



# Designing business models for commercial tree growing partnerships on rural land Summary Report

Report 10 of the Next Generation Forest Plantations  
Investment Project

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This report draws on the following project reports:

Anderson, N. 2018. Integrating trees in rural landscapes: Landowner Assessment. Report 3.

Dembek, K. and York, J. 2019. Next Generation Forest Plantation Investment: Financial Sector Report. Report 7.

Jenkin, B, Keenan, R & Bull, L 2018, 'Tree plantation investment and partnerships in Australia: an analysis of past experiences', Report 1.

Jenkin, B. 2018. Next Generation Plantation Investment Research Project Benchmarking analysis: Part 1 Australia's history of plantation development, policy and incentives. Report 2.

Jenkin, B. 2019. Next Generation Plantation Investment Research Project Benchmarking analysis: Part 2 An international perspective of the history of plantation development, policy and incentives. Report 8.

Keenan, R.J., Anderson, N., Bull, L., Dembeck, K., Kostanski, L. and Patterson, S. 2019. Designing business models for commercial tree growing partnerships on rural land: a guide for the Victorian forest industry. Main report. Report 9.

Severino, D, Hasanka, C and Costello, L. 2018. Next Generation Plantation Investment Land Capability Assessment. Report 3.

These can be found at this site:

<https://blogs.unimelb.edu.au/nextgenplantations/#tab187>

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## Introduction

Tree plantations currently supply 80% of wood for the timber industry in Australia but despite increasing demand and rising timber prices, investment in new plantations is at a standstill. Generating more wood is a growth opportunity for the sector, but with no expansion of the commercial estate, timber supply will remain flat, constraining new investment and limiting opportunities for forest processing and regional industry development. Climate and environment policies are driving demand for more trees in rural landscapes to sequester carbon, improve water quality, reduce soil erosion and provide wildlife habitat. The right tree species in the right locations can increase farm production, providing shade and shelter for stock and crops, and income from timber.

The timber industry and the Federal Government have set national goals for new timber plantations but location and source of investment in these new trees is unclear.

This report provides an overview of outputs from the Next Generation Forest Plantation Investment (NGFPI) project. An aim of the project was to support new commercial tree investment by providing guidance on collaborative business models between the timber industry and rural landowners. It draws on experience from past plantation investments, research on the attitudes and needs of rural landowners, analysis of suitable land areas, and the requirements of different types of investors.

Three types of business models are recommended: *land lease*, *joint venture* and *outgrower* models. Offering alternative models will enable the industry to engage landowners with different scales of suitable land, different interests in growing trees, varying needs for immediate income, and risk appetites. The models allow for landowners with varying needs for permanent plantings, subject to industry constraints.

The following factors are required to make these models work:

1. Regional planning to ensure that the right tree species are planted in the right places to generate desired benefits.
2. A commitment to purchase wood, with prices high enough to generate required rates of return for investors.
3. Income through carbon or other payments for environmental services as the trees are growing.
4. An investment vehicle to generate sufficient scale for investors and underwrite investment risks.
5. Mutual understanding, trust and long-term commitment among landowners, the timber industry and other stakeholders

Models that meet different landowner needs will be more likely to interest a wider group of landowners and see more take-up of commercial tree growing. Flexibility includes payment arrangements, landowner co-investment, tree location and design on farms (including permanent plantings for shade, shelter, aesthetics or biodiversity benefits).

Realising opportunities from investing in more timber trees on rural land will require the Australian timber industry to change the way it interacts with rural landowners. Working together, the sector can promote a consistent message that producing timber is a farm activity that complements other forms of agriculture, and that the industry is willing to work with farmers to achieve common goals.

## Key messages

The following actions are recommended from industry, governments and rural landowners to support more commercial tree investment on rural land.

### Timber and plantation industry actions

**Set clear goals and targets** to inform stakeholders of company plans to increase the area of commercial trees. Frame targets and goals in terms of the benefits, desired outputs and outcomes—increased wood supply, regional investment, jobs, improved water quality, conservation or other community benefits.

**Develop plans for regional investment hubs** through collaboration across the forest sector and through inclusive consultation with stakeholders along the value chain, in local government and the broader community. These plans require industry leadership and regional platforms for dialogue.

**Understand the stakeholder landscape** to identify key decision makers, collaborators and influencers who are important for the success of the program.

**Collaborate across the sector** to develop and present common messages for consistent policies, opportunities for investors and potential co-benefits (such as farm production, carbon or water quality), and build public support for the sector.

**Increase investor awareness and engagement with commercial trees** by breaking down stereotypes, demonstrating social and environmental benefits, lowering the investment threshold and demonstrating potential for competitive returns. Work with investors and governments on suitable investment vehicles.

**Increase landowner awareness of commercial tree opportunities** through broad-based communication and engagement, and targeted campaigns relevant to farmers with different values, beliefs and goals, and varying personal, social, cultural and economic circumstances.

**Work with rural advisors** to engage farmers in collaborative business models.

**Clearly communicate company needs for commercial trees**, including species and minimum areas for viable planting, management and harvest and associated costs. Indicate the poor financial viability of small, isolated plantings or those on steep slopes.

**Work with landowners to develop collaborative business models** to integrate trees into farm plans, providing benefits for the farm operation and supporting rural business development plans. Build trust in business negotiations by listening to farmers, understanding their needs and sharing a greater portion of the benefit from the investment.

**Plan for increasing climate risks** when selecting locations for tree-growing, including risks to infrastructure and other components of the value chain.

**Invest in research for alternative species and products** to open a wider area of land for commercially attractive tree species and wood products at a commercially viable scale.

## Government actions

Australia's three levels of government can support commercial tree investment by adopting a consistent approach to trees on farms, including integrating commercial tree-growing into federal and state agricultural policies.

Government policy can support collaborative business models by improving landowner negotiating power through access to information and supporting cooperative tree-grower organisations. Information needs include market trends, product prices, calculation of returns and risk assessments. Governments can also develop standard legal agreements, provide concessional finance, co-invest in public good values of trees with direct grants or underwrite investment risks.

## Federal Government

1. **Eliminate the 600 mm maximum rainfall restriction on plantation forestry, simplify plantation forestry methodologies, and reduce the uncertainty for commercial tree investors to receive carbon payments through the Emissions Reduction Fund.** Growing commercial trees for harvest on cleared land increases landscape carbon stocks. Carbon payments can provide short-term cash flow and increase commercial tree investment.
2. **Develop a coordinated long-term national plan for trees in rural landscapes** with state, territory and local governments. Define desired public good environmental outcomes and communicate information on synergies between agriculture and commercial tree-growing options.
3. **Develop a planning framework for regional tree investment hubs** in conjunction with industry, state governments and other stakeholders, using spatial information on land suitability to better integrate with agriculture, and specifying infrastructure for industry development.
4. **Develop incentives linked to regional plans.** Design grants or loan programs to target specific locations for afforestation, tree species and other desired project attributes. Work with State Governments to align incentives. Consider underwriting market or biophysical risks to provide assurances to investors and landowners.
5. **Ensure taxation policies for investors in commercial trees are consistent with those for other agricultural land uses.**
6. **Increase research and development in commercial trees on farms** for different regions and support education and training to build professional capacity in the industry, farm advisors and rural landowners.
7. **Provide technical and financial support for commercial farm tree information**—inventories, timber prices, harvest projections and other planning tools to provide a clear picture of the current plantation industry and market status in each state and territory.

## Victorian Government

1. **Work with the sector to promote the benefits of trees on rural land for climate change and the circular economy**, including use of wood in construction, packaging and paper products and the need for more trees to create a new cycle of sustainability.
2. **Planting trees requires a package of policy actions similar to those supporting solar energy. Develop plans and targets for investment in commercial trees in regional hubs** in conjunction with industry, state governments and other stakeholders, based on spatial information on land suitability to integrate with agriculture, and specifying infrastructure for industry development. Use these plans to progress investment of the \$110 million committed to timber plantations. Underwrite market or biophysical risks to provide assurances to investors and landowners.
3. **Support CMAs and government agencies to develop information for tree-planting**—including suitable locations and integrating commercial tree-growing with catchment management and farm productivity objectives.
4. **Develop incentives linked to regional plans to ensure these increase investment, without distorting the market or delaying investment.** Design long-term grants or loan programs to target specific locations for afforestation, tree species and other project attributes. Work with the Federal Government to align carbon-related incentives. Ensure incentives are promoted and accessible to rural landowners and investors.
5. **Develop investment vehicles for public and private investment in trees in rural landscapes** at sufficient scale to make a difference. These could include payments for environmental services for trees in rural landscapes.
6. **Provide support for collaborative business models** between industry and landowners, including development of standard legal agreements, offtake agreements and other relevant administrative documents. Provide support services for preparing and submitting planning applications.
7. **Ensure coordinated planning for plantations across local governments.** Provide information on the potential benefits of commercial trees. Relevant local governments need trained staff, information and resources to implement state policies and plans. Provide guidance on planning scheme arrangements that support integration of commercial trees with agriculture.
8. **Increase research and development in commercial tree plantations on farms** for different regions and support education and training to build professional capacity in industry and local governments, and for farm advisors and rural landowners.
9. **Provide information and planning tools for trees on farms**, carbon calculators, risk management and information for rural landowners. Provide technical and financial support for commercial farm tree inventories in Victoria, and information on timber prices, harvest projections and other planning tools.

## Local Government actions

Local governments play a critical role in planning, regulating and approving commercial tree-growing on private land. Local governments also provide and maintain local infrastructure such as roads and bridges that is critical to the success of planted forest investments. If convinced of the local economic and environmental benefits, local governments can also be strong champions and supporters of investment in commercial tree plantations on rural land.

1. **Provide clear right to harvest** for commercial planted trees.
2. Ensure that commercial trees are **incorporated into planning schemes**.

3. **Exclude planted commercial trees from environmental planning overlays.**
4. **Participate in the development of plans for regional hubs for commercial trees.**
5. **Ensure that council has appropriately trained and informed staff** to manage Codes of Practice for commercial trees and other legislative and policy requirements.

#### Rural landowner actions

**Consider incorporating trees on farms** for income diversification and on-farm benefits.

**Seek information** on investment options, companies as potential partners, tree species site and management requirements and timber market prospects.

**Explore opportunities for trees to offset greenhouse gas emissions from farming.**



## **The situation**

Demand for wood is growing. The use of wood in construction and packaging is increasing, and wood is replacing plastics and petrochemicals in the emerging 'bioeconomy'. An estimated 500,000 ha of new softwood plantations are required to meet domestic timber demand for housing by 2045.

To expand plantation timber production, the plantation sector has three options:

1. Increase the productivity of the current estate,
2. Buy rural land for new plantations, or
3. Engage in partnerships with landowners and investors.

Plantation companies can make their own decisions about the relative merits of these options. Financially, there may not be a large difference between land purchase and forming landowner partnerships. The decision will likely depend on other factors, such as land and capital availability, and a desire to share more benefits with the community.

## **The project**

The goal of this component of the project was to investigate business models for commercial tree plantations between the timber industry and rural landowners. These models build on the concept of 'shared-value', which is not only about sharing financial returns. These partnerships can build stronger links with the community and be more politically and socially acceptable than large-scale purchase of agricultural land. In forming strategic partnerships with landowners and investors, the industry can generate wider social and environmental benefits from tree investments.

The project identified about 1.5 million ha of suitable, cleared, private land in target regions in western Victoria and Gippsland. However, many rural landowners are unaware of the opportunities in commercial tree plantations, or have negative attitudes due to past experiences. These attitudes towards commercial tree are often reflected in the community more generally, including key decision makers and stakeholders.

Potential investors in trees fall into three broad categories: large fund managers, individuals with significant independent capital and rural landowners. Many investment managers are also unaware of commercial tree-growing opportunities. Those who are often have mixed views about plantations and commercial tree-growing. Capital is potentially available from a range of sources, if the investment provides an acceptable rate of return. If they are interested in investment, large investors require suitable investment vehicles that provide scale and manage risks.

What kinds of business models might attract and engage investors and landowners? An effective business model involves all people in the value chain, with benefits outweighing costs for all participants. Farmers may accept more modest financial returns if trees provide on-farms benefits and service timber industry needs. Tree crops require longer timeframes to generate returns than most other forms of agriculture, with different risks and uncertainties. Model design needs to identify and manage these risks.

If done well, partnerships with landowners can enable greater access to land with lower initial capital outlay, diversify sources of timber supply and share the benefits of the investment more widely. These models involve a shift from transactional negotiations, focusing on minimising costs for industry, to longer-term relationship-building, explicitly revealing preferences and interests and working toward a shared long-term goal.

Many of the ideas presented in this report are not new. Project research and analysis has provided a basis for determining what is needed to make partnership models work at scales to make a difference to

future wood supply. Recommendations aim to avoid problems with past investment. If industry is more proactive, engaged, flexible and collaborative, confidence can be built among landowners in working with industry to address potential risks and concerns.

This transformation will take time. Companies need to acknowledge past problems and commit to a long-term process of change, in both industry and the farming community. This commitment can build a positive legacy for future investment. Companies investing in this research have shown leadership and accepted some of the risks associated with taking the first step, in working with farmers in a new way of conducting business.

## Collaborative business models

A business model represents how a company structures its resources, partnerships and customer relationships to create and capture value, i.e. to generate income. Business models are collaborative when involving close working partnerships and sharing value, i.e. create value for both the company and partners involved, for example, with local landholders and suppliers. The flow of benefits in the model needs to be transparent and distributed fairly and risks need to be clear and managed appropriately. In successful models, benefits outweigh opportunity costs for all partners.

All partnership models should be based on sound financial analysis and good technical information. Agreements should be transparent, clearly assigning ownership of different assets (land or trees) and indicating the rights, responsibilities, risks and rewards for each party. Developing tree-growing partnerships is a social learning process involving knowledge-sharing, action, assessment, reflection and review in a process of continuous improvement. Models will develop and evolve over time as companies engage and learn, and as landowners build knowledge and confidence in the benefits of commercial tree-growing and working within the sector.

Three collaborative business models are presented: **land-lease**, **joint venture**, or **outgrower** partnerships (Figure 1). Companies have used all three successfully in Australia and internationally. These are part of a broader spectrum of tree-growing business models, extending from large-scale plantation ownership by growers to small-scale farm forestry focused on producing on-farm benefits or specialty timber for niche markets.

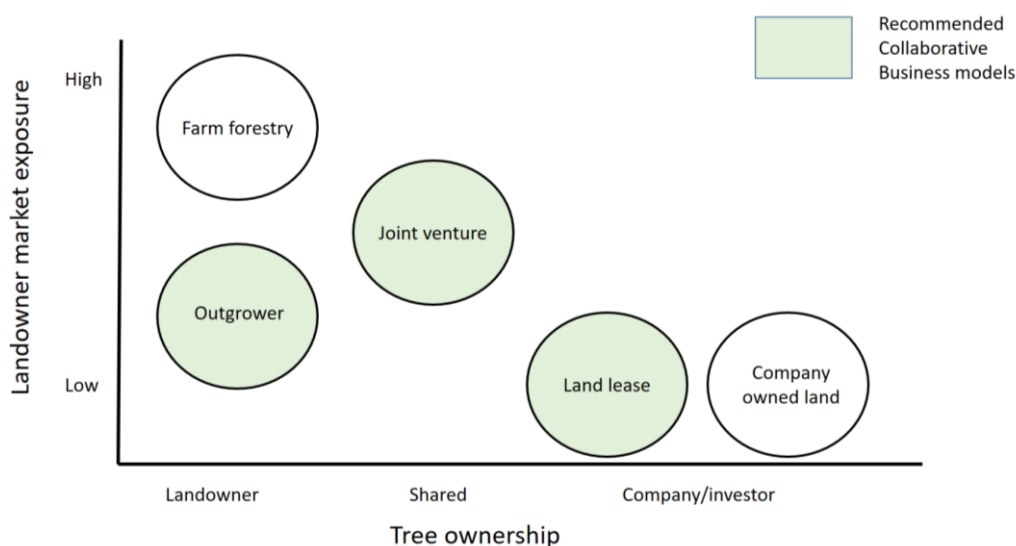


Figure 1. The spectrum of business models for commercial tree-growing.

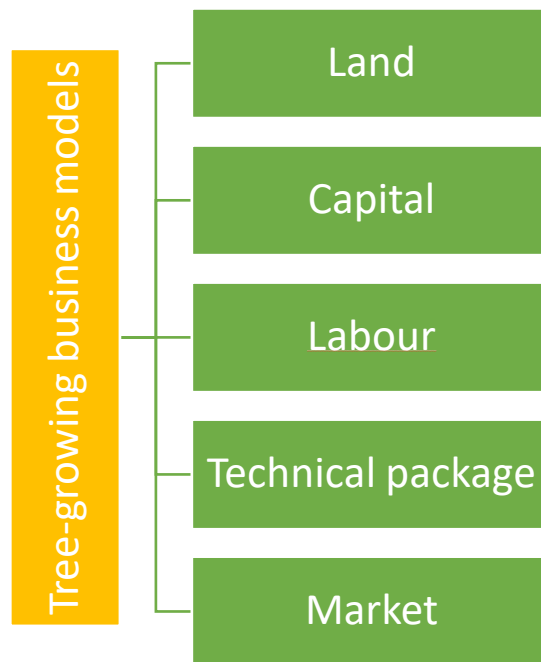


Figure 2. Elements of commercial tree business models.

Business models have five elements (Figure 2):

- **Land** needs to be capable of supporting growth of desired tree species at an acceptable rate within suitable economic distance of a mill or port, accessible by harvest machinery and appropriate transport, and of sufficient area to ensure a viable harvest volume.
- **Capital** provided by a company, landowner or third-party investors pays for land costs, and establishment and maintenance of the trees until harvest. In some cases, governments may contribute funds through grants or payments for tree-growing. Grants or payments linked to benefits such as carbon sequestration or water quality can improve the overall return on investment and make investments more attractive by providing income while trees are growing. Grants should be geographically targeted and performance-based, and consider all positive and negative impacts.
- **Labour**, the human input required to plant and manage the trees, can be provided or paid for by the company, the landowner or a third-party contractor.
- **A technical package** includes the tree species and its site and management requirements. Commercial tree species generally have superior growth, form and wood properties resulting from breeding and improvement practices. A science-based package reduces risks of inappropriate site selection or poor tree-growth and guarantees value by producing wood with known market properties.
- A **market** guarantee is generally provided through an agreement with a wood buyer to purchase wood. This is called an offtake agreement and provides confidence in the future market for landowners and investors. The buyer could be a timber processor or a third-party. The purchase

agreement can be based on a set future price or linked to a market index, e.g. export prices, and can be 'take-or-pay' or 'first right of refusal'. The latter allows tree owners to sell to another buyer offering a higher price, but the party to the agreement has the opportunity to buy at this higher price.

In each of the recommended models, a landowner provides the land. A timber purchasing or forest management company provides the technical package (required tree species and management). The models are not definitive and can be tailored to suit the needs of different parties. Variable elements in the models are the source of capital (company, an independent investor or the landowner), the nature and timing of payments to landowners, inputs by landowners, ownership of the trees, who receives payments for services such as carbon sequestration, and the landowner exposure to market risks.

The models can apply to short rotation or longer rotation softwood or hardwood plantations. Flexible configurations of trees on the land (wider windbreaks, strips, areas around irrigators or in larger blocks) are possible.

Models are underpinned by agreements that indicate: the timeframe; any interest on the property title; lease payment and cost or profit-sharing arrangements; responsibility for rates, taxes or insurance; condition of land at the end of the agreement (e.g. who is responsible for the stumps and site clean-up); transfer rights, treatment of carbon or other obligations; consultation and grievance arrangements; termination, review and renewal; and compliance with relevant legislation, planning or forest certification requirements.

Agreements also need to cover risks such as bankruptcy of either party, plant closures or major changes in market conditions. Government can provide underwriting or insurance arrangements, as in other sectors, such as construction. Management activities and responsibilities can be attached to these agreements.

## Model 1. Land lease or crop-share

INPUTS					
Contributor	Land	Labour	Capital	Technology	Market
Landowner	✓				
Company		✓	?	✓	✓
Investor			✓		

### Tree ownership

Company and/or investor

### Landowner risk

Low

### Landowner control over tree management

Low

### Most likely of interest to

Larger, commercial-scale farmers who want regular and secure annual income, who do not want to commit their own time, machinery or capital to tree-growing and with low risk appetite.

### Scale

Minimum area of 20 ha, depending on location.

### Variations

- Crop-share, the landowner agrees to delay income until harvest. This may suit landowners with high current incomes.
- Income might be accumulated lease payments, or an agreed proportion of the final harvest value. In the latter case, the landowner would have more market risk, and therefore expect a higher return.
- Reduced annual lease payments in return for permanent plantings for on-farm, aesthetic or biodiversity benefits.

- This model involves the company or investor leasing land. The company or investor provides the capital to establish and manage trees. Costs of fencing, or roading to access the trees, are agreed between the landowner and company.
- The company and/or investor owns the trees, controls management and timing of harvest, and bears the market risk.
- Carbon or water quality payments are made to the lessee(s). The lessee(s) bears the risks and transaction costs.

## Model 2. Joint venture

INPUTS					
Contributor	Land	Labour /machinery	Capital	Technology	Market
Landowner	✓	✓	✓?		
Company			✓	✓	✓
Investor			✓?		

### Tree ownership

Agreed share between parties according to inputs

Landowner risk,  
share of return

Moderate

Landowner  
control over tree  
management

Shared with company and investors

Most likely of  
interest to:

- Larger-scale commercial landowners willing to commit their own resources or funds to commercial tree-growing.
- Landowners who can bear more risk in return for a greater share of the final profit.

Scale:

Likely >50 ha to justify the transaction costs of establishing the joint venture, depending on location and tree growth rates.

Variations:

- Landowner may receive intermediate payments, as agreed between the parties.
- Reduced final crop share in return for permanent plantings for on-farm, aesthetic or biodiversity benefits.

- In this model, the landowner contributes land, labour and equipment, and possibly part of the capital. The company provides tree seedlings and specialised equipment, and prescribes management inputs. Third-party investors potentially provide capital to establish and maintain trees.
- The market is secured through a 'take-or-pay' wood purchase agreement.
- The landowner, the company and potentially an investor jointly own the trees.
- Parties share decision-making on tree-management and timing of harvest.
- Parties share government payments for carbon or water quality benefits according to tree-ownership share.

### Model 3. Outgrower

INPUTS					
Contributor	Land	Labour	Capital	Technology	Market
Landowner	✓	✓	✓		
Company			?	✓	✓
Investor			?		

Tree ownership	
	Landowner
<b>Landowner risk, share of return</b>	Moderate-High
<b>Landowner control over tree management</b>	Moderate-High
<b>Most likely of interest to</b>	Farmers who want a higher degree of control and take a greater interest in managing and marketing their trees.
<b>Scale</b>	5 ha upwards. Absolute minimum depends on the volume of wood.
<b>Most likely product</b>	Short-rotation pulpwood, or softwood or hardwood sawlogs. Depends on the interest of the landowner and the willingness of buyers to commit to a future market price.
<b>Variations</b>	Wood purchase agreement on a 'take-or-pay' or 'first right of refusal', allowing sale to another buyer offering a higher price.

- In this model, the landowner provides land, labour and capital to establish and manage trees. The landowner might borrow funds from a third-party investor or a lender. The company could provide seedlings of the desired species at cost and management information.
- A future market is secured through a wood purchase agreement, either 'take-or-pay' or 'first right of refusal'. The latter provides less security for the grower but the prospect of a better price in a rising market, if there are alternative buyers.
- The landowner owns the trees, and has more control over tree location, integration with the farm operation and management decisions, such as the time of harvest. The landowner bears more risk but has the potential for greater reward, depending on the market.
- The landowner receives government payments for carbon or water quality benefits and bears the associated transaction costs.