

# Economic Benefits and Markets

Trees on farms offer income opportunities and increase land value.



**Landholders can increase their income through trees on farms in multiple ways – and throughout a plantation’s lifecycle.**

Profitability can be maximised by careful design and management planning, which also impacts market access and end uses. Landholders should consider their options early to ensure their investment in trees pays off.

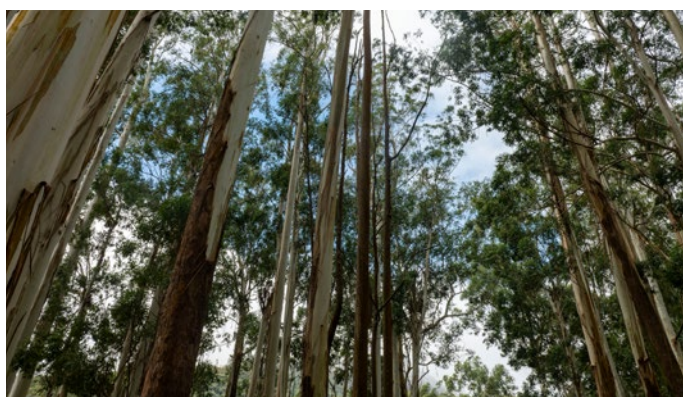
## Key markets

### WOOD

Wood is a leading market for trees on farms. Several commercial species are proven to suit the Tasmanian climate and timber production market, including:

- Eucalyptus (*E. nitens* and *E. globulus*)
- Radiata Pine (*P. radiata*)
- Blackwood (*A. melanoxylon*)
- Cypress (*C. macrocarpa*)

Trees for commercial production produce different log types, which can broadly be categorised as sawlogs and pulplogs, and come with distinct qualities and end uses. Both log types can be produced from plantation forests or from native regrowth forests.



Type	Sawlogs	Pulplogs
<b>Qualities</b>	Graded on appearance, strength, size, species  High-quality sawlogs meet size and grade specifications, with low defect occurrence	Do not meet sawlog quality specifications
<b>Primary products</b>	Veneer Sawn timber Poles, piles and girders	Chips Sawdust Shavings Manufacturing waste (biomass)
<b>End uses</b>	Furniture Construction material Utility poles, piles, bridges Landscape and fencing	Construction material Paper and packaging Rayon and cellulose products Food additives Cabinetry Bioenergy, pellets, biofuel

Quality factors, primary products and examples of final uses for sawlogs and pulplogs

### Wood from plantations

Trees for commercial wood production can be integrated across farming landscapes. They are typically planted as block configurations; however, commercial species are increasingly being established within woodlots and shelterbelts, to maximise the co-benefits of trees throughout their lifecycle.

The location of farm plantations should be selected according to the needs of the tree species and conditions of the site (e.g., soil conditions, temperature, moisture), as well as practical harvesting considerations (see 'Influencing factors') and on-farm requirements.

Commercial plantations can be based on a single species or integrated with native species to support biodiversity and farm productivity.

For more information, visit the 'Sites, species and planting' topic of the Tree Alliance Knowledge Hub at [treealliance.com.au](http://treealliance.com.au)

### Wood from native regrowth forests

Tasmania's private native regrowth forests have a long history of active management for timber production. Silvicultural treatments such as thinning and selective harvesting can generate income, while improving forest health, productivity and carbon sequestration.

Markets for native forest logs are generally similar to those of plantation logs; however, forest timbers are increasingly the preferred choice for higher-value products that require durability and visual appeal (e.g., doors, windows, stairs, furniture and flooring).

Harvesting native regrowth forests is a complex process. Planning for harvesting should start several years prior to the anticipated operation, and include careful financial analysis and environmental assessment.

For more information, visit the 'Native forest management' topic of the Tree Alliance Knowledge Hub at [treealliance.com.au](http://treealliance.com.au)

### Influencing factors

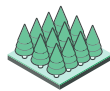
In addition to the species and quality specifications of wood being sold, several operational factors may impact the profitability of commercial forestry projects. This includes:

Location of, and access to, trees – farm infrastructure and the location of trees impact harvest difficulty and therefore operational costs/profits; for example, trees planted on sloped ground require specialist harvesting equipment; or farm roads may require modification/construction to accommodate large vehicles

Haulage costs – the distance to market and the condition of roads can significantly impact the profitability of a project; the greater the distance to mills or markets, the greater the transport costs

Volume and area – machinery costs (e.g., hire and transportation) and the efficiency of equipment can impact operational expenses; the volume of trees being harvested per acre / per hour should generate a sufficient per unit profit

Management and contractors – commercial plantations require silvicultural management to maximise the value of the end-product; plus, harvesting and sales require arrangements with contractors and partners that can influence costs.



**Growing demand from the home-building and renewables markets means one billion additional trees need to be planted in Australia by 2030.**

### CARBON

As trees grow, they absorb carbon from the atmosphere and store it as wood. By planting and managing trees, farmers can reduce their emissions to generate income, while improving the sustainability of their operations.

Markets and governments are increasingly focused on net zero emissions, with multiple targets and strategies working towards emissions-reductions throughout supply chains and industries. By taking action to reduce their operation's emissions, farmers can capitalise on these market opportunities while remaining competitive in the face of emerging regulatory obligations.

There are two broad options for landholders looking to generate income from the carbon-neutral economy:

#### Selling carbon credits

For some industries (e.g., aviation, shipping and some energy sectors), it is not possible to reduce emissions through currently available practices and technologies. These industries purchase carbon credits to offset their carbon footprint and meet their emissions obligations.

Landholders can generate carbon credits through emissions-reduction activities (e.g., planting trees) and sell them to boost and diversify their income.

#### Carbon insetting

Landholders can use their emissions-reduction activities to achieve carbon neutrality within their own operations.

Landholders planning emissions-reductions projects can undergo an auditing process to formally measure their emissions baseline and demonstrate the results of their activities. With reduced emissions, farmers can retain market

access for their products and safeguard the profitability of their operations as expectations and regulations evolve.

#### Influencing factors

For landholders considering participating in the carbon credit market, some key financial considerations include:

- **Contractors** – The process of calculating emissions reductions, and generating and selling carbon credits, comes with initial set-up expenses and operational costs; carbon auditing, brokers, project management and transaction expenses can impact profitability
- **Conditions** – ACCUs schemes come with strict guidelines and conditions around how reduction activities must be undertaken, which may impact decision-making for land use into the future; some ACCU methods, for example, do not allow for commercial harvesting or require trees to remain in the ground for a specified period.



**By 2030, it is highly likely that Tasmanian farming businesses will be required to be carbon neutral.**

#### FARM FORESTRY CARBON TOOL

Gain a picture of your farm's emissions and learn how many trees are needed to offset them – in less than two minutes.

[carbonestimator.net.au](http://carbonestimator.net.au)

#### BIOENERGY

Bioenergy is a renewable energy alternative to fossil fuels, produced from organic matter known as biomass. It is considered a vital component of Australia's clean energy future.

Biomass comes from a range of sources, primarily forestry, agriculture and organic wastes and residues. This includes forestry residues such as small trees, branches, tops and un-sellable wood. Biomass is then converted to bioenergy through a range of technologies, to generate electricity, heating and transport fuels.

Bioenergy has the potential to replace fossil fuels in almost every market. State and national governments have launched strategies to grow Australia's bioenergy industry, including significant investments in infrastructure and facilities.

As this emerging market continues to grow, new opportunities may arise for Tasmanian farmers to increase their income while reducing farm waste.

#### Influencing factors

Tasmania has an abundance of under-utilised biomass, making bioenergy an attractive market that can be rapidly adopted. Some considerations for landholders include:

- **Balancing values** – some biomass (e.g., high quality wood or native vegetation) can be used to produce higher value products, or left in the landscape for environmental benefit; landholders should determine the best use for their wood products by taking into consideration the full range of potential financial and non-financial values
- **An emerging sector** – bioenergy facilities and infrastructure on an industrial-scale are not yet fully established in Tasmania; landholders should remain aware of emerging developments, opportunities and enterprises in the bioenergy sector.

### Indirect financial benefits

#### PRODUCTIVITY

Well-placed trees as part of a whole-farm system increase the productivity of farmland. Productivity boosts from trees have the potential to match or surpass the value of commercial timber production, unlocking the financial benefits of trees throughout a plantation lifecycle.

Productivity benefits include:

- **Shelter** – providing protection from heat, rain and high wind speeds, to improve the microclimate of paddocks and reduce stress on animals and crops
- **Soil health** – mitigating the degradation of soils (by reducing risk of erosion and salinity, and improving soil fertility) to support pasture production
- **Water quality** – preventing sediment runoff into waterways and stabilising banks to reduce the risk of erosion and flooding
- **Biodiversity and habitat** – providing habitat for beneficial wildlife, which in turn deliver essential ecosystem services such as pollination and pest control
- **Amenity and wellbeing** – increasing farm land values and conditions, while providing wellbeing benefits for farmers and farm staff.

For more information, visit the 'On-farm benefits' topic of the Tree Alliance Knowledge Hub at [treealliance.com.au](http://treealliance.com.au)



**A case study of 1ha shelterbelt on a 25ha pasture paddock shows a return of 19% over 25 years from harvest, shelter, carbon and amenity values.**

#### NATURAL CAPITAL

Trees provide important functions on farms that produce valuable outcomes such as biodiversity, shelter, improved water and soil quality, carbon sequestration and amenity. Trees are therefore an important natural capital asset.

**'Natural capital' considers natural resources (e.g., air, water, trees) as stocks of assets that produce valuable ecosystem services**

Natural capital accounting is a method of translating the value of ecosystem assets and services into monetary terms. At a simplified level, it involves:

- Taking stock of natural capital assets and liabilities
- Understanding the flows of benefits from ecosystem services (current and future)
- Generating balance sheets and statements to measure and report these values.

Natural capital accounting can provide farmers with accurate information to support informed decision-making about farm operations and tree planting. It can also be used to improve farm productivity and tree management processes.

Translating natural capital into monetary values is not a simple task; methodologies and tools are currently in development to support farm-scale natural capital accounting in Australia. Existing studies have demonstrated financial returns of natural capital on farms, which in many cases can exceed the value of commercial wood production. This also includes increases to the capital value of farmland through trees.

## References

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## Next Step



### CALL THE FREE HELPLINE

Ask a question or connect with a forestry consultant.

**1300 661 009**



### VISIT THE KNOWLEDGE HUB

Find info on each stage of growing trees on farms.

**[www.treealliance.com.au](http://www.treealliance.com.au)**



### ARRANGE AN APPOINTMENT

Talk about your goals and find out what's possible.

**[admin@pft.tas.gov.au](mailto:admin@pft.tas.gov.au)**



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Tasmania is one of the best places in the world to manage forests for sustainable and profitable outcomes. To learn more about your options for renewable native forest management, contact the team at Private Forests Tasmania on their Tree Alliance hotline or through their general enquiries.

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