

# Integrating trees in rural landscapes: What do landholders think?

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## Research report

### 1 *What is this study about?*

Forest plantations are a major source of timber and wood products in Australia. However, although there is an increasing demand for wood and wood-based products, there has been an overall decline in Australia's plantation area, with almost no new plantations established since 2008. It has been known for some time that integrating timber trees in farmland can potentially provide additional income and a range of environmental, social and economic benefits to farmers. The challenge is to develop new ways to integrate tree plantations with existing agricultural enterprises that can provide multiple benefits to landowners while meeting the increasing demand for timber. This is the aim of a multidisciplinary research project: *Next Generation Forest Plantation Investment* being undertaken by the University of Melbourne and Swinburne University of Technology.

Funding for the project is through the Commonwealth Government's Voluntary Matching Program, co-funded by Hancock Victorian Plantations Ltd, Midway Ltd, Australian Paper, AKD Softwoods and OneFortyOne Plantations Ltd. Forest and Wood Products Australia administers the project on behalf of the Department of Agriculture and Water Resources.

This research report summarises findings from the second stage of the project that aimed to understand the views of landowners about integrating trees on their land.

### 2 *Research objectives and method*

Information was collected using a survey mailed to owners and managers of properties larger than 10ha in southwest Victoria within 200 km of Colac and Mt Gambier, and in Gippsland within a 200km radius of Morwell. Questions in the survey were based on findings from the first stage of the study involving 34 interviews with landowners within the study area. The survey had three sections: the first seeking views on planting trees for commercial harvest; the second about the importance of different factors when making decisions about establishing trees for commercial harvest; and the third about the relative acceptability of different establishment, management and payment options if trees were planted for commercial harvest.

#### 2.1 *Who took part in the survey?*

A total of 183 surveys were returned. Survey respondents were engaged in a range of agricultural enterprises, including dairy, cattle, sheep (wool and prime lambs) and forestry. Beef cattle was a major activity for almost half (49%) of respondents. The size of rural landholdings ranged from 13 ha to 8,500 ha (mean 219 ha, median 79 ha). While most participants (84%) had no previous involvement with growing trees for commercial harvest, more than half (68%) indicated they were either actively considering or might plant trees for commercial harvest in the future. Two-thirds of the respondents were male (69%), with most over 50 years of age (82%). Almost half (42%) of the survey respondents had properties that had been in the same or in family ownership for more than 30 years.

### 3 Research findings

#### 3.1 What were the views of respondents about planting trees for commercial harvest?

Three broad types of views about planting trees for commercial harvest were identified.

1. View type 1: Commercial plantings can provide a range of on-farm benefits. This could include diversifying income, increasing land value, providing a legacy for future generations, and generally adding to the enjoyment of owning land. Within this view type, commercial forestry is not considered to conflict with the main farm business, commercial plantings are not considered to discourage future buyers of the land, and uncertainty about future markets and returns does not discourage growing trees for commercial purposes.
2. View type 2: Farming is a business. As such, maximising income from the land is the most important factor in land use decisions. Within this view type commercial tree planting is likely to be considered only if the financial returns are higher than those from current activities or if trees are planted on poorer or less productive land. While uncertainty about future markets and returns from commercial forestry is a concern within this view, commercial plantings may be considered if they provided additional farm benefits such as shade and shelter, i.e. trees are planted to complement current land use.
3. View type 3: Growing trees for commercial purposes conflicts with the main farming business. Those with this type of view prefer to focus on existing agricultural activities rather than growing trees for commercial purposes.

Survey respondents had quite different views about planting trees for commercial harvest (see Figure 1). Views about the on-farm benefits of trees were relatively evenly spread amongst survey respondents, with 37% of respondents agreeing and 37% disagreeing with the view that trees planted for commercial harvest could provide on-farm benefits. Views that trees for commercial harvest conflicted with the main farming business were also divided, with over one third of survey respondents (44%) agreeing with this view, while slightly fewer respondents (39%) disagreed with this view. There was more consensus about the importance of financial returns from commercial plantings, with only 23% of respondent disagreeing with this view.

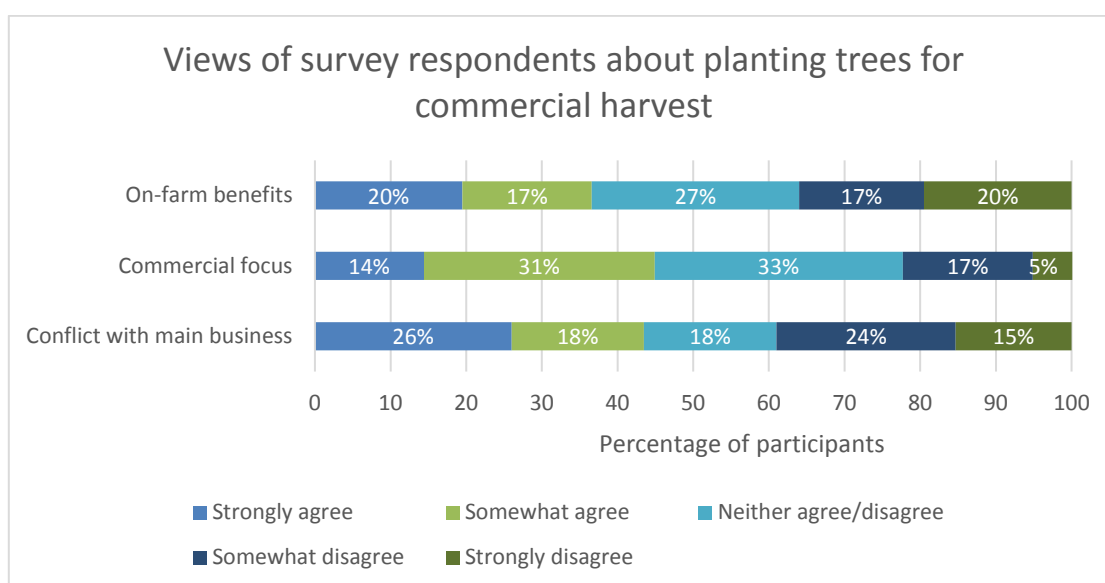


Figure 1 Percentage of survey participants who agreed, neither agreed not disagreed, or disagreed with the three types of views about planting trees for commercial harvest.

### 3.2 How did participants regard planting trees for commercial harvest?

However, the analysis also indicates that the views of survey respondents about integrating commercial plantings on their properties are more complex than indicated above. Rather than falling into only one category, respondents tended to hold a combination of views. A cluster analysis indicated five broad groupings of survey respondents sharing similar views about commercial plantings (see Figure 2).

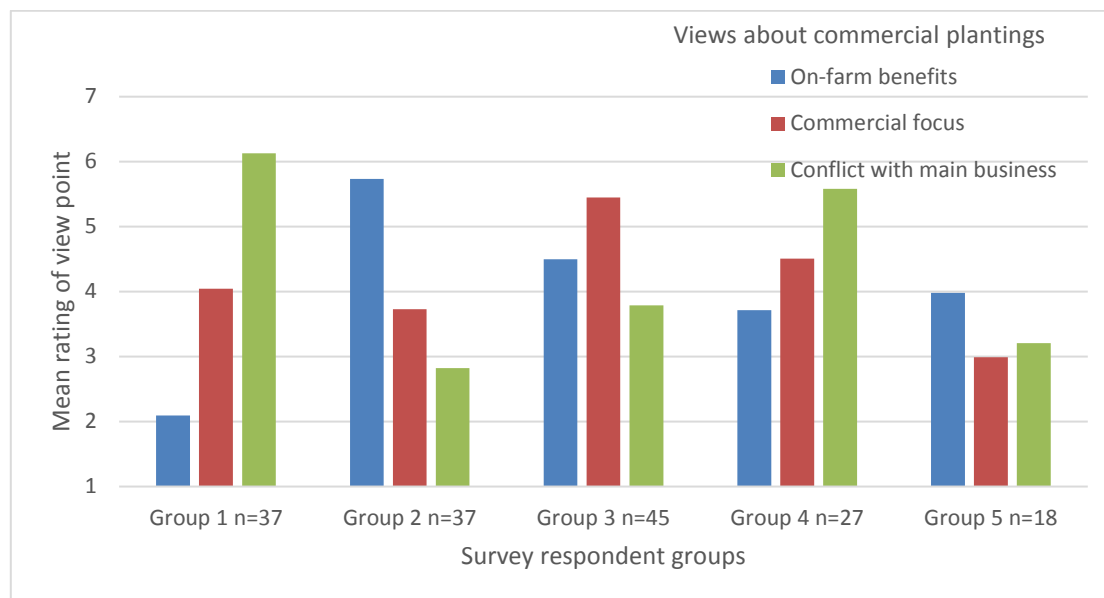


Figure 2: Survey respondents grouped by shared views on planting trees for commercial harvest. The mean rating for each view point is indicated on a 7-point scale where 1 = Strongly disagree and 7 = Strongly agree

Survey respondents in group 1 prefer to focus on their current land use, feeling that they need to use all their land for existing agricultural enterprises. Respondents in this group tend to strongly disagree that growing trees for commercial harvest can provide on-farm benefits. In contrast, survey respondents in group 2 share the view that commercial plantings can provide on-farm benefits; they do not agree that commercial plantings conflict with current land uses. Income maximisation was not a major concern for respondents in this group.

Respondents in group 3 have a focus on commercial outcomes, while also agreeing that plantings can provide on-farm benefits. Like respondents in group 1, those within group 4 tended to agree commercial plantings would conflict with their current land uses but were more likely to agree that forestry could provide on-farm benefits than respondents in group 1. Respondents in group 5 were more ambivalent about the benefits of integrating trees on their properties; they did not tend to agree that farming was a business rather than a way of life, or that plantings for commercial harvest conflicted with their current land use.

### 3.3 What factors are important when making decisions about establishing trees for commercial harvest?

Four broad factors were important in deciding to engage in commercial forestry:

1. *Landowner input*

Respondents wanted input into the initial design and planning of tree plantings, including choice of tree species, shape of planting (such as in blocks, belts or some other configuration), and where the trees are planted; as well as having control of, and access to, the land once trees are established.

2. *Financial returns*

Respondents wanted information on the financial returns from commercial plantings, including the availability of tax concessions or additional payments for environmental benefits such as carbon credits.

3. *Additional benefits*

There was some preference for planting designs that provide environmental and on-farm benefits in addition to the financial returns from forestry. These benefits include increasing biodiversity and providing shade and shelter, even if it meant lower commercial returns from the trees. This could include integrating permanent plantings not intended for harvest with commercial trees.

4. *Ongoing relationship*

Respondents would like timber companies to provide regular updates about tree performance, market trends, prices, and have personal contact for dealing with any issues that might arise.

### 3.4 How acceptable were different establishment, management and payment models?

Models for establishing trees for commercial harvest on rural land can vary. Responsibility for establishing and managing the trees and associated costs and the distribution of financial returns can differ between different landowners. The following models were identified from survey responses:

1. *Independent grower*

The landowner is responsible for establishing and managing the trees, including stump removal, if needed, at the end of tree rotation. The landholder retains ownership of the trees until they are sold. The landholder pays all costs associated with establishment and management of the trees and receives all or a share of the net proceeds at the prevailing market price at the time the trees are sold. The landowner bears the costs, risks and potential returns.

2. *Commercial partnership*

The landowner provides the land and a commercial partner is responsible, and pays all associated costs, for establishing and managing the trees, including stump removal. The partner retains ownership of the trees. The landowner receives either an annual payment or a share of the net sales proceeds. Also acceptable within this model were an 'offtake agreement' with an agreed price determined before the trees are planted, or an annuity tied to the projected returns from timber sale. The commercial partner bears the costs and most of the risk.

### 3. *Shared ownership*

The landowner provides the land, a commercial partner is responsible for some aspects of establishing and managing the trees, with the landowner also contributing some work (e.g. fencing or weed control). Ownership of the trees is shared proportionally by prior agreement according to the value of inputs. The landowner may be paid for the work done and receives an annual lease payment with no share of the sales proceeds. Alternatively, the landowner may contribute an agreed share of the costs (in cash or in kind) and receive agreed share of the net sales proceeds. Costs and risks are shared in this arrangement.

All three models were acceptable to respondents in the survey, although model preference varied. The shared ownership model tended to be favoured by most respondents.

## 4 *Conclusions*

The aim of the survey was to better understand the views of landowners and managers about planting trees for commercial harvest. Views and expectations about integrating commercial forestry with existing agricultural land uses varied considerably between respondents. More than half of the respondents indicated willingness to consider commercial forestry, but new models need to be flexible to meet the differing objectives and concerns about commercial forestry. Financial returns from trees need to be similar to those from other land uses, landowners need to be involved in decision making on commercial plantings, and plantings need to be designed to provide on-farm as well as commercial benefits. Investment partnership arrangements also need to be flexible to accommodate different financial circumstance and different levels of interest and capacity to be involved with managing trees.

## 5 *Where to from here?*

Findings from this survey will be used to design and test new models for integrating trees in rural landscapes that meet the needs of landowners, industry, capital investors and other stakeholders.

## 6 *Finally, thank you to all survey participants*

We are very grateful to all the survey participants who took the time to share their views about establishing trees for commercial harvest on their land.

If you would like more information about the project, or if you have any comments or suggestions, please contact:

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