



Incentives to promote greater native afforestation in New Zealand

Peter Edwards, Manaaki Whenua – Landcare Research; Geoff Kaine, Manaaki Whenua – Landcare Research; Simon Wegner, Scion; Margaret Brown, AgResearch

KEY MESSAGES

Native afforestation provides benefits for the environment and to society. Some points to note when considering the design of a programme to increase native afforestation include:

- Most landholders are only moderately interested in applying for financial incentives
- Incentive programmes with high transaction costs will likely discourage participation
- Landholders are interested in incentives/programmes that provide wrap around support for planting native trees
- Supplementary incentives likely to engage more landholders include reducing transaction costs, and targeted technical assistance and improved advice and information.

A one-size fits all incentives programmes is unlikely to appeal to many landholders and a suite of incentives are needed to engage a wider range of landholders.

BACKGROUND

Native afforestation has the potential to generate significant benefits for the New Zealand environment and New Zealanders. However, current approaches using financial incentives are falling short of providing the necessary impetus to stimulate widespread plantings by rural landholders.

The One Billion Trees Programme (1BT) is one example of a government programme aimed to increase tree planting

across New Zealand by providing direct grants to landholders to plant trees. The 1BT fund is now closed and our exploration of how landholders engaged (or not) with the 1BT fund can inform the structure of incentives for future afforestation grant funds or schemes.

Financial incentives via an afforestation grant programme were used by 1BT as the key mechanism to achieve the goals of the programme. However, there has not been significant uptake of the 1BT financial incentives among farming landholders. To promote greater rates of afforestation will require alternative incentives to also be used.

Surveys (see Box 1) we undertook found that up until mid-2021, less than 3% of landholders had received financial assistance through the 1BT programme. In contrast, 37% had received a grant to plant trees from some other funding source. Most landholders only had mild to moderate interest in seeking financial support from 1BT to plant trees. This means that landholders will only devote a limited amount of time and energy to seeking financial assistance to plant native trees, even if they have a favourable attitude towards financial assistance. Thus, the financial incentives offered through 1BT were not likely to have high uptake and other approaches are needed that appeal to a wider range of landholders.

By classifying landholders into different segments – planting for farm productivity or business performance, aesthetics, and full-scale conversion – several approaches were identified that could promote greater native afforestation rates. Using a combination of ‘traditional’ and non-traditional approaches to the design and implementation of incentives will enable landholders to select the incentive(s) that work best for them based on their aspirations, goals, and context.

SUPPLEMENTARY APPROACHES TO INCENTIVISE NATIVE AFFORESTATION

Two key approaches were identified that could potentially increase landholder willingness to plant native trees. These approaches rely on developing partnerships with Councils, non-profit organisations, and extension service providers to support landholders to plant and manage native trees. These approaches would be used concurrently and include:

1. Reducing transaction costs

Transaction costs such as completing applications, finding seedling suppliers, and planting and management advice are deterrents for some landholders participating in the 1BT programme. To increase participation:

- The application could be simplified for the landholder or Te Uru Rākau or regional council staff could complete the application process on the behalf of landholders. This will reduce the time and stress of completing what many perceive as an arduous and complicated application process.
- Allow existing documentation, e.g. Farm Environment Management Plans (FEMPs) to form a large part of the application documentation needed to participate in the afforestation grant programme. This reduces duplication in effort on the part of the landholder.
- Costs could be reduced if regional councils provided a rates rebate on land afforested with native trees. The rebate could be subject to a minimum forested area and other restrictive covenants imposed by Councils for rates rebates could be removed.
- The burden of sourcing and securing native seedlings could be reduced. For example, coordinating or subsidising bulk purchases (to gain economies of scale, reducing costs) of native trees through a Council or other organisation so landholders place an order once per year and the seeds or seedlings are delivered to their door.
- Costs could be further reduced through economies of scale and native tree survival rates could be increased through the provision of subsidised management services (e.g. assistance with tree planting, weed and/or pest control) through Councils or catchment groups.

2. Improving access and quality of advice and information

Easily accessible, factual information and advice was the second key element of wrap-around support requested by landholders. Because the mass growing of native trees is relatively new/unknown, having appropriate information readily available and kept up

to date is important to help ensure a high seedling survival rate. The current offering of extension and consulting services available for agriculture and forestry does not yet extend to native trees. Some avenues include:

- Ensuring information is easily accessible, all in one location, and contains information on planning, planting, managing, and growing native trees. This information should also include social, economic and cultural information, such as information on gaining a social licence to operate.
- Improving the Canopy website (www.canopy.govt.nz) as the basis of the Forestry Information Hub. The site could contain all the information that landholders considering planting native trees need to plan, plant, and manage their trees. The Forestry Information Hub should also contain research and information beyond the silvicultural information and include social, economic, and cultural information, e.g. how to gain and maintain a social licence. Maintaining a social licence is important to mitigate community concerns with trees on your land.
- Reviewing existing extension services and incentivising training or accrediting new or existing extension services to provide native tree/forest advice and information.
- Providing professional or specialist assistance for growing large-scale native tree plantations. Technical and professional advice and support for complex processes, for example mapping or boundary surveying will help landholders more easily prepare application documents.
- Ensuring management advice and support (e.g. through a retainer or subsidy direct to specialist extension services) is guaranteed until the trees have grown past a critical point (a point where ongoing survival is highly likely). This will help overcome the initial capability gap with successfully growing native trees.
- Promoting the narrative that planting trees is not 'selling out' from farming. Trees have played an integral part of farming systems globally and can be an integral part of a farming system in New Zealand. This narrative may encourage reticent landholders to participate in afforestation grant schemes.

BENEFITS OF INCENTIVISING GREATER LEVELS OF NATIVE AFFORESTATION

Implementing the approaches above can provide environmental, social, economic and cultural improvements to New Zealand through the planting of native trees. The consequences of implementing some of these approaches, however, may raise concerns with community members in

areas of tree planting, and should be implemented cautiously.

The benefits to implementing the supplementary approaches include:

- **Greater participation:** Reducing transaction costs for participation in an afforestation grant programme will likely encourage more landholders to participate, enable trees to be planted faster, and ensure the goals of the programme are met.
- **Better seedling survival:** Supporting the provision of ongoing, consistent, appropriate advice on planning, planting, and early management of native trees through direct subsidies to specialist extension services has the potential to ensure better survival of the seedlings. Council, consultant or non-profit involvement is central to implementing this on the ground.
- **Improved landholder well-being:** Reducing or eliminating transaction costs for participation could improve the well-being of landholders. Rural landholders are often considered asset rich, and cash and time poor. Reducing transaction costs decreases their already stretched cognitive and decision-making load. The promotion of positive narratives around trees on farms can remove some perceived stigma that is currently associated with planting trees on farms.

Some issues that need to be considered when implementing the supplementary approaches include:

- **Timing of the advice:** Specialist advice needs to be provided early so that landholders understand the purpose or end goal of planting, and ensuring that tree species and planting locations are appropriate for achieving those goals. Having the wrong tree in the wrong place can cause economic and environmental damage, e.g. wildings.
- **Social licence to operate:** Any planting of trees, including natives, on a large scale can raise social and cultural concerns, e.g. community acceptance and harvesting/using taonga species. Providing support, guidance, and information would help landholders mitigate these concerns early in the process. For example,
 - Guidance on appropriate local tikanga for the planting and use of native trees that are considered taonga species, e.g. particular karakia and methods for harvest or use.
 - Planting trees, including natives, especially for eventual harvest, can raise community concerns, e.g. clear-felling, trucks and road degradation, and debris flows. Information and support for gaining and maintaining a social licence to operate are important.

The supplementary approaches being proposed here would sit alongside financial incentives and are aimed to improve participation in any afforestation programme. The approaches target the key barriers rural landholders noted and will provide a wider set of incentives to stimulate greater native afforestation activities by rural landholders.

ACKNOWLEDGEMENTS

We would like to acknowledge Te Uru Rākau, which provided funding for this policy brief through the One Billion Trees Partnership fund.

Box 1: Analytical methodology

The I₃ Framework is a model of compliance behaviour proposed by Kaine et al. (2010). It is grounded in social psychology and marketing theory and provides the theoretical foundation for identifying what factors influence landholders' willingness to seek incentives for planting trees.

The findings presented in this policy brief come from a survey of 500 landholders (primarily sheep, beef, dairy and lifestyle block owners) across King Country, Hawke's Bay, the Manawatu, Wairarapa, and Southland conducted in May–June 2021.

Kaine G, Murdoch H, Lourey R, Bewsell D 2010. A framework for understanding individual response to regulation. *Food Policy* 35: 531–537.

CONTACTS

Peter Edwards

Manaaki Whenua – Landcare Research, Level 6, 17-21 Whitmore St, Wellington, 6011.

EdwardsP@landcareresearch.co.nz

Geoff Kaine

Manaaki Whenua – Landcare Research, Gate 10, Silverdale Rd. University of Waikato, Hamilton, 3216.

KaineG@landcareresearch.co.nz

Simon Wegner

SCION, Te Papa Tipu Innovation Park, Titokorangi Dr., Rotorua, 3010.

Simon.Wegner@scionresearch.com

Margaret Brown

AgResearch, Grasslands Research Centre, Tennent Dr. Fitzherbert, Palmerston North, 4410.

Margaret.Brown@agresearch.co.nz

