TIA
Tasmanian Institute of Agriculture

UNIVERSITY of TASMANIA
Tasmanian Government
TIA is a joint venture of the University of Tasmania and the Tasmanian Government

Growing red meat productivity through the selection and establishment of perennial legumes

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Project Overview

This research project aims to enhance the legume component of pastures, improving productivity and resilience of the feedbase for Tasmanian red meat producers by identifying and establishing perennial legume species that can successfully persist to fill feed gaps and improve tolerance and productivity under waterlogging.

Improvement

Currently the prevalence of perennial legumes in dryland pastures in Tasmania is low and is limiting profitability and productivity. This project aims to increase the legume component in pastures from 12-15% currently to 20-25%.

Region focused approach

This project will take a region focused approach in the Tasmanian Midlands and North-West Coast.

Midlands

In the low to mid rainfall Midlands, the research aims to extend the growing season of dryland pastures through improved establishment and persistence of perennial legumes. The project will research sowing practices that advantage legumes during establishment and demonstrate how to establish legumes in existing grass dominant pastures. Legumes that will be trialled under broadcast roller sowing, direct drilling and strip till in new and existing pastures will include Red, Talish, White and Caucasian clover and Lucerne.

KEY POINTS

- **Project Term:** 2020-25
- **Funding:** $1.5 million investment between Tasmanian Institute of Agriculture and Meat & Livestock Australia
- **Alignment:** Livestock Productivity Partnership
- **Delivery:** Combination of applied research + on farm involve and partner activities
- **Target regions:** Tasmanian Midlands and North-west Coast
- **Project Team:** Rowan Smith, Beth Penrose, Adam Langworthy, Brett de Hayr, Gary Martin, Joanna Talbot, Huan Le Huu

North-West Coast

In the higher rainfall North-West of Tasmania the aim is to improve autumn and winter feed supply of grass-fed systems by identifying and demonstrating legume species that can successfully fill feed gaps during the late summer/autumn and improve resilience to waterlogging/pugging.

Left: *Red clover amongst tall fescue. Photo: R. Smith*
Right: *Angus cattle grazing mixed sward containing red clover, cocksfoot and perennial ryegrass Photo: I. Bruce*

Research, Involve & Partner

An important aspect of this research are on-farm trials (in addition to TIA research sites at Cressy and Elliot) ,which have already started in the early research phase on properties in the North-West and Midlands. This project has 2 phases – the first is an experimental phase including trial plots and glasshouses and the second phase involves field evaluation and partnering with producers. Importantly the learnings from phase 1 (which focuses on trial plots) will then be extended to 10 producer lead sites on-farm to trial alternative sowing techniques and species at a commercial scale that have shown promise during the first phase of the project.

In 2023, TIA will be looking for expressions of interest from producers interested in participating in this second phase of the project. Anyone interested in discussing this further should contact: Rowan.Smith@utas.edu.au. Also in 2023, a dedicated workshop will be held to plan the next phase of the Involve and Partner Program with the aim to establish a further 20 producer demonstration sites to be supported through the MLA Donor company as a separate but parallel project commencing in the final year on this project.

Above : *Screening strawberry clover and Lotus for increased waterlogging tolerance.*

Linking Projects Across Southern Australia

The region focused approach allows for more targeted research and extension activities for producers with similar constraints, objective sand values and will collaborate with aligned projects in regions across South Eastern Australia. The methods and approaches used will also be informed by social research being undertaken through TIA and DPIPWE investment. The extension activities of this project provides opportunities to extend knowledge generated in legume focused projects under the LPP program "Improve year – round feed supply". Two current pasture projects being conducted under the LPP of relevance to Tasmanian producers are;

- ***Extending the boundaries of legume adaptation through better soil management in high rainfall zones – Richard Hayes (NSWDPI)***
- ***Perennial pasture and forage combinations to extend summer feed in southern NSW – Richard Culvenor (CSIRO)***

Left: *Strip tillage into existing pasture trial "Fosterville" 2020,* ***Right:*** *Sowing methods and species evaluation "Rokeby" 2021.*

This five-year project (2020-2025) is being led by Tasmanian Institute of Agriculture (TIA) in partnership with MLA as part of the Livestock Productivity Partnership.

For more information please contact: *Rowan Smith@utas.edu.au | utas.edu.au/tia*

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