10	28 May 11	Victorian Cherry Association	Anthony Allen 03 5628 1717
CY09019	Retail handling training package	Levy	1 Jun 10	28 Feb 11	Cherry Growers of Australia Inc	Trevor Ranford 08 8349 5073
CY09021	Breeding business plan	Levy	4 Jan 10	30 Apr 10	Cherry Growers of Australia Inc	Trevor Ranford 08 8349 5073
CY09025	NSW Cherry Growers – Asia fruit logistica 2009	VC	2 Sep 09	10 Oct 09	NSW Cherry Growers Association	Joanne Wells 02 6384 3285
CY09027	Sweet cherry industry study tour of Argentina and Chile incorporating the 6th International Cherry Symposium	Levy/ VC	26 Oct 09	28 Feb 10	Cherry Growers of Australia Inc	Trevor Ranford 08 8349 5073
CY09500	2009/10 marketing program	Levy	1 Jul 09	28 May 10	Horticulture Australia Limited	Elisa Tseng 02 8925 2300
CY09900 /10	Cherry partnership agreement 2009–12	Levy	1 Jul 09	31 Aug 10	Cherry Growers of Australia Inc	Trevor Ranford 08 8349 5073

Project No.	Project title	Levy or VC	Project start	Project completion	Organisation	Contact
HG06040	Optimal irradiation procedures for sterilisation of Queensland fruit flies	Levy	1 Oct 06	30 Apr 10	Macquarie University	Phillip Taylor 02 9850 1311
MT06020	Improving market access R&D for the Australian horticultural industries	Levy	1 Jul 06	31 May 12	Horticulture Australia Limited	Kim James 08 6389 1407
MT06022	Generation of dimethoate and fenthion residue samples to maintain market access	Levy/ VC	6 Jun 07	11 Jun 10	Agronico Research Pty Ltd	Dale Griffin 03 5976 4511
MT07015	Tasmanian pest incursion monitoring	Levy/ VC	1 Aug 07	1 Jun 11	Fruit Growers Tasmania Inc	Anna Steinhauser 03 6231 1944
MT07058	Combined Fruit Growers Tasmania and Cherry Growers of Australia Industry Development Officer	Levy/ VC	1 Jul 07	31 Aug 11	Fruit Growers Tasmania Inc	Anna Steinhauser 03 6231 1944
MT08013	Development of an international standard for Mobile Elevating Work Platforms (MEWPs) used in orchards	Levy/ VC	15 Jul 08	19 Jul 09	Keith Batten & Associates	Keith Batten 0418 738 969
MT08015	Data collection program	Levy/ VC	15 Sep 08	30 Jun 10	Horticulture Australia Limited	Wayne Prowse 02 8295 2300
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	A/Prof Tony Clarke 07 3138 5023
MT08044	Future surveillance needs for bee biosecurity	Levy/ VC	5 Jan 09	15 Apr 10	Rural Industries R&D Corporation	Dr Dave Alden 02 6271 4128
MT08047	Implication for surveillance of the host shift of <i>Varroa jacobsoni</i> to <i>Apis mellifera</i>	Levy/ VC	1 Nov 08	31 May 12	CSIRO Entomology	Paul De Barro 07 3214 2811
MT08048	Simulation workshop for Varroa mite incursion	Levy/ VC	5 Jan 09	15 Apr 10	Rural Industries R&D Corporation	Dr Dave Alden 02 6271 4128
MT08079	Pollination Aware – it's importance to Australia	Levy/ VC	25 May 09	15 Apr 10	Rural Industries R&D Corporation	Dr Dave Alden 02 6271 4128
MT08080	Structured approach to fruit fly research and management for the Australian horticultural industry – Phase 1	Levy/ VC	31 May 09	31 May 10	Plant Health Australia	Nicholas Woods 02 6215 7704
MT09006	Improving European earwig management in pome and cherry orchards through the use of pheromones	Levy	2 Nov 09	30 Sep 12	Tasmanian Institute of Agricultural Research	Geoffrey Allen 03 6226 2732
MT09021	Improving China market access for Australian horticultural products	Levy	5 Apr 10	31 Mar 11	Horticulture Australia Limited	Stephen Winter 03 9832 0787
MT09026	Protecting pollination for the Australian horticultural industry Stage 2	Levy/ VC	30 Mar 09	31 Jul 12	Horticulture Australia Limited	Kim James 08 6389 1407
MT09073	2009 Australia/China market access seminar	Levy	5 Oct 09	31 Dec 09	Office of Horticultural Market Access	Stephen Winter 03 9832 0787

Cherry Investment Summary

Ten months ended 30 April 2010

	Marketing 2009/10 \$	R&D 2009/10 \$	Combined 2009/10 \$
Funds available 1 July 2009	166,208	403,472	569,680
INCOME			
Levies Received	264,564	352,771	617,335
Commonwealth Contributions		263,244	263,244
Other Income	3,067	9,222	12,289
Total Income	267,631	625,237	892,868
Budget	176,351	640,078	816,429
Variance to Budget	91,280	(14,841)	76,439
PROGRAM INVESTMENT			
Levy Programs	220,915	457,497	678,412
Service Delivery Programs by HAL	33,314	68,991	102,305
Across Industry Contribution		5,307	5,307
Levy Collection Costs	2,838	3,768	6,606
Total Investment	257,067	535,563	792,630
Budget	282,246	651,405	933,651
Variance to Budget	25,179	115,842	141,021
Annual Surplus/Deficit	10,564	89,674	100,238
Funds available 30 April 2010	176,772	493,146	669,918

Cherry Industry Advisory Committee (IAC)

Bob Granger (Chair)
Max Arif
Steve Chapman
Scott Coupland
Ian Hay
Tim Reid
Ian Sparnon
Trevor Ranford (Ex-Officio)
Owen Connelly (Ex-Officio)



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