The Perennial Horticulture Centre (PHC) is one of five sector-based research, development and extension (RD&E) centres within the Tasmanian Institute of Agriculture (TIA).

**TIA**

TIA is a joint venture between the University of Tasmania and the Tasmanian Government. TIA has approximately 150 staff and 100 higher degree research students. Its headquarters are in Hobart but it has offices and laboratories in four locations across Tasmania and has access to four research farms.

**Perennial Horticulture Centre – what we do**

The PHC activity is focussed on four strategic pillars (see the Centre’s [Strategic Plan](#)):

- industry and government targeted RD&E (research, development and extension);
- scientific excellence;
- teaching and training in horticulture;
- excellence in corporate care of our people.

Centre staff conduct production- and sustainability-related research, development, extension and education. The Centre comprises the Tree Crops, Grape and Wine and Plant Extracts groups in order to service the key state and national industries of: apple; cherry; grape and wine; walnuts/hazelnuts and; plant extracts (boronia, Tasmanian native pepper, fruit marc) with some activity in berries.

Discipline strengths include: plant physiology (carbohydrate-, nutrient- and water-relations), pathology (epidemiology, decision support, biosecurity), soil and irrigation science, wine chemistry, plant extraction technology and new natural product development and value chains.

Centre staff deliver teaching of Horticulture Science, Soil Science, Plant Pathology, and Agricultural Technology into the undergraduate program of the School of Agricultural Science and supervise a large number of Research Higher Degree (mostly PhD) candidates.

Advisory Committee: Centre alignment with industry and government priorities and strategic direction are informed by the [PHC Advisory Committee](#).

PHC activity is highly collaborative and interactive with the industry, scientific and government communities.

**Industry Development and Extension**

Centre staff work closely with state (e.g. Fruitgrowers Tasmania, Wine Tasmania) and national (e.g. Apple and Pear Australia Ltd, Cherry Growers Australia, Australian Nut Industry Council, Raspberries and Blackberries Australia) peak bodies in industry development – for example developing integrated pest management posters, fact sheets, national extension road-shows, seminar series, next user forums and workshops, spray guides, minor use permit development, germplasm evaluation, general information for investors.

**Scientific service and contributions**

The first external node of the Australian Wine Research Institute (AWRI) was formed in collaboration with TIA in 2008. Centre staff co-convened the Australasian Horticulture and Post-harvest Conference in 2011 and the International Cool Climate Grape and Wine Symposium in 2012. Staff are contributing to the 7th International Walnut Symposium in 2013 and the International Horticulture Congress in 2014. Centre Staff conduct and publish high-impact research that contributed to the Excellence in Research Australia (ERA; web link) scores of 5/5 (well above world standard) in 2010 and 4/5 (above world standard) in 2012.

**Government interaction**

Staff work closely with the State Government Departments of Primary Industry, Parks, Water and the Environment (DPIPWE) and Economic Development, Tourism and the Arts (DEDTA) on various committees and working groups to provide input for policy development and in managing projects and infrastructure. The TIA Centre Leader is currently Deputy Chair of the [National Horticultural Research Network](#) (NHRN: web link) that comprises of Directors of Horticulture for each state, CSIRO and the RDC Horticulture Australia Ltd.
Flagship programs

- Lead the national apple and pear orchard productivity program
- Lead national agency for cherry and walnut/hazelnut industry RD&E
- Cool climate pinot noir and sparkling viticulture and wine-making program
- Trans-Tasman grape botrytis program
- Flavour and aroma extraction of fruit juice marc with the Cascade Beverage Co
- Australian Centre for International Agricultural Research projects for example: Increasing Productivity and Profitability of Indonesian Smallholder Plantations

National and international collaborations

- Plant and Food Research New Zealand
- Washington State University (USA)
- University of Oregon (USA)
- University of Concepcion (Chile)
- Australian Wine Research Institute
- University of Adelaide
- University of Melbourne
- Department of Primary Industries Victoria
- Department of Agriculture, Forestry and Fisheries Qld.

External funding

Centre staff work closely with Horticulture Australia Ltd, the Grape and Wine RDC and the Rural Industries RDC in order to develop, execute and extend RD&E projects for the benefits of stakeholders.

Teaching and training

Staff effectively contribute to the teaching of Horticulture Science, Soil Science, Plant Pathology, Agricultural Technology within the School of Agriculture Science to ensure maximum benefit from the teaching-research nexus. Staff provide expert PhD supervision – an audit by the NHRN showed that TIA Horticulture-related PhD completions were well above that of any other national provider for the period 2008–2012.

Staff

Staff list on the TIA website – Click on a name to get more information, including credentials and research interests.

Current projects

Current projects list.

Facilities

Glasshouse facilities and Laboratories at Sandy Bay (Field Horticulture; wine and post-harvest), New Town Laboratories (fruit quality), Mount Pleasant Laboratories Launceston (Grape and Wine); Central Science Laboratory of UTAS provides cutting edge HPLC, Gas Chromatography, SEM, Raman and FTIR microscopy, vibrational and NMR spectroscopy, micro-nutrient analysis; field trials on commercial orchards and vineyards, semi-commercial trials in wineries, micro-winery at Brown Brothers Kayena Vineyard in the Tamar Valley.

Publications

Evans, KJ and Palmer, AK and Metcalf, D*, ‘Effect of aerated compost tea on grapevine powdery mildew, botrytis bunch rot and microbial abundance on leaves’, European Journal of Plant Pathology pp. Published online: 13 October 2012. ISSN 0929-1873 (2012) [Refereed Article] [Full Text]

Measham, PF and Bound, SA and Gracie, AJ and Wilson, SJ, ‘Crop load manipulation and fruit cracking in sweet cherry (Prunus avium L.)’, Advances in Horticultural Science, 26 (1) pp. 25-31. ISSN 0394-6169 (2012)


Hardie, MA and Lisson, S and Doyle, RB and Cotching, WE, ‘Determining the frequency, depth and velocity of preferential flow by high frequency soil moisture monitoring’, Journal of Contaminant Hydrology, 144 pp. 66-77. ISSN 0169-7722 (2013) [Refereed Article] [Full Text]