

Silvopastoral trials of commercial pine systems in North Queensland

Unlocking a softwood income stream for beef graziers

Silvopastoral systems combine natural forests or planted trees with pasture and livestock on the same land management unit. They are not homogenous systems given there are a multitude of ways to integrate forestry and livestock production.



Environmental benefits can include aesthetics, water quality improvement, soil conservation, carbon sequestration and fuel reduction.



Financial benefits can include farm income diversification, increasing the resilience of a farm to the impact of climate change and complementing annual cash flows from livestock with longer term timber harvest income.



This project is looking at a number of ways to increase commercial tree production to grow future wood supply, as well as deliver multiple benefits for graziers and landowners.

The project will:

- assess the economic merits of integrated grazing and commercial tree farming systems compared to traditional forestry practices
- measure and model the returns from field trials with cattle grazed in widely spaced commercial pine forests
- compare the returns from integrated beef and timber production including carbon sequestration with external data on grazing only activities on cleared farmland.



Project Commenced November 2021



Project Completion November 2024

Project Update 1



International research has demonstrated silvopastoral systems can be **productive, profitable and sustainable**. These systems, apart from enhancing income and biodiversity, can help to **lower overall carbon emissions** by sequestering carbon and contribute to carbon neutral targets.

This Australian research project is being undertaken on land managed by HQPlantations (HQP) at Cardwell, Queensland at an existing Caribbean pine plantation. Pasture, timber and beef production will be evaluated as well as co-benefits such as carbon sequestration and animal welfare.

Three scenarios (treatments) will be evaluated:

1. Commercial pine plantation at full tree stocking (approximately 1000 stems per hectare)
2. Silvopastoral system in pine plantation with timber and livestock production with 30% tree thinning
3. Silvopastoral system in pine plantation with timber and livestock production with 50% tree thinning



Queensland Department of Agriculture & Fisheries site team photo (from L to R): Tony Burrridge, Troy Stephenson, Luke Danaher and Nahuel Pachas



To date the project team has established the trial site and sub-plots that will be monitored.

Over the next few years measurements will be undertaken of the trees, pasture and cattle. This information will be used to model the financial outcome for each treatment and potential benefits for landowners.



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Learn more and register for project updates at
www.timberqueensland.com.au/Growing/Silvopasture.aspx