

Gegedzerick Open Day



LANDCARE LEADS THE WAY

Sat, 25 March 2023

Station 7 - Soil treatments

It is often considered what to add to a planting hole to maximise the tree/shrub's chances of survival. Taking a lead from the Regenerative Agriculture movement, we trialled three types of soil additives aimed at improving microbe growth, nutrient availability, water retention and capturing and storing carbon long-term:

Compost increases soil microbes which provide nutrients to plants. It also increases soil moisture retention. We added half a bucket of "Coompost", obtained from the Cooma waste facility, to each of 300 holes.

Biochar (which is burned biomass) increases availability of plant nutrient cations (calcium, magnesium, potassium) by reducing soil acidity. It also locks carbon away long-term in the soil. We obtained biochar from a local supplier and added approximately 4 litres (or 0.7 kg) per hole to each of 300 holes.

Rock dust helps reduce soil acidity and remineralise soils, helping carbon sequestration, microbial growth and soil fertility. We obtained basalt dust from Schmidt Quarry near Nimmitabel and added approximately 4 kg per hole to each of 300 holes.

Since all the above work together to stimulate microbial growth and capture carbon, we combined all three treatments in a further 300 holes. We also combined just biochar and compost in another 300 holes.

Holes were dug by excavator in late 2021. Additives were added to the surface around the planting holes by volunteers on August 9 2022 after whipper-snipping around the holes two weeks earlier.

The area we worked in was an ex-sheep camp and was extremely thick with weeds at the time of planting with a 50:50 mixture of trees and shrubs in late October of 2023. As soil moisture was good, we did not spray the holes areas prior to planting but sprayed two weeks post-planting instead. After planting, many of the tree guards were removed by wallabies.

Survival and growth rates of the plants will be assessed in Autumn 2023 and statistically tested for significant effects of soil additive treatments.

Soil additives trial area

soil_additives_map_Gegedzerick

-  Biochar + compost
-  Biochar only
-  Compost + Biochar + Rock dust
-  Compost only
-  Control - no additives
-  Rock dust only

