Silvicultural options to optimise the productivity of *Eucalyptus nitens* plantations

**Amount:** $30,746 (2015 rate) tax free scholarship with possible 6 month extension plus project operational funds

**Location:** Hobart, Tasmania

**Eligibility:** Domestic and International students with First Class or Second Uppers Honours/Masters or equivalent

Submission dates for applications are listed on [http://www.utas.edu.au/arc-forest-value/phd-project-opportunities](http://www.utas.edu.au/arc-forest-value/phd-project-opportunities)

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**About the Centre**

This research project is part of the ARC Centre for Forest Value. The Training Centre will build the capacity to shift the forestry and wood products sector from a traditional, resource driven, low-technology base to a market-driven, precision-manufacturing focused industry that applies modern technologies and business approaches to the value chain from germplasm to commercial buildings, and from production to restoration plantings. Learn more at [www.utas.edu.au/arc-forest-value](http://www.utas.edu.au/arc-forest-value)

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**Project Overview**

Overall, this project aims to enhance plantation productivity and profitability of Australia’s main plantation species by better matching genotypes to environments and silviculture. It will link closely with partner breeding and seed production programs. It aims to determine:

1. Patterns of genotype-by-environment interactions to better define germplasm deployment zones;
2. The sustainability of genotype performance under multi-rotation coppice regimes; and
3. The genetic opportunities and trade-offs amongst traits affecting industrial objectives (e.g. for chip, pulp, timber, engineered wood products and energy production) and risk traits (drought/pest/disease risk)

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**Specific Project**

*Eucalyptus nitens* is widely planted in temperate regions of the southern hemisphere. It is the main eucalypt species grown in Tasmania, where the plantation estate is now stabilising after decades of rapid expansion.
Further, there is now increasing data on harvest-age growth or yield which allows the identification of components of the estate which (i) are planted on sites where the environment is not expected to allow economically viable yield to be achieved, or (ii) which fail to realise the environmentally predicted productivity. This project will map productivity as a function of climate and soil characteristics, to study the discrepancy between potential and realised productivity and yields. It will identify and test the key silviculture interventions which are likely to reduce this gap, taking into account the effects of successive rotations.

The ARC Industrial Transformation Training Centre for Forest Value is supported from the Australian Research Council’s Industrial Transformation Training Centres scheme (project number IC150100004).

To submit an expression of interest or for general information, please contact the Centre for Forest Value at forest.value@utas.edu.au.

For information related to this project please contact Professor Brad Potts Brad.Potts@utas.edu.au or Professor Mark Hunt Mark.Hunt@utas.edu.au for more information.

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Partner Organisations