Extreme rain events and floods throughout 2010/11 had an impact on the quantity and quality of passionfruit entering the marketplace. Reduced crop production led to an increase in price, with fruit selling at $1 a piece in supermarkets and green grocers. Growers with a substantial amount of fruit on the market have received good returns. The down side is that many consumers have chosen to purchase other fruit which sells at a lower price.

Far North Queensland and NSW have had a good season compared to other regions. Supply is due to increase between June/July as NSW finishes picking and the Far North Queensland 2011/12 season begins. Weather permitting, the passionfruit industry can expect good production levels in 2011/12.

Levy investment

In 2010/11 the total levy income received was $159,481; $93,030 of which was raised for R&D and $66,451 for marketing. The current levy is 20 cents/8kg carton for R&D and 20 cents/8kg carton for marketing. Of the $136,745 budgeted for R&D projects, a total of $56,515 was invested and $80,230 of deferred payments will be carried into 2011/12. A total of $25,000 was invested towards marketing projects. The Australian Government provided $32,302 of matched funding to support four R&D projects in the R&D levy program.

In addition to levy funds, $20,630 of voluntary contributions (VC) was provided to the industry for supplementing levy-funded projects and/or solely funding VC-only projects in the R&D programs. VC funds are matched by the Australian Government.

HAL is responsible for managing these funds and takes advice on how to invest the funds from the Industry Advisory Committee (IAC). Consultation with the IAC is essential in determining the most critical investment priorities for the industry.

The industry also contributes 3% of levy and voluntary contributions (matched) to an across industry program that addresses issues that affect all of horticulture, such as water availability, climate change, biosecurity, market access.

Strategic objectives

The process for determining the industry’s priorities begins with the development of the industry’s strategic plan. The plan guides future R&D and marketing investment over a five year period. Activities in the 2010/11 period were therefore guided by the Passionfruit Australia Strategic Plan 2006–2010.

These plans are developed to reflect both the industry’s priorities and the Australian Government’s rural R&D priorities. The plans are reviewed regularly.

The industry’s objectives, as outlined in the strategic plan, are:

- **Objective 1:** Increase production in line with increased market demand.
- **Objective 2:** Deliver products that meet consumer and industry requirements.
- **Objective 3:** Effective industry organisation providing a better environment for individual businesses.

R&D program

In 2010/11 there were four new and ongoing projects. Three of these received an R&D levy and one received a combination of R&D levy and VC funding.

Marketing program

The first year of marketing levy income has been invested in market research and developing a brand tool box.

The brand tool box for the industry will include the core marketing objective, identified target audiences, brand positioning, a unique selling proposition (key messages), as well as an industry logo that will be consistent across all forms of communication.

Conclusion

This report provides a snapshot of project activities in the 2010/11 year. The report’s sections are divided by the industry’s objectives to reflect the activities being undertaken that address these industry issues.

For more information contact:
Jane Wightman, HAL Industry Services Manager
T 07 3012 8688
M 0404 309 877
E jane.wightman@horticulture.com.au

The projects in this report have been funded by HAL using the passionfruit levy and/or voluntary contributions from industry with matched funding from the Australian Government for all R&D activity.
Increase production in line with increased market demand

Passionfruit consumer research and brand toolbox development

Project PF10503 involves the development of the passionfruit’s positioning statement and creative artwork to support that statement. These concepts will embody the essence and uniqueness of passionfruit and will incorporate feedback gained from project PF10504.

The objective of project PF10504 is to identify the usage and behavioural patterns of passionfruit consumers in Australia. Key outcomes from this project will also include:

- Identifying key market segments and understanding consumer sentiments.
- Examining barriers to purchase and consumption of passionfruit and how the industry is able to overcome these barriers.
- Positioning territories and branding concepts for the development of marketing promotions.

The insights and data gathered from the research will also assist in the development of a clear long term marketing strategy for Passionfruit Australia. The study closely looks at the motivations and barriers of consumers purchasing passionfruit, the frequency of consumption, quantity of consumption and awareness levels towards certain attributes of the product.

This project was undertaken in two phases, with the first phase being an online survey of 314 passionfruit buyers who have bought passionfruit in the last twelve months. Initial findings show that only 27% of all grocery buyers have bought passionfruit within this period, furthermore, less than 28% of these buyers account for over 67% of the total volume of passionfruit bought. The online survey was followed by a qualitative phase that involves the recruitment of two focus groups. The main objective of this phase was to:

- Further understand consumer sentiments towards passionfruit.
- Explore the new positioning statements, including creative artwork, developed for the passionfruit industry.

The final report and debrief on both quantitative and qualitative phases will be communicated to the industry in mid July 2011. The analysis and information gained from this research will form a vital component of the strategy and help develop the industry’s strategic three year marketing plan.

Projects PF10503 and PF10504

For more information contact:
Shanka Dharmaratne, HAL
T 02 8295 2300
E shanka.dharmaratne@horticulture.com.au

CLIMATE CHANGE RD&E

Climate change research is not new, but the urgency of information for producers 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 Federal Government funds, has increased by 30%. 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 2011, 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.
Disease management and breeding of passionfruit for improved quality and productivity

Virus and fungal diseases are major constraints to productivity and quality of passionfruit. A recently completed project aimed to address these issues through breeding for disease resistance, improving knowledge of virus and fungal diseases, and evaluating new management strategies.

In a previous HAL funded project (PF04001) a cross of Passiflora edulis f. flavicarpa ‘Heuston’ x Passiflora incarnata with virus and cold tolerance was developed, however it did not set seed, making it unsuitable for rootstock production. Through this project it was demonstrated that clonally propagated rootstocks of this line were not suitable for commercial passionfruit production. However, it was demonstrated that fertility could be restored through back-crossing. A backcross F2 with similar Fusarium wilt resistance to current rootstocks as well as resistance to the passionfruit potyviruses (Passionfruit woodiness virus (PWV), Passiflora virus Y (PaVY) and Clover yellow vein virus (ClYVV)) has been developed and is available for further breeding. The introduction of cold and virus tolerance into scion lines was also investigated.

The serious impact viruses are having on passionfruit production was clearly demonstrated in this project and a workshop was held with industry representatives to develop strategies for their control and gain a commitment from industry to these strategies.

Diagnostic assays for the viruses commonly found in passionfruit were improved. Assays can be conducted more efficiently because the same sample preparation can be used for ELISAs for Passiflora latent virus (PLV) and Cucumber mosaic virus (CMV) as well as nested PCRs for PWV, PaVY and ClYVV. The nest PCRs were developed so that low cost reagents could be used and efficiency in conducting the assays were increased.

The effects of each of PWV, PaVY, CMV and PLV on symptom development in passionfruit were examined and PWV and PaVY alone each caused strong but different symptoms. CMV, which is not commonly found in commercial passionfruit, caused only mild symptoms. PLV does not appear to play a big role and, generally, did not cause any symptoms. ClYVV from passionfruit could not be separated from PWV, hence three isolates of ClYVV from other hosts were used to inoculate passionfruit, however, none of the inoculations were successful. Further research is required to understand ClYVV infection of passionfruit. It is possible that transmission of ClYVV in passionfruit requires the presence of PWV.

The use of the defence activator Bion® has previously been shown to be effective in controlling Cladosporium oxysporum on passionfruit. In this project the effectiveness of Bion® against Septoria passifloricola (Septoria spot) on passionfruit has been demonstrated for the first time. In preliminary trials, two other defence activators appear to be promising for the control of Alternata spot (Alternaria alternata) and Septoria spot on passionfruit, but further research is required to optimise application rate and timing.

In recent years a pre-harvest anthracnose has been affecting passionfruit. Studies undertaken in this project indicate that both pre-harvest and post-harvest anthracnose of passionfruit is caused by another Colletotrichum sp. rather than Colletotrichum gloeosporioides as previously reported. However, further field experimentation is recommended for confirmation.

Assistance was provided to the passionfruit industry through:

- Support of the variety breeding program where new crosses were kept virus-free through diagnostics.
- Routine diagnostic services and advice were provided to passionfruit growers who sent in samples.
- Extension of information to industry through presentations at field days, the industry magazine Passion Vine and updating of the Passionfruit Growing Guide.
- Investigations and advice on rootstock seed issues.

Project PF07001

For more information contact:
Jay Anderson, DEEDI
T 07 3255 4354
E jay.anderson@deedi.qld.gov.au
Multi-industry economic evaluation

This multi-industry economic evaluation project is funded by the R&D levy contribution of six small industries (chestnut, custard apple, passionfruit, pineapple, papaya and persimmon). The project commenced in March 2011 and is due for completion by the end of September 2011.

The Australian Government has identified the need to substantiate the return on investment to both the levy payer and the broader community. As a result, horticultural industries which are members of HAL are requested to support a project conducted in accordance with these guidelines.

Following the Council of Rural R&D Corporations (CRRDC) evaluation methodology, a list of all the R&D projects implemented in the last five years (including those that are currently in an advanced stage) will be prepared and grouped according to the HAL portfolio. One project from each of the six participating industries will be randomly selected and evaluated by the evaluation team.

Project MT10045
For more information contact:
Michael Clarke, AgEconPlus Pty Ltd
T 0438 844 024
E clarke@ageconplus.com.au

New industry publication for subtropical and tropical fruit sector

The Australian subtropical and tropical fruit industries have developed a new industry publication to profile the mango, melon, pineapple, custard apple, lychee, persimmon, papaya, and passionfruit industries. This publication provides information on this growing sector of Australian horticulture to create a better understanding of its collective value.

The publication collates data from the Australian Bureau of Statistics (ABS), peak industry bodies, sales and consumer research, and will be made available electronically to relevant federal and state agencies as well as other stakeholders.

There is currently no single point of reference containing detailed information on each industry and the potential growth and value of the group as a whole.

Project MT09049
For more information contact:
Anne Larard, Produce Pathways
T 0432 395 985
E anne.larard@optusnet.com.au
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 R&D 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 passionfruit 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

HAL’s roles and relationships

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

In 2010/11 HAL invested more than $90 million in projects to benefit horticulture industries.

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

The 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

HAL partnership agreement and consultation funding

The partnership agreement between Passionfruit Australia Incorporated 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 passionfruit R&D levy and matched funds from the Australian Government as well as passionfruit marketing funds.

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

The full year consultation funding expenditure for Passionfruit Australia Incorporated in 2010/11 was $7,920 and $11,480 VC. This represents 7.5% of the total annual levy expenditure.

Project PF10900/PF10910

For more information contact:
Jann Bonsall, Passionfruit Australia Incorporated
T 07 5485 4402
E admin@passionfruitaustralia.org.au
The passionfruit 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

### ACROSS INDUSTRY PROGRAM

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Project title</th>
<th>Levy or VC</th>
<th>Project start</th>
<th>Project finish</th>
<th>Organisation</th>
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<tr>
<td>AH09009</td>
<td>Food security discussion paper</td>
<td>Levy</td>
<td>30/7/10</td>
<td>28/1/11</td>
<td>Growcom</td>
<td>Troy Reeves 0408 135 003</td>
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</table>

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

| AH09019 | Office of Horticulture Market Access – Technical Manager (SPS and Research and Development) | Levy | 1/10/09 | 30/9/10 | Kalang Consultants | Rob Duthie 02 6286 7151 |
| AH09027 | Investing in Youth successful scholarship applicant | Levy | 31/5/10 | 31/3/14 | Rural Industries R&D Corporation | Ken Moore 02 6271 4127 |

**Objective 2: Maximise the health benefits of horticulture products**

| AH10003 | Horticulture component of the National Climate Change Research Strategy for Primary Industries | Levy | 1/4/11 | 31/8/11 | Horticulture Australia Limited | Peter Melville 02 8295 2317 |
| AH10006 | Pesticide spray drift in horticulture – a response to new guidelines from the APVMA | Levy | 1/7/10 | 31/5/11 | Horticulture Australia Limited | Peter Melville 02 8295 2317 |
| AH10009 | Response to Productivity Commission | Levy | 1/10/10 | 31/3/11 | Horticulture Australia Limited | Warwick Scherf 02 8295 2323 |
| MT08042 | Driving collaboration in Australian horticultural research | Levy | 1/12/08 | 30/6/11 | RIS Projects | Russell Soderlund 03 5968 3599 |
| MT09043 | Enhancing confidence in product integrity in domestic and export markets | Levy | 1/7/10 | 30/6/11 | Horticulture Australia Limited | Warwick Scherf 02 8295 2323 |

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

| MT10029 | Managing pesticide access in horticulture (cont. from AH04009 and MT07029) | Levy | 1/7/10 | 2/7/15 | AgAware Consulting Pty Ltd | Peter Dal Santo 03 5439 5916 |
| MT10049 | A multi target approach to fruitspotting bug management | Levy | 1/3/11 | 1/4/16 | NSW Department of Industry and Investment | Dr Ruth Huwer 02 6626 2451 |

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

| AH10012 | Horticulture support for the CRCNPB rebid | Levy | 15/9/10 | 31/12/10 | CRC For National Plant Biosecurity | Scott Baxter 02 6201 5067 |
# PASSIONFRUIT PROGRAM

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Industry obj.</th>
<th>Rural R&amp;D priorities</th>
<th>Project title</th>
<th>Levy or VC</th>
<th>Project start</th>
<th>Project finish</th>
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<th>Contact</th>
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<tr>
<td>MT09049</td>
<td>3</td>
<td>🌺 🍏 🍊 🍉 🍊 🍊</td>
<td>Subtropical and tropical fruits collective industry profile publication</td>
<td>VC / Levy</td>
<td>29/3/10</td>
<td>31/5/11</td>
<td>Produce Pathways</td>
<td>Anne Larard 0432 395 985</td>
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<tr>
<td>MT10045</td>
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<td>🍊 🍊 🍊 🍊 🍊 🍊</td>
<td>Multi-industry economic evaluation – BCA</td>
<td>Levy</td>
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<td>30/9/11</td>
<td>AgEconPlus Pty Ltd</td>
<td>Michael Clarke 0438 844 024</td>
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<td>PF07001</td>
<td>1</td>
<td>🍊 🍊 🍊 🍊 🍊 🍊</td>
<td>Disease management and breeding of passionfruit for improved quality and productivity</td>
<td>Levy</td>
<td>31/10/07</td>
<td>22/4/11</td>
<td>Department of Employment, Economic Development &amp; Innovation</td>
<td>Jay Anderson 07 3896 9511</td>
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<td>PF10008</td>
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<td>🍊 🍊 🍊 🍊 🍊 🍊</td>
<td>Cabrio trial</td>
<td>Levy</td>
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<td>30/6/11</td>
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<td>Ben Callaghan 02 8295 2300</td>
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<td>PF10503</td>
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<td>Passionfruit brand toolbox development</td>
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<td>30/6/11</td>
<td>Horticulture Australia Limited</td>
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<td>PF10800</td>
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<td>Industry Annual Report</td>
<td>Levy</td>
<td>1/7/10</td>
<td>30/6/11</td>
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<td>PF10900</td>
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<td>2010 Passionfruit Partnership Agreement</td>
<td>VC / Levy</td>
<td>1/7/10</td>
<td>10/08/11</td>
<td>Australian Passionfruit Industry Association Inc</td>
<td>Jane Wightman</td>
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Australian Government Rural R&D Priorities: 🌺 Productivity and adding value 🍊 Supply chain and markets 🍉 Natural resource management 🌬️ Climate change and climate variability 🛡️ Biosecurity 🚮 Innovation skills 📈 Technology
## PASSIONFRUIT INVESTMENT SUMMARY

Year ended 30 June 2011

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<tr>
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<th>Marketing 2010/11 $</th>
<th>R&amp;D 2010/11 $</th>
<th>Combined 2010/11 $</th>
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<tr>
<td>Funds available 1 July 2010</td>
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### INCOME

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<th>Levies received</th>
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<th>Other income</th>
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<td>66,451</td>
<td>32,302</td>
<td>1,504</td>
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<td>210,694</td>
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<td><strong>Variance to budget</strong></td>
<td>(18,374)</td>
<td>(32,768)</td>
<td>(14,394)</td>
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### PROGRAM INVESTMENT

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<th></th>
<th>Levy programs</th>
<th>Service delivery programs by HAL</th>
<th>Across industry contribution</th>
<th>Levy collection costs</th>
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<td></td>
<td>25,000</td>
<td>3,281</td>
<td>775</td>
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<td><strong>Budget</strong></td>
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<td>(78,530)</td>
<td>(90,120)</td>
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<td><strong>Annual surplus/deficit</strong></td>
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<tr>
<td>Funds available 30 June 2011</td>
<td>35,363</td>
<td>82,422</td>
<td>117,785</td>
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</tr>
</tbody>
</table>

### FOR MORE INFORMATION CONTACT:

**Jane Wightman**
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Horticulture Australia Limited (HAL)
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E jane.wightman@horticulture.com.au