Our Vision

TIA will contribute to the development of prosperous, innovative and sustainable rural industries and communities through impact-focused education, research, development and extension.

Our Mission

TIA conducts and delivers targeted, innovative and responsive agricultural education, research, development and extension.
Agriculture is a key driver of the economy of Tasmania. Its importance continues to be reflected in the partnership between the Government and the University of Tasmania through the Tasmanian Institute of Agriculture (TIA) which saw $9.8 million being invested by the Tasmanian Government and the University in research, development, extension and education during 2014.

Now seen as a role model for government-university partnerships, the joint venture generated a further $8.8 million in competitive industry and research grants during the year. In the past year, TIA has undertaken research, development, extension and education activities aligned to the needs of Tasmanian industry. For example, TIA played a lead role in horticulture projects including the PIPS Orchard Productivity Program and the Integrated Management of Diseases of Pyrethrum Project with Horticulture Australia Limited. It partnered with Dairy Australia Limited in the Dairy Businesses for Future Climates Project and was the lead institution in developing forage systems to meet the challenge for cool temperate pasture-based dairy systems. TIA also delivered projects to optimise cropping practices in mixed farming systems and relating to food safety, including those around meat health. The partnership between TIA and private sector service providers continues to operate effectively, allowing for the joint development of extension activities and a clear pathway for increasing economic activity in the agricultural sector of the economy.

In addition to the significant funding being generated, TIA’s growing profile continues to attract undergraduate and postgraduate students. Tasmania’s agricultural strength is in its capacity to grow high-quality produce; to harness innovation; to add and retain value within Tasmania; and to sustainably increase farm productivity and profitability. TIA is a role model through which to deliver research, development, extension and education to support improved agricultural productivity and competitiveness.

I would like to acknowledge the TIA Advisory Board members for their vision and commitment to agriculture in Tasmania. Together with TIA staff this highly regarded partnership between the Tasmanian Government and the University of Tasmania will continue to benefit Tasmania.

PROFESSOR HOLGER MEINKE
TIA Director
TIA 2014 ADVISORY BOARD

MR KIM EVANS
Chair, TIA Advisory Board and Secretary, Department of Primary Industries, Parks,Water and Environment

MS MICHELE MOSELEY
Deputy Secretary, Department of Primary Industries, Parks,Water and Environment

MS DEIDRE WILSON
Director, Policy Division, Department of Primary Industries, Parks,Water and Environment

PROFESSOR MARGARET BRITZ
Dean, Faculty of Science, Engineering and Technology, University of Tasmania

PROFESSOR ANDREW WELLS
Executive Director, Research Policy Planning and Development, University of Tasmania

MS AMY GRUBB
Industry Representative

PROFESSOR HOLGER MEINKE
Director, TIA and Head, School of Land and Food

MS JAN DAVIS
Industry Representative

MR JOHN MAYNARD
Industry Representative

MR LEON QUILLAM
Industry Representative
The Tasmanian Institute of Agriculture (TIA) sits within the School of Land and Food at the University of Tasmania and is a Joint Venture between the Tasmanian Government and the University. This partnership and TIA’s mandate in research, development, education and extension is unique in Australia.

TIA is a dynamic team of 130 scientists, educators and technical experts with access to world-class facilities and equipment, who conduct high-quality research, development, extension, education and training to meet the needs of the agricultural and food sectors.

TIA’s focus is on developing prosperous, innovative and sustainable rural industries and communities. TIA’s capability covers the entire agriculture and food value chain, from production to consumption. It specialises in temperate agriculture and is structured to give it the agility to adapt to industry’s strategic goals.

TIA has five research centres: Dairy, Extensive Agriculture, Food Systems, Perennial Horticulture and Vegetables.
Research Development and Extension

TIA’s five sector-based centres are the core organisational units of TIA where research, development and extension (RD&E) takes place.

DAIRY

The TIA Dairy Centre aims to help industry sustain dairy production, improve resource-use efficiency and environmental performance. The Dairy Centre carries out research, development and extension projects that help to improve dairy farm production practices and efficiencies through improved information and knowledge application. The TIA Dairy Centre maintains a close working relationship with Dairy Australia and DairyTas. The Centre receives support from Dairy Australia and DairyTas to distribute the Tassie Dairy News to dairy farmers throughout Tasmania and support for research, development and extension.

In 2014, the Dairy Centre continued to deliver information and advice to Tasmanian dairy farmers through its extension programs, including Dairy Smart (aimed at improving dairy farmers’ skills in business, feedbase and nutrition, and people management) and the Young Dairy Network Tasmania (providing training, development and social networking opportunities for young people working in the dairy industry). The team ran 61 events (field days, workshops and discussion groups) with almost 700 attendees during 2013-14, as well as providing written information such as fact sheets and producing 11 issues of Tassie Dairy News, which is distributed to over 700 people. The development and extension team also ran workshops on pasture management, technology and automatic milking systems.

The TIA Dairy Centre offers access to a free, national benchmarking service – the Dairy Australia funded Dairy Farm Monitor Project – which provides information on dairy farming business efficiency and performance. In 2014, 31 Tasmanian dairy farm businesses were involved in the project, which produced dairy industry ‘snapshots’ on the state’s average farm earnings, return on assets, feed sources, pasture consumption and greenhouse gas emissions.

The TIA Dairy Centre has active industry groups that provide advice and feedback on research. As a result, TIA’s dairy research has real-world applications that are aimed at improving on-farm efficiency and profitability, now and into the future. Examples of this research include application of nitrogen to pastures using sensors for identifying and
avoiding nitrogen rich urine and faeces patches, use of forages such as plantain to complement ryegrass for increased milk production and development of tools for forecasting pasture growth at the farm and paddock level. Upgrades to the Tasmanian Dairy Research Facility are also enabling TIA to conduct a broader range of animal and animal nutrition research. Feeding and milk monitoring system upgrades, and inclusion of auto-drafting and auto-weighing, has enabled research into the effects of variable-rate feeding and omega-3 supplements. The Dairy Centre’s Sense-T project, in collaboration with CSIRO, is utilising remote sensor technology cow collars to measure grazing behaviour and detect behaviour associated with oestrus in dairy cattle.

HIGHLIGHTS

Variable and extreme climatic events
TIA is undertaking a joint project with the University of Melbourne to examine the impact of extreme and more variable climatic events on the profitability, productivity and social aspects of dairy farms in Vic, SA and Tasmania. The project is funded by Dairy Australia and the Federal Department of Agriculture.

Bail feeding review
Dr James Hills completed a review for Dairy Australia in 2014 on differential bail feeding in pasture-based dairy systems, which will be used by Dairy Australia to help set future research directions for supplementary feeding.

TIA Dairy Centre wins VC’s award
The TIA Dairy Centre’s Development and Extension team was recognised in the 2014 Vice Chancellor’s Awards as an ‘outstanding example of community engagement’ and was awarded $10,000 to help the team continue its work.
More milk from forages project
The More Milk from Forages project, led by Dr Keith Pembleton and funded by Dairy Australia, aims to increase the supply and consumption of forages on Tasmanian dairy farms and increase milk production per cow from a predominantly perennial pasture diet by manipulating the feedbase. The project is investigating the forage and milk production potential of forbs and legumes when grown as part of a perennial ryegrass forage base. The project innovatively integrated component research (eg field plot, glasshouse and animal feeding experiments) with biophysical and farms system modelling to address the “whole of farm system” influence.

First above ground effluent tank
TIA is part of a unique Dairy Tasmania project that will measure the benefits of Australia’s first above-ground dairy effluent tank. The 40m diameter, 2ML tank sitting on a Meander dairy farm will be monitored by TIA researchers over the next two years to investigate strategies that reduce methane emissions as well as make more effective use of effluent as a fertiliser.

Nuffield Scholar
TIA Dairy Centre’s Thomas Snare was awarded the $30,000 2015 Nuffield Australia Dairy Producer Farming Scholarship. Mr Snare manages the farm at TIA’s Dairy Research Facility and is involved in his own family farming business. Mr Snare will use the scholarship to research value adding in the dairy beef industry and how lean management systems can be applied in agriculture.
Extensive Agriculture

TIA’s applied research for the extensive agriculture sector seeks to address industry problems with practical solutions. Work is conducted across a range of production systems and landscapes, from extensive rangeland grazing and dryland cereal cropping, to intensive beef finishing systems in the high rainfall zone and intensive irrigated cropping of cereals. Plant breeding and improvement are a major focus, along with better management of existing farming systems.

Wool, red meat, cereals and grain legumes collectively account for about one third of the total gross value of Tasmania’s agricultural production. The significant contribution of these industries is reflected in the breadth of research undertaken by the Extensive Agriculture Centre.

In 2014, the Centre has strengthened its relationships with bodies such as GRDC, the Australian Sheep CRC, MLA, AWI, Department of Agriculture, Fisheries and Forestry and Tasmanian Natural Resources Management groups to deliver RD&E that is relevant to producers. Working in collaboration with Southern Farming Systems, in 2014 TIA helped set-up a number of on-farm trials of wheat, barley and canola to trial irrigation, varieties and crop fungicides with high yielding crops in the high rainfall zone as part of GRDC-funded research. TIA is also working with King Island beef producers as part of the State Government’s King Island assistance package to establish the island’s beef enterprises on a more sustainable footing and reduce the incidence of dark-cutting meat that currently causes 13% of King Island beef carcasses to be downgraded.

Collaborations with CSIRO and the University of New England were initiated to work together on disease and management modelling, electronic monitoring (including Sense-T), advance breeding techniques, genetic testing and modelling and risk analysis. These collaborations will have significant implications for Tasmania’s prime lamb and wool industries, particularly with irrigation to the Midlands potentially increasing the intensive grazing and animal finishing capacity in the region.

The research outcomes from the Carbon Futures Initiative (CFI) project on soil carbon, which was completed in 2014, was shared with producers through field days and workshops. TIA worked with two NRM regions, Greening Australia and 20 farmers to
test different approaches for increasing soil carbon in dryland grazing systems.

In 2014, TIA undertook a review into the decline of pasture renewal on properties and is developing extension packages aimed at expanding the pasture seed industry within Tasmania. The Centre also developed a strategic extension plan as a result of feedback from a Sheep Connect survey of 91 sheep graziers.

HIGHLIGHTS

National virus screening program

Associate Professor Meixue Zhou was appointed by the GRDC to lead their $1.5m national screening program to find genes resistant to Barley Yellow Dwarf Virus in wheat.

Cressy trials expanding

Trials at the Cressy Research and Development site continued to expand in 2014, with 10 projects being undertaken in herbage development, sustainable grazing, cereals development, salinity and national pasture variety trials. This included a new trial as part of the Tasmanian Quality Meat partnership that is investigating the impact of grazing history, sheep breeds and omega-3 fatty acid supplements on the growth rate and meat quality of lamb. Project funders include GRDC, MLA, Tasmanian Government, PGG Wrightson Seeds, NSW DPI and SARDI.

Potential to double genetic gain

TIA’s modelling research into sheep breeding has shown that by using relatively simple changes in the breeding systems it is possible to increase the rate of genetic gain in wool sheep from the current rate of less than $1/ewe/year to over $2/ewe/year. TIA senior animal scientist Brian Horton’s research has found if the best stud breeders use appropriate methods and these gains are passed to all commercial breeders, the potential benefit to Tasmanian sheep producers is about $2 million per year.

New Vietnam cattle project

TIA was awarded a four-year $1 million ACIAR project to improve productivity and profitability of smallholder beef enterprises in Central Vietnam. The project builds on other beef research by TIA in north-west Vietnam. New research will address the value chain from production through to finishing and marketing.
Crop salinity award
TIA plant pathologist Professor Sergey Shabala secured a 3-year Australian Research Council (ARC) Discovery Project grant of $849,078 to examine how plants utilise external bladders to take-up and store excess salt.

New Malt variety
TIA researchers have bred a new variety of malt barley in Tasmania, which has the potential to be exported internationally for use in boutique beers and whiskeys. TIA Cereal Breeder Associate Professor Meixue Zhou identified the new variety, Macquarie Barley, through a breeding program funded by the GRDC.

Leadership recognition
Extensive Agriculture Centre leader Brian Field was awarded the Dean’s Award for Exceptional Performance at the 2014 Faculty of Science, Engineering and Technology Awards.

Sheep Connect success
Sheep Connect Tasmania has recorded excellent engagement success within its first three years. So far 914 farmers have attended 12 events, email opening rates rose from 28 per cent to 49 per cent, and 82 per cent of farmers reported they had made actual practice changes as a result of Sheep Connect Tasmania. The state Sheep Connect coordinator, James Tyson, ran a number of workshops during 2014, including a very popular labour-saving sheep handling equipment field day and footrot management practical sessions.

Water efficiency ‘Eureka Moment’
TIA’s Dr Tina Acuna, as part of a larger team including GRDC ndCSIRO was awarded the 2014 National Water Use Efficiency Initiative in the Australian Museum Eureka Prizes. The Water Use Efficiency team identified changes in farming practice that can make staggering differences to water-yield efficiencies. They were able to show that Australian grain farmers can boost yields by more than 50 per cent without using any extra water.
Food Systems

The integration of agriculture with food systems is an important priority for TIA. Food Systems provides Australia’s food industries and governments with innovative research and knowledge of emerging issues. It aims to help diversify Tasmania’s economic base by increasing exports of high-quality, nutritious, value-added food products.

The Food Safety Centre (FSC) is nationally and internationally recognised for its expertise in food safety, risk assessment and systems biology of food-borne pathogens and spoilage microorganisms.

FSC received international recognition in 2014 when Thomson Reuters, the global leader in online research publication metrics, selected ComBase for its new Data Citation Index. FSC is one of three partners in the ComBase initiative, which is the world’s leading public database describing microbial responses to food environments and containing more than 70,000 data records.

In 2014, the Centre was asked to undertake a number of contract research projects by national and Tasmanian organisations and businesses in response to Food Standards Australia & New Zealand (FSANZ) changes to recommended microbiological limits for *Listeria monocytogenes*.

FSC also produced predictive models for Tasmanian salmon producers to ensure salmon quality and safety in supply chains.

Decision support software developed by FSC from Dairy Australia funds was adopted by industry during 2014. The software helps milk companies evaluate whether milk collected from farms prior to completion of cooling can be delivered to processing factories without jeopardising quality or safety.

FSC assisted Walnuts Australia during 2014 with its food safety programs.

The Centre for Food Innovation (CFI) undertook a project for the Defence Science and Technology Organisation (DSTO) to trial the commercial capability of producing freeze dried rice using improved technology and infusion techniques to add flavour and fortify the nutritional content. Deloraine’s Forager Foods was contracted to make commercial test batches for evaluation.

The CFI undertook a King Island wallaby population study in 2014, which produced significant background information on the potential of wallaby as a new industry for King Island.
The background and feasibility study looked at possibilities for sustainable harvesting of the local wallaby population and whether or not farmers may be able to tap into international markets (high-end Asian markets in particular). Nutritional benefits of eating wallaby, branding, exotic appeal, harvesting, freight and export were also considered. Tasmania’s Department of Primary Industries, Parks, Water and Environment funded the study through TIA as part of a State Government response to the King Island JBS abattoir closure in 2012.

**HIGHLIGHTS**

**Industry innovation partners**

Several food production/processing businesses, including Hansens Orchards, Woolworths and Houston’s Farm, agreed to work with the ARC Industrial Training Centre in Innovative Horticultural Products. The $4.5m Centre will support 10 PhD candidates and 3 post-doctoral fellows in collaboration with CSIRO and the Defence Science and Technology Organisation. The focus will be on improved shelf-life and sensory quality of fresh foods through food science and market analysis projects and training for capacity in this area.

**Ensuring oysters are safe**

TIA researchers developed a microbial modelling tool called the Oyster Refrigeration Index, which has improved the way Sydney rock oysters are stored. As a direct result, the New South Wales Food Authority modified temperature requirements for this valuable oyster species, resulting in thousands of dollars in reduced refrigeration costs each year, and potentially opening lucrative international markets.

**Fish diet supplements**

A new project with a Tasmanian salmon producer and four feed supply companies was instigated to investigate novel fish diet supplements. The research seeks to improve productivity and sustainability of farmed salmon. The research will be coupled to student training and features close involvement with personnel from the salmon producer.

**Environmental Health Training**

FSC conducted a two-day workshop to enhance knowledge and understanding of microbiology for Tasmanian Environmental Health Officers. The workshop focussed on water quality, potentially hazardous foods and the legal side of public health law.
Milk Cooling Predictor

Decision support software prepared by FSC from Dairy Australia funds is now being adopted in industry. The software assists milk companies to evaluate whether milk collected from farms prior to completion of cooling can be delivered to processing factories without jeopardising quality or safety.

MATS evaluation initiated

Evaluation of the potential for a Microwave Accelerated Thermal Sterilisation (MATS) process to be commissioned as an industry development project progressed in 2014 with support of CSIRO and DSTO Scottsdale. The process is being evaluated for its ability to locally produce shelf-stable defence foods, emergency foods and ready-to-eat meals to replace current canned and frozen products.

Resistant starch energy bars

The CFI and DSTO Scottsdale are collaborating with US Defence in food research. The existing project involves development of a functional food bar incorporating resistant starch for slow-release energy.
Perennial Horticulture

The Centre for Perennial Horticulture works with innovative established and emerging perennial horticulture industries. TIA’s focus is on quality and yield in apples, cherries, wine grapes and wine making. The Centre also offers expertise in extractive crops, walnuts and berries.

The Centre leads a number of large collaborative programs, including the national apple and pear five-year R&D program, Productivity, Irrigation, Pests and Soils (PIPS), which concluded in December 2014. This work included extensive research into tree structure and crop load management and analysis of effective fertigation strategies involving varying timing and application rates of nitrogen, both aimed at optimising yield and fruit quality.

TIA also coordinates Australia’s National Cherry Development Program and is working with the cherry industry, key growers and exporters across four states to improve yields and quality through an integrated national extension program. As part of this, TIA developed a comprehensive export resource pack and ran workshops to assist growers with meeting new stringent biosecurity export requirements. As a result, more than 40 cherry orchardists obtained registration to export cherries in the 2014/15 season, which is the largest number of cherry exporters to ever be registered in Australia.

TIA also undertook a number of research projects into cherry quality including reducing the impact of late season rainfall on cherries; optimising cherry firmness, size and post-harvest shelf life. The research into cherry cracking work continued into 2015.

TIA’s wine research group, which is based in Launceston, is expanding their work. Dr Anna Carew successfully secured three years of post-doctoral funding (approximately $500,000) from the Grape and Wine Research & Development Corporation to investigate Pinot Noir winemaking and wine chemistry. Angela Sparrow’s research into techniques to enhance wine colour intensity and stability attracted widespread interest from winemakers in Tasmania, Victoria, ACT and East Gippsland approaching her to request that she further her research in their wineries during 2015.

The Centre is also called on regularly by Tasmanian, interstate and international industry to provide advice. In 2014, Dugald Close and Penny Measham were asked to advise the Thai Government on the prospects for a cherry industry around the mountainous Chang Rai region in the north. The Centre also presented workshops for farmers in the Tasmanian Midlands with new irrigation about potential for growing wine...
grapes and berries. TIA also contributed to raising awareness in all Australian cherry production regions of the recently detected Little Cherry Disease by supporting workshops in all states.

**HIGHLIGHTS**

**Sparkling wine research award**
Dr Fiona Kerslake was awarded the 2014 Don Martin Sustainable Viticulture Award. The Fellowship, worth $10,000, provides a Tasmanian-based wine professional with the opportunity to undertake national or international travel for study or practical activities that will benefit the state’s wine sector through innovation, sustainability and best practice. The Fellowship encourages research across viticulture and oenology, and was initiated to commemorate influential Tasmanian viticulturist Dr Don Martin by the Alcorso Foundation.

**China walnut industry**
David McNeil was invited as part of the Chinese Global experts program to evaluate their walnut RD&E program in Shaanxi, China. China is the world’s leading producer of walnuts and has developed many novel solutions to problems that also affect Australia. An agreement is being developed between the Australian Walnut Industry Association, Yunnan walnut breeders and the University of Tasmania to provide blight resistant walnuts from China to Australia or evaluation.

**Sense-T Viticulture**
Vineyards in Tasmania are susceptible to damage from frost, fire and disease. Through a Sense-T project, TIA’s Kathy Evans developed a prototype web application to provide data that will help vineyard managers minimise the impact of diseases such as Botrytis and reduce the need for spraying; provide early response to frost and smoke; optimise water use and irrigation; improve grape yield and quality; and access markets through demonstrating provenance and sustainable practices. The project was completed in early 2015.

**True bugs under spotlight**
In recent seasons, strawberry bugs have caused havoc in both Victorian and Tasmanian strawberry crops. This has prompted a TIA investigation into which bugs cause damage, what type of damage they
cause and potential management strategies to deal with them. The aim is to optimise spraying, protect beneficial insects and produce excellent fruit. The project will be completed in 2015.

**Untapped cool climate wine potential**

Tasmanian fine wine could find its way into more restaurants, bottle shops and onto more tables thanks to TIA research published in 2014 on ‘Tasmania’s untapped cool climate wine potential’, which showed the island state has a wealth of untapped prime grape-growing locations. The study, funded by the Australian and Tasmanian governments, and managed by TIA, was undertaken by Dr Richard Smart, of Smart Viticulture and Dr Reuben Wells, of Ag Logic.
**VEGETABLES**

The Vegetable Centre focuses on research, development and extension in the vegetable and allied industries in Tasmania, including poppies, pyrethrum and herbs. The major vegetable crops covered by the Centre include potatoes, onions, carrots, brassica (cabbage, cauliflower, and broccoli), beans and peas. Programs are targeted to meet local industry needs while developing a national and international presence.

TIA’s Forthside Vegetable Research Facility celebrated its 51st birthday during the year and many outstanding long-term contributions to the productivity of Tasmanian vegetable farmers. Research trials have been run at the Facility since 1963, thanks to strong lobbying by the local pea industry and the Tasmanian Farmers’ Federation. The 54-hectare farm is run by TIA as an experimental research facility with paddocks used by external clients including Serve-Ag, Simplot, Peracto, Field Fresh Tasmania and Botanical Resources Australia. The Vegetable Centre also undertakes research on commercial farms and provides the Tasmania’s potato seed certification service.

The Vegetable Centre won tender bids from Horticulture Australia Limited to lead two projects in 2014 on soil-borne disease and precision agriculture. Associate Professor Calum Wilson led the Soil-Borne Disease Management Diagnostics project and coordinated a workshop of research providers to determine possible projects for developing diagnostic systems for soil-borne pathogens for the vegetable industry. A review and prioritisation of vegetable crops for future mechanisation and automation RD&E was led by John McPhee and includes collaboration with the National Centre for Engineering in Agriculture (NCEA) at the University of Southern Queensland, the Queensland Department of Agriculture, Fisheries and Forestry and the NSW Department of Agriculture.

The Vegetable Centre, ACIAR-funded project was behind positive international collaboration during the year. Due to ACIAR’s involvement in vegetable production research in Central Province, Papua New Guinea (PNG), TIA’s Associate Professor Colin Birch and Dr Laurie Bonney participated in a forum run by the National Agricultural Research Institute and Fresh Produce Development Agency. The aim of the forum was to help develop strategies to expand PNG’s vegetable industry. Future research, development,
extension and training activities were part of the forum discussions.

Other major research areas undertaken in 2014 were:

• Value chain innovation
• Plant pathology in pyrethrum, poppies and potatoes
• Genetics of disease susceptibility and control (potatoes, pyrethrum)
• Climate change adaptation and mitigation (carbon storage in soil, nitrous oxide emissions from soils)
• Controlled traffic farming systems
• Seed and plant physiology in vegetables and pyrethrum
• Health and storage of processing potatoes

HIGHLIGHTS

International service recognition
Dr Alistair Gracie and John McPhee were recipients of the International Horticultural Congress (IHC2014) Medals for their considerable efforts in helping to organise the event. Attendance at the IHC2014 exceeded 3,000 delegates.

Vegetable sustainability
Tasmanian Agricultural Productivity Group (TAPG) was funded $1,034,000 for a project aimed at making the vegetable industry more sustainable. TIA’s John McPhee is a collaborator on the project establishing field sites to demonstrate the economic and environmental benefits of controlled traffic farming and sub-soil manuring. Research and on-farm experience in Victoria indicate that sub-soil manuring has the potential to significantly improve the productivity and sustainability of duplex soils, which is particularly important for the expansion of irrigation in Tasmania’s Midlands.

Call for international research
ACIAR commissioned TIA to undertake a scoping study on integrated resource management for fruit and vegetable production in Lao PDR and Cambodia

Value chain expert joins TIA
Value chain research, development and management is increasingly recognised as a major constraint in the development of
profitable agrifood systems. The three-year appointment of value chain expert, Dr Laurie Bonney, to the position of Associate Professor (Value Chains) was announced during the year. Laurie will build TIA’s emerging Agrifood Value Chain Research Group and provide academic leadership through multidisciplinary teams and promotion of the University of Tasmania in value chain research and management. Laurie’s expertise in this field is well recognised nationally and internationally.

Monitoring psyllids in potato crops

TIA, in collaboration with several potato processing industry partners (Simplot Australia Pty, McCain Foods Australia Pty, Smiths Snackfood Company and Snack Brands Australia) is monitoring a network of yellow sticky traps in the major potato growing regions of eastern Australia, to act as an early warning system to detect incursions of the tomato potato psyllid. No tomato-potato psyllids (*Bacticera cockerelli*) were detected on 498 traps placed in the field during the 2014/15 season.

TIA helping solve poppy mystery

During the 2014 spring, poppy growers across the state started noticing large swathes of poppy seedlings withering and dying in their paddocks. Whole plants were being killed and the disease was wiping out large crop areas – something not seen before. The mystery disease outbreak sparked an industry-wide response. The Tasmanian Government’s AgriGrowth team brought together the state’s three poppy processing companies, Poppy Growers Tasmania and TIA to develop an action plan. TIA began working on a DNA test to detect the pathogen in seeds and in 2015 is trialling new seed treatments to stop the spread of the disease into next season’s crop.
IRRIGATION PROGRAM

TIA’s Irrigation Program provides the knowledge to unlock the economic, social and environmental potential of irrigation infrastructure. The Program is managed by TIA and delivered in collaboration with farmers and other research providers.

2014 was an exciting time in the establishment of the Irrigation Program. The year saw extensive collaboration take place with key partners, the formation of an advisory group and industry consultation to set research priorities.

During the first half of 2014, the Tasmanian Government funded a consultancy by Macquarie Franklin and Jason Alexandra. The consultancy consolidated irrigation-related RD&E capability across TIA into a focused irrigation RD&E Program, and sought agreement on a nationally coordinated RD&E program with an aspirational target of $5 million over three years.

The consultancy was a great success, and provided the external impetus, ideas and resources to generate a new RD&E unit within TIA. This unit has representatives from each of TIA’s commodity based RD&E Centre’s, coordinating irrigation related activities across the organisation. Initial consultations introduced the program to diverse groups of stakeholders, and collected initial feedback on potential RD&E priorities for the program. These initial priorities were refined in a foresighting workshop conducted in April 2014 into 160 research priorities organised into four themes. Participants in the workshop also helped to select members of an advisory group.

A workshop of research providers in August 2014 took the 160 research priorities provided by stakeholders and translated them into a program of 19 RD&E projects. The Irrigation Program Design documents was made available for industry comment, and used to seek investment in the program. Participants in the design of the new Irrigation Program included the University of Tasmania, Tasmanian Irrigation, CSIRO, the University of Southern Queensland, Tasmania’s three Natural Resource Management groups, agricultural consultants, including Macquarie Franklin, policy and technical officers from the Tasmanian Department of Primary Industries, Parks, Water and Environment, and Sense-T research and technology providers such as the Launceston-based company Ag Logic.

The Tasmanian Government funded TIA’s Irrigation Program under the AgriVision
2050 initiative. The four-year Water for Profit Program was launched by the Minister for Primary Industries the Hon Jeremy Rockliff in March 2015. The Water for Profit Program will help to ensure that farmers are equipped with the right skills and information to increase profits and sustainability from their investments in irrigation infrastructure.
The recruitment and retention of students to the University of Tasmania’s agriculture degrees continues to be a major focus. The School of Land and Food hosted multiple student groups that have visited the University in 2014 and continued to support the Faculty of Science Engineering and Technology’s national and international course marketing and promotion endeavours by presenting at events such as career advisors’ forums for local and mainland colleges and international education agents’ familiarisation visits.

The School of Land and Food’s Masters by Coursework program continues to expand. There were 11 mid-year enrolments in Masters by Coursework, lifting the total number enrolled to 28. Of these 28, 27 are Full Fee Paying Overseas Students (FFPOS). There were three mid-year enrolments in the agricultural undergraduate degrees.

The School of Land and Food continues to have strong enrolments in postgraduate research training degrees, with 91 students enrolled in 2014.

The proposed new degree in Animal Science was endorsed in 2014 and the degree commenced in Semester 1, 2015.

The School of Land and Food has been working closely with the Vocational Education and Training sector to develop an integrated program that will provide multiple educational pathways into the agrifood sector. The School supported an expression of interest submission by TasTAFE to Skills Tasmania for resources to deliver a joint course in agrifood.

Threshold-learning outcomes for the School’s agriculture degrees and units were mapped in 2014. This mapping exercise is an important part of a major review of the courses and units offered with the core objectives of evaluating and enhancing teaching and learning outcomes, teaching efficiency, and the relevance and attractiveness of the School’s degrees.
Digital marketing campaign

Following disappointing enrolments in undergraduate agriculture degrees in 2014, the University of Tasmania funded a digital marketing campaign to boost enrolments for 2015. The digital campaign focused on study and career options in agriculture and was officially launched in mid-2014. The campaign, produced by the University of Tasmania and the Tasmanian Institute of Agriculture (TIA), delivered a feature video via Facebook to school leavers in Tasmania, Victoria and New South Wales. It invited them to contact the University for information about study and career options in agriculture and agricultural science. The second part of the campaign moved to digital advertisements and targeted school leavers in Tasmania and Victoria. The University received 48 enrolments in undergraduate agriculture related degrees in 2015 - the highest number of enrolments for 20 years.
## TIA PROJECTS 2014

<table>
<thead>
<tr>
<th>FUNDING BODY</th>
<th>INVESTIGATORS</th>
<th>CENTRE</th>
<th>PROJECT TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dairy Australia Limited</td>
<td>Irvine, LD; Perez Fonseca, AJ; Haynes, CM</td>
<td>Dairy</td>
<td>Tasmanian Dairy Benchmarking (Dairy Farm Monitor Project)</td>
</tr>
<tr>
<td>Dairy Australia Limited</td>
<td>Freeman, MJ; Perez Fonseca, AJ; Rawnsley, RP</td>
<td>Dairy</td>
<td>AMS and AMR Support</td>
</tr>
<tr>
<td>Dairy Australia Limited</td>
<td>Irvine, LD; Perez Fonseca, AJ; Hall, AF; Haynes, CM; Mann, EM</td>
<td>Dairy</td>
<td>Dairy Smart (Phase 2)</td>
</tr>
<tr>
<td>PGG Wrightson Seeds (Australia) Pty Ltd</td>
<td>Irvine, LD; Perez Fonseca, AJ; Hall, AF; Haynes, CM; Mann, EM</td>
<td>Dairy</td>
<td>Dairy Smart (Phase 2)</td>
</tr>
<tr>
<td>Meat and Livestock Australia</td>
<td>Turner, LR; Kilpatrick, SI</td>
<td>Dairy</td>
<td>Pilot study of MLA best practice programs: farmer engagement, participation and adoption</td>
</tr>
<tr>
<td>Dairy Australia Limited</td>
<td>Pemberton, KG; Rawnsley, RP; Turner, LR; Freeman, MJ; Hills, JL</td>
<td>Dairy</td>
<td>More Milk From Forage: Developing forage systems to meet the challenge for cool temperate pasture based dairy systems</td>
</tr>
<tr>
<td>Dairy Australia Limited</td>
<td>Pemberton, KG; Harrison, MT; Rawnsley, RP</td>
<td>Dairy</td>
<td>Developing temperate pasture-based dairy systems to meet the challenges of a warmer and drier climate</td>
</tr>
<tr>
<td>Dairy Australia Limited</td>
<td>Pemberton, KG; Lane, PA</td>
<td>Dairy</td>
<td>Novel endophytes in ryegrass: Defining their contribution to successful pasture establishment in Tasmania</td>
</tr>
<tr>
<td>Dairy Australia Limited</td>
<td>Pemberton, KG; Freeman, MJ; Rawnsley, RP</td>
<td>Dairy</td>
<td>Investigating the dietary cation-anion difference (DCAD) of Plantago lanceolata and its potential as a pre-calving forage for dairy</td>
</tr>
<tr>
<td>Department of Agriculture</td>
<td>Rawnsley, RP; Hills, JL</td>
<td>Dairy</td>
<td>Lowering nitrous oxide emissions in intensively grazed pastures</td>
</tr>
<tr>
<td>Dairy Australia Limited</td>
<td>Rawnsley, RP; Pemberton, KG; Smith, RW</td>
<td>Dairy</td>
<td>Harnessing the potential for forages under the major irrigation expansion</td>
</tr>
<tr>
<td>Cooperative Research Centre for Polymers</td>
<td>Acuna, TL; Tarbath, M</td>
<td>Extensive Agriculture</td>
<td>Physiological and Climate Effects of Degradable Polymer Film Applied as a Crop Overlay</td>
</tr>
<tr>
<td>Department of Agriculture</td>
<td>Bridle, K; Duddles, J; Broderick, K; Schlig, S; Hovenden, MJ</td>
<td>Extensive Agriculture</td>
<td>Increasing Soil Carbon Storage in Extensive Grazing Systems in Temperate Regions</td>
</tr>
<tr>
<td>Australian Wool Innovation Limited</td>
<td>Tyson, JR</td>
<td>Extensive Agriculture</td>
<td>Sheep Connect Tasmania 2012-2015</td>
</tr>
<tr>
<td>Meat and Livestock Australia</td>
<td>Ball, PD; Corkrey, SR</td>
<td>Extensive Agriculture</td>
<td>Improving MSA compliance on King Island</td>
</tr>
<tr>
<td>Grains Research &amp; Development Corporation</td>
<td>Moeller, CN</td>
<td>Extensive Agriculture</td>
<td>The role of canopy architecture in improving the water-limited yield of wheat lines contrasting in the 'tin' gene</td>
</tr>
<tr>
<td>CRC for Sheep Industry Innovation</td>
<td>Horton, BJ</td>
<td>Extensive Agriculture</td>
<td>Contribution to ss1.3 and 4.1 of Sheep Operational Plan</td>
</tr>
<tr>
<td>Grains Research &amp; Development Corporation</td>
<td>Johnson, PG; Merry, AM; Smith, RW; Acuna, TL; Davey, B; Howard, RC</td>
<td>Extensive Agriculture</td>
<td>Optimising cropping practices in mixed farming systems of Tasmania</td>
</tr>
<tr>
<td>Pulse Breeding Australia</td>
<td>Johnson, PG; Barry, KM</td>
<td>Extensive Agriculture</td>
<td>Increasing pulse plant pathology capacity via a project to clarify the interaction of waterlogging and ascochyta in lentils and faba beans</td>
</tr>
<tr>
<td>Australian Centre for International Agricultural Research</td>
<td>Lane, PA; Ives, SW; Bonney, L; Malau-Aduli, AEO; Parsons, D</td>
<td>Extensive Agriculture</td>
<td>Overcoming Technical and Market Constraints to the Emergence of Profitable Beef Enterprises in the NW Highlands of Vietnam</td>
</tr>
<tr>
<td>Grains Research &amp; Development Corporation</td>
<td>Lane, PA; Parsons, D</td>
<td>Extensive Agriculture</td>
<td>Determining the residual effect of Roundup (glyphosate) on successful crop establishment</td>
</tr>
<tr>
<td>Asia-Pacific Network for Global Change Research</td>
<td>Meinke, HB; Parsons, D</td>
<td>Extensive Agriculture</td>
<td>Improving the Robustness, Sustainability, Productivity and Eco-efficiencies of Rice Systems throughout Asia</td>
</tr>
<tr>
<td>Australian Wool Education Trust</td>
<td>Malau-Aduli, AEO; Holman, BW</td>
<td>Extensive Agriculture</td>
<td>Genomics and Proteomics of Wool Quality in Spirulina-Supplemented Sheep</td>
</tr>
<tr>
<td>Organisation</td>
<td>Authors</td>
<td>Research Area</td>
<td>Title</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Australian Centre for International Agricultural Research</td>
<td>Parsons, D; Smith, RW; Bonney, L; Malau-Aduli, AEO; Lane, PA</td>
<td>Extensive Agriculture</td>
<td>Developing productive and profitable smallholder beef enterprises in Central Vietnam</td>
</tr>
<tr>
<td>Australian Research Council</td>
<td>Shabala, SN; Flowers, TJ; Haros, GG</td>
<td>Extensive Agriculture</td>
<td>Halophytes for high-saline agriculture: optimising performance and understanding the physiology</td>
</tr>
<tr>
<td>Australian Research Council</td>
<td>Shabala, SN; Flowers, TJ; Haros, GG</td>
<td>Extensive Agriculture</td>
<td>Halophytes for high-saline agriculture: optimising performance and understanding the physiology</td>
</tr>
<tr>
<td>Australian Research Council</td>
<td>Shabala, SN; Zhou, M; Shabala, L</td>
<td>Extensive Agriculture</td>
<td>Developing molecular and physiological markers for marker-assisted barley breeding for waterlogging tolerance</td>
</tr>
<tr>
<td>Department of Primary Industries, Parks, Water &amp; Environment</td>
<td>Shabala, SN; Zhou, M; Shabala, L</td>
<td>Extensive Agriculture</td>
<td>Developing molecular and physiological markers for marker-assisted barley breeding for waterlogging tolerance</td>
</tr>
<tr>
<td>Grains Research &amp; Development Corporation</td>
<td>Shabala, SN; Zhou, M; Shabala, L</td>
<td>Extensive Agriculture</td>
<td>Transpirational control and oxidative stress tolerance traits as components of salinity stress tolerance in cereals</td>
</tr>
<tr>
<td>Grains Research &amp; Development Corporation</td>
<td>Nelson, R</td>
<td>Extensive Agriculture</td>
<td>Thresholds of success - the on-farm economics of expanding irrigated grain production in Tasmania's midlands</td>
</tr>
<tr>
<td>Australian Seafood Cooperative Research Centre</td>
<td>Bowman, JP; Zarkasi, KZ</td>
<td>Food Safety</td>
<td>Atlantic Salmon Gastrointestinal Health and Productivity</td>
</tr>
<tr>
<td>Tassal Operations Pty Ltd</td>
<td>Bowman, JP; Zarkasi, KZ</td>
<td>Food Safety</td>
<td>Atlantic Salmon Gastrointestinal Health and Productivity</td>
</tr>
<tr>
<td>Australian Pork Limited</td>
<td>Ross, T; Kiermeier, A</td>
<td>Food Safety</td>
<td>Philip Gurman PhD Scholarship - Pork Food Safety Project</td>
</tr>
<tr>
<td>Australian Research Council</td>
<td>Ross, T; Stanley, RA; Close, DC; Tampin, ML; Breadmore, MC; O’Cass, AG; Grace, AJ</td>
<td>Food Safety</td>
<td>ARC Industrial Transformation Training Centre for Innovative Horticultural Products: Adding value to horticulture value</td>
</tr>
<tr>
<td>Australian Seafood Cooperative Research Centre</td>
<td>Tampin, ML; Powell, S</td>
<td>Food Safety</td>
<td>Seafood Molecular Biologist Mapping Microbial Communities in Seafood Production and Processing Environments to Improve Targeting Intervention Strategies</td>
</tr>
<tr>
<td>Australian Seafood Cooperative Research Centre</td>
<td>Tampin, ML</td>
<td>Food Safety</td>
<td>Time-Temperature Management to Maximise Returns through the Prawn Supply Chain</td>
</tr>
<tr>
<td>Meat and Livestock Australia</td>
<td>Tampin, ML; Ross, T; Bowman, JP</td>
<td>Food Safety</td>
<td>Bacterial Physiology relevant to Meat Microbiological Quality</td>
</tr>
<tr>
<td>Department of Environment (Cwth)</td>
<td>Leitch, PB; Meinke, HB; Nelson, R; Bridle, K; Mohammed, CL; Lefroy, EC; Bindoff, NL</td>
<td>Institute</td>
<td>Climate Change Impacts and Adaptation Planning for the Southern Slopes NRM Region - Southern Slopes Cluster</td>
</tr>
<tr>
<td>Horticulture Australia Limited</td>
<td>Bound, SA; Domeney, PS; Measham, PF</td>
<td>Perennial Horticulture</td>
<td>Improving Fruit Quality and Consistency in Cherries through maximised nutrients availability</td>
</tr>
<tr>
<td>Horticulture Australia Limited</td>
<td>Barry, KM; Glen, M; Corkrey, SR</td>
<td>Perennial Horticulture</td>
<td>Optimal management of pre-harvest rot in sweet-cherry</td>
</tr>
<tr>
<td>Horticulture Australia Limited</td>
<td>Buntain, M</td>
<td>Perennial Horticulture</td>
<td>Selection of clearing resistant blackcurrant</td>
</tr>
<tr>
<td>Horticulture Australia Limited</td>
<td>Buntain, M</td>
<td>Perennial Horticulture</td>
<td>Identification and management strategies for true bugs in Tasmanian strawberries</td>
</tr>
<tr>
<td>Horticulture Australia Limited</td>
<td>Close, DC; Ryan, Dan; Goodwin, Ian; Tustin, Stuart; Williams, David; Clothier, Brent; Bound, SA; Middleton, Simon</td>
<td>Perennial Horticulture</td>
<td>PIPS Orchard Productivity Program</td>
</tr>
<tr>
<td>Australian Grape and Wine Authority</td>
<td>Close, DC; Dambergs, RG; Sparrow, AM</td>
<td>Perennial Horticulture</td>
<td>Comparative Analysis of Wine Tannins in Pinot Noir Grapes</td>
</tr>
<tr>
<td>Organisation</td>
<td>Name(s)</td>
<td>Title</td>
<td>Project Title</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>--------------------------------</td>
<td>--------------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Horticulture Australia Limited</td>
<td>Close, DC; Bound, SA; Swarts, ND; Jones, JE; Corkrey, SR</td>
<td>Perennial Horticulture</td>
<td>Optimising Cherry Firmness, Size and Post-Harvest Shelf Life: Fruit Set and Crop Load, Tree and Fruit Nutrition</td>
</tr>
<tr>
<td>Australian Grape and Wine Authority</td>
<td>Close, DC; Carew, ALJ; Dambergs, RG; Sparrow, AM</td>
<td>Perennial Horticulture</td>
<td>Improved red wine process efficiency and product quality through enhanced phenolic extraction by controlled phenolic release (CPR) and berry pricking</td>
</tr>
<tr>
<td>Australian Grape and Wine Authority</td>
<td>Close, DC</td>
<td>Perennial Horticulture</td>
<td>Travel bursary to attend XXVIIth polyphenols conference and 8th tannin conference</td>
</tr>
<tr>
<td>Australian Grape and Wine Authority</td>
<td>Jones, JE; Close, DC</td>
<td>Perennial Horticulture</td>
<td>How does tannin and anthocyanin in the grapes relate to wine quality?</td>
</tr>
<tr>
<td>Australian Centre for International Agricultural Research</td>
<td>Mendham, DS; Mohammed, CL; Glen, M; Hardie, MA</td>
<td>Perennial Horticulture</td>
<td>Increasing Productivity and Profitability of Indonesian Smallholder Plantations</td>
</tr>
<tr>
<td>Horticulture Australia Limited</td>
<td>Measham, PF; Bound, SA; Barry, KM; Domeney, PS</td>
<td>Perennial Horticulture</td>
<td>Reducing the Impact of Late Season Rainfall</td>
</tr>
<tr>
<td>Horticulture Australia Limited</td>
<td>Evans, KJ; McNeil, DL; Ranford, T</td>
<td>Perennial Horticulture</td>
<td>Determining and Establishing Quality Parameters for Australian Walnuts</td>
</tr>
<tr>
<td>Horticulture Australia Limited</td>
<td>Swarts, ND; Close, DC</td>
<td>Perennial Horticulture</td>
<td>Precision Fertigation for Improved Apple Orchard Productivity</td>
</tr>
<tr>
<td>Department of Agriculture</td>
<td>Swarts, ND; Close, DC; Hardie, MA</td>
<td>Perennial Horticulture</td>
<td>Reducing nitrous oxide emissions in key perennial tree crop industries</td>
</tr>
<tr>
<td>Australian Centre for International Agricultural Research</td>
<td>Birch, CJ; Doyle, RB; Sparrow, LA; Bonney, L; Gracie, AJ</td>
<td>Vegetable</td>
<td>Increasing Vegetable Production in Central Province, Papua New Guinea, to Supply Port Moresby Markets</td>
</tr>
<tr>
<td>Australian Centre for International Agricultural Research</td>
<td>Birch, CJ</td>
<td>Vegetable</td>
<td>Integrated resource management for fruit and vegetable production in Laos and Cambodia</td>
</tr>
<tr>
<td>Horticulture Australia Limited</td>
<td>Gracie, AJ; Boersma, M</td>
<td>Vegetable</td>
<td>Physiology of Onion Bulbs Destined for Export Markets</td>
</tr>
<tr>
<td>Horticulture Australia Limited</td>
<td>Scott, JB; Hay, FS; Jones, S; Pilkington, S</td>
<td>Vegetable</td>
<td>Understanding the Infection and Population Biology of Poppy Downy Mildew for Improved Crop Resistance</td>
</tr>
<tr>
<td>Horticulture Australia Limited</td>
<td>Scott, JB; Hay, FS; Pethybridge, SJ; Groom, T</td>
<td>Vegetable</td>
<td>Integrated Management of Diseases of Pyrethrum</td>
</tr>
<tr>
<td>Australian Research Council</td>
<td>Wilson, CR; Scott, JB; Groom, T</td>
<td>Vegetable</td>
<td>Understanding the evolution of fungicide resistance for durable control of fungal pathogens in pyrethrum</td>
</tr>
<tr>
<td>Horticulture Australia Limited</td>
<td>Wilson, CR; Tegg, RS</td>
<td>Vegetable</td>
<td>The Importance of Tuber Borne Inoculum on the Health of Seed Potatoes and on the Storability of Processing Potatoes (APRP2)</td>
</tr>
<tr>
<td>Horticulture Australia Limited</td>
<td>Sparrow, LA; Wilson, CR</td>
<td>Vegetable</td>
<td>Diagnostic tests for soilborne pathogens - International Collaboration (APRP2)</td>
</tr>
<tr>
<td>Horticulture Australia Limited</td>
<td>Sparrow, LA; Wilson, CR</td>
<td>Vegetable</td>
<td>Survey the Impacts of Commercial Rotations on Pathogen Inoculum Levels (APRP2)</td>
</tr>
<tr>
<td>Grains Research &amp; Development Corporation</td>
<td>Tegg, RS;Wilson, CR</td>
<td>Vegetable</td>
<td>8th Australian Soilborne Diseases Symposium</td>
</tr>
<tr>
<td>Horticulture Australia Limited</td>
<td>Wilson, CR; Tegg, RS</td>
<td>Vegetable</td>
<td>ASDSB - Conference support for vegetable specialists.</td>
</tr>
<tr>
<td>Horticulture Australia Limited</td>
<td>Wilson, CR; Tegg, RS; Allen, GR; White, LR</td>
<td>Vegetable</td>
<td>Monitoring psyllids and psyllid predators in Australian potato crops</td>
</tr>
<tr>
<td>Horticulture Australia Limited</td>
<td>Wilson, CR</td>
<td>Vegetable</td>
<td>Spongospora infection of potato roots - ecology epidemiology &amp; control</td>
</tr>
<tr>
<td>Australian Research Council, Epoh Health Tasmania Pty Ltd, Greenham Tasmania Pty Ltd</td>
<td>Tamlpin, ML; Duh, B; Louviere, J; Turner, P; Arundel, A; Rose, J</td>
<td>School of Land and Food Food</td>
<td>Pathways to Market: Transforming Food Industry Futures through Improved Sensing, Provenance and Choice</td>
</tr>
</tbody>
</table>
TIA FINANCIALS 2014

Breakdown of external grants secured in 2014

- 8% Other Universities
- 11% Industry
- 33% Australian Government
- 46% Industry R&D Corporations
- 2% State Governments (not including Tasmanian Government JVA)

TASMANIAN INSTITUTE OF AGRICULTURE (TIA)

NOTES TO ACCOMPANY FINANCIAL DETAILS

The financial details reported here relate to TIA activities for 2014. The detail was prepared by TIA and checked by Financial Services, University of Tasmania.

Specific contributions from each funding source are as follows:

1. University of Tasmania
   - 2014 Operating Grant Funds to TIA/School of Agricultural Science: $4,393,319
   - 2014 University Research Scholarships to PhD students studying in areas related to TIA activities: $508,630

   TOTAL University of Tasmania contribution: $4,901,949

2. Department of Primary Industries, Parks, Water & Environment (DPIPWE)
   - CRF funds granted to TIA for the 1 January 2014 to 31 December 2014 financial year under the TIA Joint Venture Agreement: $4,814,124

   TOTAL DPIPWE contribution: $4,814,124

3. Industry - including private industry and National Competitive Research grants
   - 2014 Industry research grants held by the University for TIA activities: $8,789,952

   TOTAL industry contributions: $8,789,952

CERTIFICATION OF FINANCIAL DETAIL

We certify that the financial detail contained in the 2014 Tasmanian Institute of Agriculture Research Annual Report has been prepared in accordance with detail held in the University of Tasmania’s Financial Management Information System, and detail provided by TIA.

[Signatures]

Professor Holger Meinke
Director TIA

Craig Barling
Chief Financial Officer
University of Tasmania