



Australian Government

Department of Agriculture,  
Water and the Environment

# Farm Forestry

Growing together

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APRIL 2022



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Department of Agriculture, Water and the Environment  
GPO Box 858 Canberra ACT 2601  
Telephone 1800 900 090  
Web [awe.gov.au](http://awe.gov.au)

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# Foreword



Farm forestry can provide farmers with ongoing economic and environmental benefits through the provision of amenity, carbon sequestration, shade for livestock, the protection of crops and waterways, and the control of salinity and soil erosion.

Farm forestry also plays an important and increasing role in providing forest industries with new sources of wood and fibre from well managed tree plantations and private native forestry.

Through participation in farm forestry, farmers have the potential to derive additional revenue from wood and fibre production and take advantage of new carbon sequestration opportunities.

To be successful farm forestry needs to be based on 'the right trees, in the right place, and at the right scale' as identified by the Australian Government's Forest Industry Advisory Council.

To encourage the establishment of farm forestry on agricultural properties the Australian Government will support collaboration and cooperation among all governments, our farming sector and the forestry industry to achieve shared outcomes.

The Australian Government strongly supports the vision that farm forestry can significantly contribute to the profitability and management of agricultural properties while supporting ongoing wood and wood fibre products to the forest industries processing and manufacturing sectors.



**Senator the Hon. Jonno Duniam**

Assistant Minister for Forestry and Fisheries  
Assistant Minister for Industry Development









# Background

Growing new plantation areas is critical to securing Australia's future wood supply and farm forestry presents a huge opportunity to grow additional wood resources.

Timber is an important input to many of Australia's key sectors, and increasing global demand for wood and wood products will present challenges for our domestic construction and manufacturing sectors going forward. In 2014, the World Bank predicted that demand for industrial roundwood would quadruple by 2050.<sup>1</sup> In Australia, the demand for softwood products is predicted to triple by 2050.<sup>2</sup>

Recognising this impending challenge, the Australian Government is delivering on the National Forest Industries Plan to introduce measures that will increase the area of Australia's plantation estate.

The National Farmers' Federation (NFF) supports farm forestry as a supplement to primary agricultural purposes and that it should become a larger part of the farm landscape. To realise this however, farmers and landholders need the tools and the know-how to integrate trees into their business.

The Australian Government's recent national farm forestry survey confirmed this. The survey found that farmers need decision support tools, extension resources and information about new products and market opportunities, to build the confidence to establish and integrate farm forestry in existing farming enterprises.

The Australian Government is working with states, territories, forest industries and landholders to identify and help fill the gaps that restrict the uptake of farm forestry. The aim of these actions is to empower farmers and landholders to invest in farm forestry and diversify their business while building Australia's wood resources.

## Our Goal

In 2018 the Australian Government released the *Growing a Better Australia* plan, which outlined our goal to support states and territories and industry to expand the plantation estate, diversify our forest industries and support farm forestry as a commercial enterprise supplying timber to Australia's forestry sector.

The Australian Government is committed to providing the tools and resources required by farmers to assess their situation and the potential for diversifying into farm forestry. To do this the Government will:

- ▶ continue to support Regional Forestry Hubs and Forest and Wood Products Australia to develop online tools and resources about farm forestry, forest products and market opportunities;
- ▶ provide financial support through concessional loans and grants; and
- ▶ provide resources to help farmers access diverse income streams related to farm forestry.

<sup>1</sup> World Bank, Forests Generate Jobs and Incomes, <https://www.worldbank.org/en/topic/forests/brief/forests-generate-jobs-and-incomes>.

<sup>2</sup> Whittle, L, Lock P & Hug, B, 2019, *Economic potential for new plantation establishment in Australia: outlook to 2050*, ABARES research report, Canberra, p. 7.



# What is farm forestry?

Farm forestry is the establishment or management of trees on private agricultural land, to produce wood and timber products. Farm forestry can be plantation species or managed native forests and can provide benefits for farm and land management, environmental or aesthetic reasons.

Farm forestry is often, but not always, on a smaller scale than industrial plantations and can provide a range of outputs in addition to timber or wood fibre production including shade for livestock, the protection of crops and waterways, or soil stabilisation. The common element is that it involves wood production by farmers and landholders.

It is important to note that farm forestry, when done in the right way, complements existing agricultural activities rather than competing against them. Often, there are areas of a property that are not suitable for farming or grazing, or areas where trees can improve the productivity of existing livestock or cropping operations. This is where farm forestry can be used.

## Why does Australia need farm forestry?

The demand for timber products globally is predicted to quadruple by 2050.<sup>3</sup> Domestically, our growing construction industry will lead to an increase in demand for timber products. At the same time, our forest industries have been impacted by significant bushfires, droughts and floods. These factors mean that over the medium to long-term, getting more plantation trees into the ground will be absolutely crucial to our future wood supply needs.

The total area of the plantation estate fluctuates based on the amount of new planting, harvesting and replanting. Over the last decade, the total area of the plantation estate has not increased significantly and the amount of new plantings onto land that has not been used for plantations previously is lower than what is needed. Australia, including governments, farmers and forest industries, is now at a point where farm forestry presents an opportunity to meet the need for more plantation trees.

In other countries, such as New Zealand and America, farm forestry is well integrated in the timber products supply chain. The support for farm forestry in Australia exists, but farmers have clearly stated they need the right tools and long-term security to make the investment in farm forestry.

“Farm forestry can complement traditional farming enterprises, through long-term investment. This research shows that support for integrated trees amongst farmers is high, with recognition for benefits including for shelter, biodiversity, aesthetics, direct economic benefits and land restoration.”<sup>4</sup>

NFF CEO Tony Mahar<sup>5</sup>

<sup>3</sup> World Bank, Forests Generate Jobs and Incomes, <https://www.worldbank.org/en/topic/forests/brief/forests-generate-jobs-and-incomes>.

<sup>4</sup> Forest and Wood Products Australia, Lifting Farmgate profitability through high value modular agroforestry, July 2020.

<sup>5</sup> AFPA and NFF joint media release, Farm forestry can deliver benefits for farmers, battle climate change and help with the timber shortage crisis, November 2021.



### Private Native Forestry – Pine Ridge

Pine Ridge is a cattle and boer goat farm near Dubbo in Central NSW owned by the Arkell family. The farm had been impacted by severe drought which reduced the carrying capacity of the property and resulted in a significant de-stocking. At the worst point, the dams had run low and the Arkells have been hand feeding stock.

With assistance from the Local Land Services NSW, the Arkells converted half the property to private native forests, mainly ironbark, which are harvested to produce fencing, decking and firewood.

The Arkells work with local harvesting contractors, Pilliga Natural Timbers to ensure their native forest timbers are sustainably harvested and provide quality products while retaining a healthy forest.

The harvested timber provides income that the Arkells could use to purchase fodder and water troughs during drought years and other farm improvements in good years, which increased the drought resilience for the property and the business.

Additionally, the partnership provides an ongoing timber supply for Pilliga Natural Timbers, which provides security for its employees.

***Supplied by Local Land Services, NSW***

## Benefits to farmers

Farm forestry has been shown to provide multiple benefits to farms. Through participation in farm forestry, farmers have the potential to derive additional revenue from wood and fibre production and take advantage of new carbon sequestration opportunities.<sup>6</sup>

Farm forestry can be integrated in whole farm planning to deliver a range of benefits throughout the life of a forest. Improved farm productivity, landscape stability, biodiversity and carbon credits will accrue in the near – medium term, with commercial wood sales for smaller trees realised in the medium term, and larger sawlog sales in the longer term.

## Support for farm forestry

The *Growing a Better Australia* plan recognised the role of farm forestry in expanding the national plantation estate and securing our future timber supplies. As part of this recognition, the Australian Government committed to undertake actions that would support the increased uptake of farm forestry.

Since the release of the plan, farmers and landholders have been faced with increased uncertainty from events such as bushfires, floods and drought, trade restrictions and the pandemic. As a result, landholders and farmers have not had the certainty required to expand into farm forestry.

## Survey

In late 2021, the Department of Agriculture, Water and the Environment conducted a survey on what would-be farm foresters needed to support the uptake of farm forestry. The key messages that came out of the strategy are that:

- ▶ governments, at commonwealth, state and local government levels, should actively support the uptake of farm forestry;
- ▶ government measures should be targeted to the needs of landholders;
- ▶ landholders need practical information and resources to support farm forestry; and
- ▶ landholders need the ability to access the carbon markets.

<sup>6</sup> FWPA *Lifting farmgate profitability through high value modular agroforestry* 2021.



# Farm Forestry Snapshot

A key aspect of the Government’s plan to increase the uptake of farm forestry is understanding the farm forestry estate currently and the possibility for expansion.

The Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) has undertaken an inventory of farm forestry nationally, entitled *Forest inventory for private native forestry, farm forestry and Indigenous forestry: Farm forestry sector report*. The report was released on 6 April 2022. The inventory shows that farm forestry activities are currently highest in Tasmania and the opportunity for growth is highest in Queensland.

## Alternative income

Farm forestry represents an opportunity for farmers to access alternative income streams. Through farm forestry, farmers receive income directly through the production of timber. The Australian Government has

also now made it easier for farm foresters to generate income by participating in carbon markets.

The Australian Government reviewed existing legislation and requirements that were restricting participation in the Emissions Reduction Fund (ERF). The Government has amended the water rule and the plantation forestry method, making it easier for foresters and farmers to participate in the ERF. Participation in the ERF allows foresters to earn Australian carbon credit units (ACCUs) and to generate income through the exchange and trade of these credits.

## Water rule expansion

In April 2020, the Australian Government amended the water requirements relevant to commercial tree plantings. These amendments will make it easier for commercial plantations and farm forestry projects to participate in the ERF within specified regions.

These specified regions are where commercial tree plantings:

- ▶ are in an area that receives more than 600mm of rainfall annually; and
- ▶ are unlikely to have a material adverse impact on the availability of water.

**Table 1:** Farm forestry area by plantation type and jurisdiction

State	Hardwood	Softwood	Species Unknown	Total
Area (ha)				
New South Wales	3,100	5,300	600	9,000
Queensland	400	0	3,400	3,800
South Australia	0	1,000	100	1,000
Tasmania	37,500	8,200	0	45,600
Victoria	2,100	5,200	3,400	10,700
Western Australia	400	0	2,800	3,200
<b>Total Area</b>	<b>43,400</b>	<b>19,700</b>	<b>10,300</b>	<b>73,400</b>

Reference: Daian M, Wood P, Lehmann C and Howell C 2022, *Forest inventory for private native forestry, farm forestry and Indigenous forestry. Farm forestry sector report*. ABARES Research Report to client prepared for the Department of Agriculture, Water and the Environment, Canberra, April 2022.



The following specified regions are either fully or partially exempt from the water rule:

- ▶ Kangaroo Island
- ▶ South-west Western Australia
- ▶ Green Triangle
- ▶ Tasmania
- ▶ North-east New South Wales
- ▶ Murray Region
- ▶ Southern Victoria (including Gippsland)

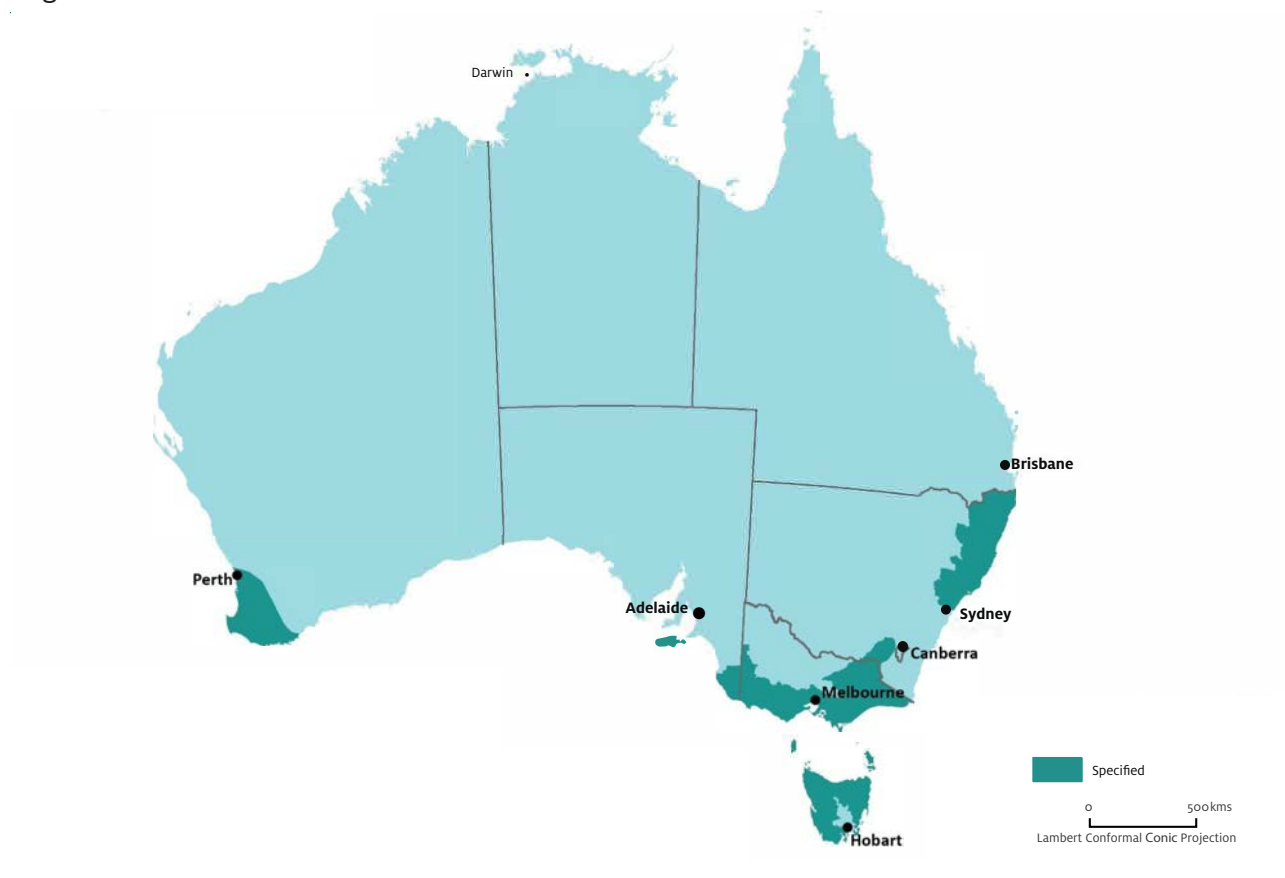
The remaining regional forestry hubs are being assessed and are expected to be fully or partially exempt in the near future.

Plantation projects outside the specified regions may still participate in the ERF. These projects may participate through another exception to the water rule such as:

- ▶ having a suitable water access entitlement; and
- ▶ being in a region where a water access entitlement cannot be obtained, and they can demonstrate, through supporting advice, to not have a material impact on water availability or water access entitlement.

Full eligibility requirements for participation in the ERF can be found on the Clean Energy Regulator's website [www.cleanenergyregulator.gov.au/ERF](http://www.cleanenergyregulator.gov.au/ERF).

**Figure 1:** Specified regions for subregulation 3.37(4A) of the Carbon Credits (Carbon Farming Initiative) Regulations 2011



## Plantation forestry method

The ERF specifies what types of activities are eligible to participate. In January 2022, following industry consultation, the Clean Energy Regulator updated the method for determining what types of plantations would be eligible to participate.

Further information on the new plantation forestry method can be found on the Clean Energy Regulator website [www.cleanenergyregulator.gov.au/ERF](http://www.cleanenergyregulator.gov.au/ERF).

**Figure 2:** Project lifecycle for projects under the 2022 plantation forestry method





# Unlocking softwood income stream for beef graziers, North Queensland

A North Queensland project is evaluating new opportunities to meet growing demand for softwood timber products and create an additional income stream for Northern Australia's graziers. The three-year *Silvopastoral trials for commercial pine systems in North Queensland* project, led by Timber Queensland, brings together forestry and livestock production experts and environmental and carbon consultants to assess potentially transformational farming systems.

The project will assess the economic merits of combined grazing and commercial tree farming systems compared to traditional forestry and grazing only practices.

The project is designed to assess if new silvopastoralism systems can deliver higher net financial returns per hectare for suitable land types, while at the same time contributing to income diversification and lower overall carbon emissions, or even carbon neutral outcomes.

The project will measure and model the returns from field trials with cattle grazed in widely spaced commercial pine forests and compare the returns from carbon sequestration and combined timber and beef production returns with traditional grazing only activities on cleared farmland.

There is a high likelihood these silvopastoralism systems can deliver higher net financial returns per hectare for suitable land types, while at the same time contributing to income diversification and lower overall carbon emissions, or even carbon neutral outcomes for a farming enterprise.







# Funding Opportunities

## Support Plantation Establishment

The Australian Government announced the *Support Plantation Establishment* program in February 2022, committing \$86.2 million. The program will be delivered in partnership with participating states and territories and industry.

Funding will be available and managed by participating state governments for businesses wishing to establish or expand plantations within the Regional Forestry Hub regions. The grants will be available for establishment costs and cannot be used for purchasing land or replanting.

## Plantation Development Loans

Plantation Development Loans are available through the Regional Investment Corporation. Concessional loans of up to \$2.5 million are available to establish new plantations (including up to 50% of the cost of land purchase) or replanting following the 2019–20 bushfires. Further information is available via the RIC website: [www.ric.gov.au/plantation](http://www.ric.gov.au/plantation)

## Payments to the states and territories

The Australian Government has committed \$3.5 million in funding to support farm forestry, private native forestry and Indigenous forestry projects, in partnership with state and territory governments.

The funding will support the delivery of projects that result in information for land managers that wish to establish new farm forestry assets and/or private native forestry or assess the suitability of Indigenous forestry areas' for the sustainable harvest of forest products.

For further information on state and territory projects, please refer to the state and territory websites:

### New South Wales

**Department of Primary Industries**

<https://www.dpi.nsw.gov.au>

**Local Land Services**

<https://www.lls.nsw.gov.au>

### Victoria

**Department of Jobs, Precincts and Regions**

<https://djpr.vic.gov.au>

### Queensland

**Department of Agriculture and Fisheries**

<https://www.daf.qld.gov.au>

### Western Australia

**Forest Products Commission**

[www.fpc.wa.gov.au](http://www.fpc.wa.gov.au)

### South Australia

**Department of Primary Industries and Regions**

<https://pir.sa.gov.au>

### Tasmania

**Private Forests Tasmania**

<http://www.pft.tas.gov.au>

### Australian Capital Territory

**ACT Parks and Conservation Service  
Environment, Planning and Sustainable  
Development Directorate**

<https://www.environment.act.gov.au>

### Northern Territory

**Department of Industry, Tourism and Trade**

<https://industry.nt.gov.au>





# Online Tools and Further Information

The Australian Government recognises that farmers and landholders need the right tools and information to support diversification into farm forestry.

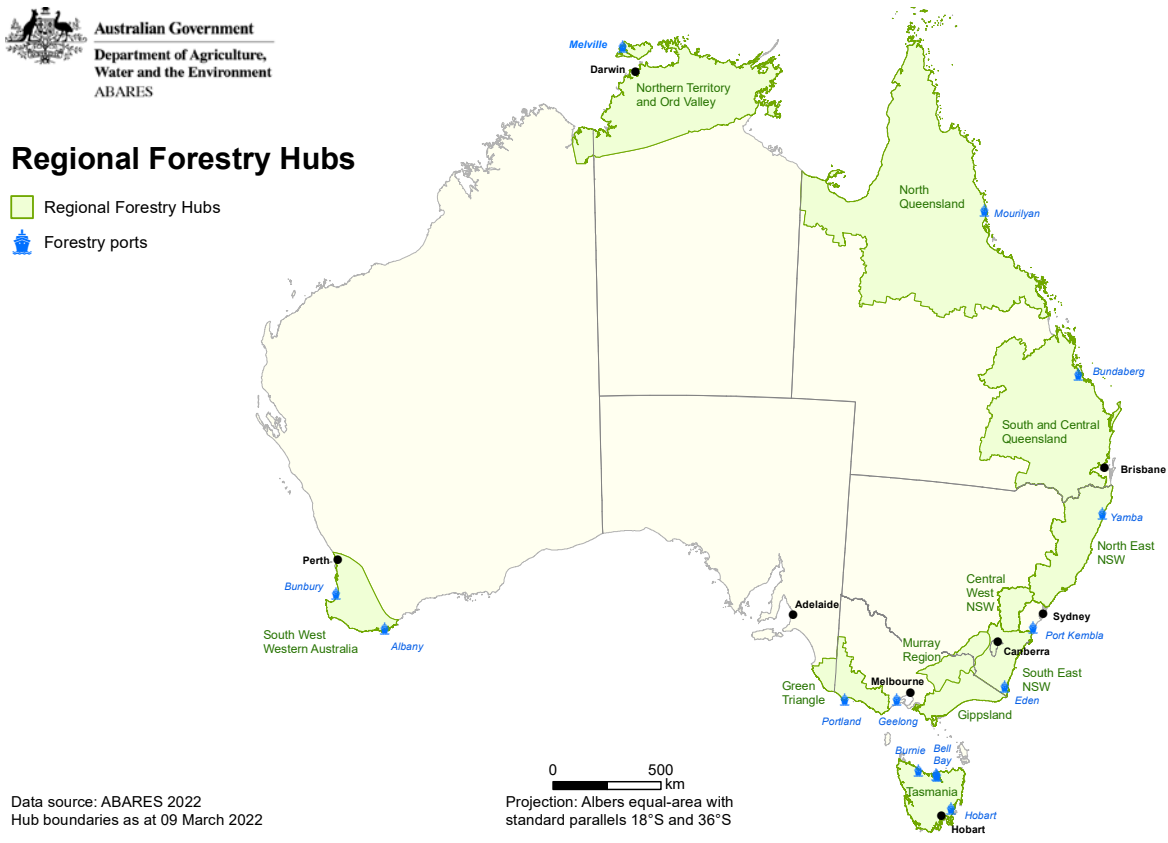
The Government is already investing, through the Regional Forestry Hubs and Forest and Wood Products Australia, in providing online materials that provide information at an appropriate level and scale. These tools are useful for farmers to get started and to help connect them to the wider forestry industry.

## Regional Forestry Hubs

Regional Forestry Hubs work with industry, state and local governments within their prescribed area to undertake strategic planning, technical assessments and analyses of forestry industries to support the growth of those industries within the region.

Funding for the Regional Forestry Hubs has been extended until 2025. A key focus for some hubs going forward is providing information and tools to farmers and landholders to assist them to make informed decisions regarding diversifying into farm forestry.

**Figure 3:** Regional Forestry Hubs





For example, in late 2021 the Green Triangle Forestry Hub released Trees into Farming plan (TIF plan). The TIF plan is a result of a year's work investigating and consolidating existing resources in the region, with the intent to utilise 100% of the resources. The TIF plan sets out new partnerships with landholders and industry to access growing market opportunities. The TIF plan will work together with industry to provide information on which trees should be grown where and to provide information on which species have a higher commercial value.

Regional Forestry Hubs work closely with local industry, stakeholders, and state and local governments to support growth of forestry in their region. This may include developing resources for farmers interested in expanding into farm forestry.

For example, the South West Hub in Western Australia has identified that farm forestry is a growth area and developed an online tool to support farmers to understand the likely return on their investment. Details of the *Decision Tree* are provided below.

The Australian Government is working with hubs that are developing these types of tools, with the aim to make them available across the hub regions.

Further information on each Regional Forestry Hub can be found via their respective websites, provided in the Resources section.

## Forest and Wood Products Australia

The Australian Government has contracted the Forest and Wood Products Australia to compile freely available online information and guidance material for farm forestry. These will be available in the second half of 2022.

The materials will provide support to farmers and landholders that are interested in diversifying their income streams through farm forestry.

### Case Study

#### South West Timber Hub Decision Tree

In 2020 the South West Timber Hub released a report into private forestry. The report contained a snapshot of private forestry in WA and developed an engagement strategy to encourage involvement in farm forestry.

As a result, South West Timber Hub launched its farm forestry program. The first phase of the program is *Decision Tree*, which provides farmers the information required to assess farm forestry for their situation.

*Decision Tree* is a predominantly online program that provides landowners information to quickly determine whether farm forestry is something they wish to pursue. Landowners, using an online tool, can determine potential return on investment, carbon rates and cashflow based on location, historical land use and size of area that could be used for farm forestry.

If landowners wish to progress, *Decision Tree* also provides extensive guidance material from different investment models, understanding carbon credits to preparing a farm forestry site, seedling selection and managing trees.

South West Timber Hub have partnered with industry members including the major sawmill operator, Wespine, and the Forest Products Commission (FPC) to optimise the return on investment for each grower. Industry and FPC representatives will go to farms to advise on how to develop and optimise a farm forestry operation. To ensure farmers aren't left with trees they can't sell, Wespine and industrial wood buyers will enter agreements with landowners to purchase the trees being planted. This allows landowners to have a guaranteed return on their investment and will help fill supply shortages within WA.

Further information on the program can be found at <http://decisiontreewa.com.au>





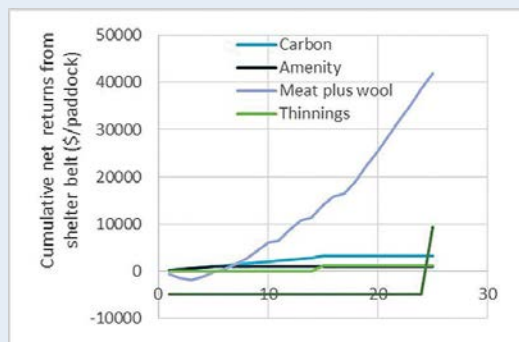
## Case Study

### Formosa Estate and farm forestry<sup>7</sup>

In 2018, the CSIRO conducted a study to compare the returns of integrated farm forestry with either full pasture or fully planted.<sup>8</sup> One of the sites included in the study was the Formosa Estate in north east Tasmania. Formosa is a family owned property in Cressy, north east Tasmania, that operates dryland and irrigated mixed farming.

The study modelled the expected net cumulative returns from the integration of 1 hectare of *Pinus radiata* shelter belts within an existing 25 hectare pasture paddock. The study demonstrated the co-benefits of integrative farm forestry including:

- ▶ providing shade and shelter for stock, and crop and pasture production and reducing damage and/or mortality due to weather extremes;
- ▶ income generated from carbon markets;
- ▶ additional income through bi-products such as biomass from thinning or pruning, essential oils or honey; and
- ▶ increased biodiversity and sustainability values, managed water flows and reduced wind and water erosion.



The modelled return, based on economic figures available in 2018, showed that over 25 years, gross returns would be \$56,560, noting that this would vary based on changes in commodity prices.

This net return is driven by a calculated benefit of the shelter on meat and wool products equalling \$42,007 over the 25 years. Income from tree harvest, at 25 years, was calculated at \$14,300, and potential value of carbon sequestration was valued at \$3,090.

This case study clearly demonstrates the economic benefits of farm forestry on the whole of farm operations.



<sup>7</sup> Private Forests Tasmania, Case Study O4. Agroforestry – Agroforestry improves enterprise income.

<sup>8</sup> CSIRO, Modelling the costs and benefits of Agroforestry systems – Application of the Imagine bioeconomic model at four case study sites in Tasmania. November 2018.





# Resources

## Regional Forestry Hubs

### Department of Agriculture, Water and the Environment

<https://www.awe.gov.au/agriculture-land/forestry/regional-forestry-hubs>

### Queensland

#### North Queensland Hub

<https://www.qldforestryhubs.com.au/nq-hub>

#### South East and Central Queensland Hub

<https://www.qldforestryhubs.com.au/s-cq-hub>

### New South Wales

#### North East NSW Hub

<https://www.nenswforestryhub.com.au/>

#### Central West NSW Hub

[www.cwfh.com.au](http://www.cwfh.com.au)

South East Hub commenced in December 2021.  
A website is being developed.

### NSW/Victoria

#### Murray Region NSW

<https://murrayregionforestryhub.com.au/>

### Victoria

#### Gippsland Hub

<https://gippslandforestryhub.com.au/>

### Victoria/South Australia

#### Green Triangle Hub

<http://gtfih.com.au/>

### Western Australia

#### South West WA Hub

<https://www.swtimberhub.com.au/>

### Tasmania

#### Tasmanian Forests and Forest Products Network

<https://www.tffpn.com.au/>

### Northern Territory

The Northern Territory Hub commenced in August 2021. A website is being developed.

## Case studies

### Private native forestry at Pine Ridge

#### Local Land Services News South Wales

<https://www.lls.nsw.gov.au/help-and-advice/private-native-forestry/case-studies-of-private-native-forestry/private-native-forestry-at-pine-ridge>

### Softwood income stream for beef graziers

#### Timber Queensland

<https://www.timberqueensland.com.au/>

#### Cooperative Research Centre for Developing Northern Australia

<https://www.crcna.com.au/>

### Decision Tree

#### South West Timber Hub

<https://decisiontreewa.com.au/>

### Formosa Estate and farm forestry

#### Private Forests Tasmania

<https://www.treealliance.com.au/>

#### Forest and Wood Products Australia

<https://www.fwpa.com.au/>

#### Australian Forest Products Association

<https://ausfpa.com.au/>



