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| The New Zealand Sheep & Beef Sector’s Contribution to Biodiversity & Carbon Sequestration |
| **Background/Objectives** Climate change and the environmental impact of food production is a modern challenge, becoming part of the wider sustainable diets discussion. In the context of New Zealand (NZ) sheep and beef farming land use, we assessed how the NZ sector currently contributes to native biodiversity conservation and carbon sequestration.**Methods**An analysis of native vegetation on sheep and beef farms in NZ was undertaken using remote sensing information. Land cover data was sourced from Agribase, Land Use and Carbon Analysis System, Land Cover Database and Land Environments of NZ. We calculated the area of native vegetation and forest on public conservation land, sheep and beef farms and other land uses. We then assessed how native forest per land use was distributed throughout different environments.**Results**Collectively, sheep and beef farms contain the most extensive land use in NZ, at 40% of the total land area; 24.5% of NZ’s native vegetation (2.8 million ha) and 17% (1.4 million ha) of all native forest is estimated to be on sheep and beef farms. This is the largest amount of native vegetation outside of the public conversation estate. Approximately 1.4 million ha (13%) of sheep and beef farms is estimated to be covered by native forest.**Discussion**NZ sheep and beef farms contain substantial native vegetation including forest types not well represented in the conservation estate. This vegetation is likely an important resource for carbon sequestration, thus may help the sector’s ongoing efforts to becoming more sustainable and carbon neutral by 2050. The existing native vegetation on sheep and beef farms could also serve as a restoration template. By investing in improving vegetation condition, area and connectivity through landscape-level conservation action, we may expand the health and range of ecosystems we are able to protect.Greener landscapes benefit human health and happiness, through cultural importance of taonga species and connection to the land. By protecting native vegetation in farming landscapes, personal and cultural wellbeing is also protected.While NZ farms are somewhat unique, there is a global need to balance production landscapes with human and ecosystem health. NZ could lead in this space by embracing the potential of our farmland to contribute to sustainable economies, ecosystems and health. However, realizing that potential will require multi-scale approaches and working with landowners**Keywords**Food Production; Biodiversity; Carbon Sequestration; Conservation; Environment |