

Gegedzerick Open Day



LANDCARE LEADS THE WAY
Sat, 25 March 2023

Station 3 - CSIRO fungi-treated seedlings

The 1000 seedlings planted as part of this experiment are at the far southern end of the TSR (Station 10).

The aim of this experiment, led by CSIRO with collaborations from Greening Australia and Upper Snowy Landcare Network, and funded by the NSW Environmental Trust, is to test whether inoculating Ribbon Gum (*Eucalyptus viminalis*) seedlings with beneficial soil fungi, known as mycorrhizae, improves the performance of seedlings when planted into woodlands suffering from severe dieback.



It is well known that many plant species form mutualistic associations with soil microbes that improve plant health and ecosystem function. Mycorrhizae represent one such association. These microscopic fungi form intimate connections with a host plant's root system that provide protection from pathogens, improved resistance and resilience to drought and access to micronutrients and water. These services are provided to the plant in exchange for sugars that the plant produces by photosynthesis. Mycorrhizal networks have also been shown to allow plants to communicate with one another in the so-called "wood-wide web".

For the experiment performed here, seedlings of Ribbon Gum were grown in the Greening Australia nursery in Canberra with and without soil collected from Ribbon Gum woodland across the Snowy Monaro that showed no sign of dieback.

After six months, many of the tubes containing the healthy live soil developed fungal fruiting bodies (that look like mushroom caps) of known mycorrhizal species - a sure sign that the eucalypt seedlings had begun forming the connections with desirable fungi.

The seedlings were planted out at Gagedzerick TSR in October 2022. Survival and growth is being monitored to determine whether inoculating seedlings with beneficial mycorrhizae can help solve the problem of dieback on the Monaro.



This project has been assisted by the NSW Government through its Environmental Trust.

