October 2023

Private Forestry Guidance Materials

Information Sheet 01: Benefits of private forestry

Overview

Commercial forest management is one of the most sustainable and rewarding land uses available to private landowners. Whether as part of a broader agricultural business or as a stand-alone enterprise, small-scale private forestry plays a critical role in providing timber to build houses and produce packaging, store carbon to fight climate change, and deliver a range of other benefits to individual land owners and the economy more broadly.

Australia is experiencing a gap between available supply and market demand for sawn timber, which is forecast to exceed 2.6 million m^3 every year by 2050. This forecast takes into consideration factors including stable domestic sawlog production, an estimated population of 40 million by 2050, housing demand of 259,000 new dwellings each year and no significant change in the types of houses being built. For Australia to meet its future demand for housing, there is a need to quickly increase the amount of land dedicated to the commercial production of timber.

Farm forestry, private native forestry and management of Indigenous-owned forest lands will play an increasingly important role in addressing this supply challenge and contributing to Australia's efforts to reduce carbon emissions.

Financial performance

Forest product revenue

Trees can provide individual farm enterprises with a profitable alternative income stream through generation of forest products while improving farm productivity and providing ecosystem services. Forest products may include timber products for commercial sale or on-farm use and non-timber products such as honey. Forest products income is independent of the price movements or timing requirements of other agricultural commodities.

Carbon revenue

Some active forest management strategies are eligible to participate in Australia's Emissions Reduction Fund (ERF), which can provide additional revenue to the forest owner. For eligible forestry activities, forestry practitioners can register a carbon forestry project with the ERF and generate Australian Carbon Credit Units (ACCUs). ACCUs can be retained by the owner to offset their own emissions from other on-farm activities, sold through reverse auctions run by the Clean Energy Regulator, or sold into the secondary market.

Farm productivity

Productivity benefits of actively managed forests in farming settings include shade and shelter for stock and crops, erosion prevention, improved water quality and management of salinity.

Environmental benefits

Carbon capture and storage

Carbon sequestration is an essential ecosystem service provided by all forests. Trees absorb carbon dioxide from the atmosphere, converting the carbon component to wood and releasing oxygen. The amount of carbon stored in a forest equates to the amount of biomass in vegetation (above and below ground), woody material, leaf litter and soil.

When a forest is harvested for commercial timber production, the fibre and wood products that are manufactured continue to store carbon for a long time.

Carbon accumulation rates correlate closely with the growth rate of the forest. Carbon is released through decomposition, which increases as forests age. Burnt wood also releases carbon. Active commercial management of forests encourages tree growth, which enables forests to continue to accumulate and store carbon at a higher rate than unmanaged forests. Captured carbon is stored for the long term in harvested wood products.

As natural capital accounting methods develop and product markets preference agricultural activities that can clearly demonstrate the broader sustainability benefits of on-farm activities, forest owners are well placed to derive market benefits from active forest management.

Biodiversity and other environmental benefits

Active management of plantations and native forests provide considerable biodiversity and ecosystem health benefits.

Plantations, even of exotic pine species, provide foraging and nesting habitat for a range of birds, small mammals and invertebrates. These plantations support wildlife populations by extending habitat around native vegetation remnants and providing landscape connectivity. Plantations can be useful in managing soil and water health and stability, for example by preventing erosion and managing salinity.

Active management of private native forests can substantially improve forest health and productivity. For example, thinned native forests suffer less tree death under drought conditions due to increased water availability and are generally less susceptible to insect and disease damage because individual trees are healthier. Stressed trees that are more susceptible are removed during thinning.

Silvicultural treatment of native forests can deliver significant environmental benefits, such as accelerating the development of large canopies, hollow formation and coarse woody debris in regrowth stands providing wildlife habitat sooner. Under many forest conditions, thinning increases water runoff and groundwater recharge, benefiting aquatic habitat and water yield through increased stream flows for up to a decade after the operation.