



Native vegetation on sheep and beef farms

Summary Report

Beef + Lamb New Zealand commissioned a desk-top assessment using satellite imagery of the amount of native vegetation, and especially native forest, occurring on sheep and beef farms in New Zealand.

The peer reviewed study, headed by the University of Canterbury and supported by staff from the Auckland University of Technology, is one of the steps outlined in B+LNZ Environment Strategy.

The objective of undertaking the work was to understand where we are now, and to enhance how B+LNZ supports sheep and beef farmers' contribution to New Zealand's biodiversity going forward.

The study has identified that:

- Collectively, sheep and beef farms contain the largest amount of native vegetation present outside of public conservation land.
- 24% of all New Zealand's remaining native vegetation cover, including both native grasslands and native forest, is estimated to be on sheep and beef farms.
- 17% of all New Zealand's native forest¹ is estimated to be on sheep and beef farms.
- 13% of the total area of sheep and beef farms, around 1.4 million hectares, is estimated to be covered by native forest. Native forest on sheep and beef farms is an important resource for biodiversity conservation in New Zealand, especially in regions where there is relatively little public conservation land, and is also a source of carbon sequestration.
- In eight of the nineteen national land environments², there is proportionally more native forest on sheep and beef farms than on public conservation land. These environments occur at lower altitudes and in drier areas of New Zealand and are particularly important because they are also the areas with the least remaining native vegetation.
- The research does not include exotic plantation forestry, shelter belts, erosion planting or riparian planting on sheep and beef farms.

Published July 2018

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What we know about native forest on sheep and beef farms

Native forest is present on sheep and beef farms for a variety of reasons. The diverse and often remote locations of sheep and beef farms means they avoided some of the large scale clearances that occurred with the arrival of different waves of immigrants to New Zealand and Government assisted land clearance loans. Sheep and beef farms tend to be more extensively farmed than other land uses. We also know that farmers generally place a high value on the benefits of having native vegetation on their properties, such as amenity value, habitat for wildlife, shelter for stock and for the enjoyment of visitors.

There is currently little coordinated research or national monitoring of either the quality of, or any changes to native vegetation cover, on sheep and beef farms. This study provides the basis for B+LNZ taking the next steps to support or coordinate work that will provide a detailed analysis of how the vegetation is changing over time, its existing and potential biodiversity values, and carbon sequestration potential. Some of this work is already underway through the National Science Challenge.

The study is a starting point for developing enduring programmes and partnerships to support landowners to continue to enhance and protect areas of native vegetation on their properties, especially where they are critical habitats for flora and fauna.

Implications of these findings

“Sheep and beef farmers have strong ties to their land and the species that call it home, and our extensive farm systems provide an environment in which biodiversity can thrive.

This study provides evidence of the passion I hear from farmers every day about their land and the efforts they have been taking over the years to protect it.

By making best use of our land, using tools like QEII national trust covenants and farm management plans, farmers can optimise production and help to underpin New Zealand’s unique biodiversity.”

Sam McIvor, CEO, Beef + Lamb New Zealand

This study highlights a number of important issues:

- Sheep and beef farmers already provide a significant contribution to the conservation of New Zealand’s native vegetation and the biodiversity it contains.
- The New Zealand sheep and beef sector is well positioned in terms of the amount of native forest on its land.
- There are significant opportunities to continue to support the great work of landowners to look after these areas.
- Very careful consideration will need to be given to how the billion tree programme interacts with farmers’ existing priorities to manage and enhance native vegetation.
- In developing a National Policy Statement (NPS) for biodiversity, we need to think carefully about how it supports landowners in their management of native vegetation on their farms and to meet wider landscape goals.
- The research is relevant to the proposed zero carbon legislation. While further research is needed, the 1.4m hectares of native forest will be sequestering carbon. Most of this is unlikely to be counted in the current Emissions Trading Scheme. Further research is now being undertaken to measure the potential of this vegetation to sequester carbon and this work will help inform B+LNZ and farmers input into the Zero Carbon Bill.
- A great incentive for farmers to retain and enhance native forest on their farms would be to include it in the accounting framework for any enhanced Emissions Trading Scheme. This would provide further support farmers to look after native forest.
- The research also supports B+LNZ work to develop an on-farm carbon calculator.
- While this study focused largely on native forest, native grasslands and wetlands are an important part of supporting biodiversity on sheep and beef farms.





What is already being done to protect and enhance existing native vegetation on sheep and beef farms

Sheep and beef farmers and their communities are already taking long term steps to look after native vegetation and other important habitats that occur on their farms:

- Sheep and beef farmers have been proactive in taking up QEII national trust and Nga Whenua Rahui covenants to permanently protect native vegetation on their farms. Over half of all QEII covenants, are on sheep and beef farms.
- Most district plans require a resource consent to clear any significant or highly valued areas of native vegetation.
- Many sheep and beef farmers have been initiators of or are a key part of landscape scale predator control throughout native vegetation on their farms.
- There are many examples both at a farm and a wider landscape scale of where farmers are working on their farms and with their catchment communities to protect and enhance native vegetation and to restore healthy biodiversity in pastoral landscapes.
- Encouraging farmers to work together with their communities to achieve biodiversity priorities, is a key part of B+LNZ's environment strategy.



SUPPORTING FARMERS TO WORK TOGETHER TO ACHIEVE LANDSCAPE SCALE RESTORATION

Cape to City is located in Te Matau a Māui/Hawke's Bay on the east coast of New Zealand's North Island. It is one of the first projects in the country to scale up biodiversity restoration and predator control and covers 26,000 hectares (64,247 acres) of land.

The cape to city project is a perfect example of the potential that arises from farmers working together with their communities to achieve bold and connected biodiversity goals.

The project works on 5 key areas including predator and weed control, habitat restoration, species reintroduction, project management, telling their story and engaging the community and research.

Through implementation of its Environment Strategy B+LNZ will encourage and support farmers to achieve more by working together in more places like this: www.capetocity.co.nz



PASSION AND INNOVATION PROTECTING TREASURED LAND

Southland sheep farmers Gay and Ron Munro have two QEII-covenanted areas – a peatbog with regenerating forest (64ha) on their farm and the other a nearby wetland area (89ha), adjoining a Department of Conservation reserve.

The Munros registered the first covenant on their farm in 1990, making open water areas, which have become home to eels and a stronghold for the giant kokopu – a rare native New Zealand fish.

The Munros are among hundreds of sheep and beef farmers who have protected over 180000 Ha of land through QEII. This example also highlights the potential for farm environment planning to help identify areas where covenants and other management tools can help to support strong biodiversity outcomes.

Biodiversity and carbon - Goals and actions

This report provides an important baseline to inform both the Biodiversity and Carbon goals and actions outlined in B+LNZ's Environment Strategy and Implementation Plan. The report also supports diverse and integrated approaches to the other pillars of our strategy - Clean Water and Healthy Soils. It provides valuable information to help B+LNZ engage with the government in the development of a National Policy Statement (NPS) for Biodiversity and Carbon Zero Legislation. Sheep and beef farmers have already reduced their GHG emissions by 30% from 1990 levels; this research will support further work to help understand the current and potential carbon sequestration opportunities for the sector.



THRIVING BIODIVERSITY

Goal: Sheep and beef farms provide habitats that support biodiversity and protect our native species.



CARBON NEUTRAL

Goal: Farmers continue reducing carbon emissions, moving towards a carbon neutral sheep and beef sector by 2050.

¹Native forest is defined as mānuka and kānuka; broadleaved indigenous hardwoods and indigenous forest (LCDB classes 52, 54 and 69). Matagouri, grey shrubland or sub-alpine shrubland are not included in this estimate.

²As defined by the Land Environments of New Zealand (LENZ) classification system. The eight land environments with high proportions of native forest on sheep and beef farms are A - Northern Lowlands; B - Central Dry Lowlands; C - Western & Southern North Island lowlands; E - Central dry foothills; G - Northern recent soils; I - Central recent poorly-drained soils; J - Eastern dry recent soils; and N - East South Island Plains.

The environment strategy implementation plan sets out steps that will be taken to achieve these goals including:

- All sheep and beef farms having an active farm plan addressing biodiversity, water, soil, carbon emissions and sequestration by 2021.
- Supporting catchment communities to improve biodiversity, with farmers, NGOs and their communities working together. This is likely to include work to support connected predator free habitats and to help develop, prioritise and implement actions to enhance biodiversity. They will also enable action on carbon issues at a catchment-level.
- Extension programmes will support farmer knowledge and capability on biodiversity issues, including how farmers can best monitor, manage and or enhance biodiversity on their farms.
- Research will help to identify priorities for biodiversity, including understanding eco-system services provided, and gaining a deeper understanding of the habitat quality of vegetation on sheep and beef farms and supporting methods to improve it.
- Enabling farmer leadership on biodiversity and carbon issues, and supporting leading farmers to tell their stories of how they manage biodiversity on their farms.
- Establishing measurable indicators for biodiversity and carbon on sheep and beef farms, and reporting publicly on them.

What can farmers do now to enhance and protect native vegetation on their farms

- Get good advice.
- Consider how your Farm Environment Plan identifies and sets out actions to support improved biodiversity.
- Exclude stock from larger areas of native forest and wetlands.
- Undertake plant and animal pest control.
- Link up with neighbours or your catchment group to connect predator free habitats across farms.
- Look for partnerships to support your actions and to attract funding.
- Consider using a QEII covenant to permanently protect more important areas of native vegetation.

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