



Bird's-eye view of Colin's microforest.

The densely planted, pocket-sized native forest was planted by Colin Davis and friends on 100 square metres of his Enner Glynn hillside property four years ago.

It is now twice as high as a nearby stand of native trees planted according to conventional agroforestry techniques at the same time.

The concept behind microforests comes from Akira Miyawaki, a Japanese botanist whose reforestation method has gained traction in Asia, Canada and the UK. Advocates of the method claim Miyawaki microforests grow up to 10 times faster, are 30 times denser, and support 100 times more biodiversity than conventionally planned agroforestry. The claim: by selecting a mix of native species, planting densely, and enriching the soil with biochar and compost, these forests become self-sustaining within a few years. The concept and development of microforests in Japan earned the botanist the prestigious Blue Planet Prize in 2006.

Colin, who had previously worked as a teacher in Africa, was inspired to create what he believes is the first suburban microforest in New Zealand in 2021, after seeing an article in *The Guardian*. He planted 25 species – including rimu, black beech, lancewood, titoki, kānuka, mānuka and tōtara – with the help of his friend AJ Clarken and volunteers from the Nelson Whakatū Muslim Association. These native trees were planted only 60cm apart – rather than the generally recommended 3-6m apart – into 200 drilled holes filled with biochar. (Luckily, AJ had already developed a backyard system for making biochar, a charcoal produced from plant matter that is believed to improve soil health and moisture, raise soil pH and sequester carbon.)

“The transformation was astonishing,” Colin says. “Mixing species and planting densely mimics nature and allows them to support each other, growing three to four times faster.”

Microforests, also known as mini, pocket and wee forests, can be created in urban centres on any site about the size of

a tennis court. The advocates say even at that size they can play a role in restoring native biodiversity, localised reduction in temperatures, and the mitigation of flood waters, erosion and runoff. Just as importantly, green spaces provides respite for stressed city dwellers, Colin says.

In his own microforest, regular applications of compost and manure tea early on saw most trees growing more than 2m in three years. The crowded nature of the plants reduced the need for weeding. “After three years, you don’t touch it, you just let it grow,” he explains.

While the Nelson City Council supported his initial project through its Environmental Grants Scheme and the Hill Country Erosion Fund, it has yet to commit to citywide implementation. However, officials have acknowledged there might be potential benefits.

Colin’s vision extends beyond Nelson. He and his wife, Faridah, were recently invited to speak at the Dunedin City Council’s volunteer appreciation event. Their trip was funded by the Nelson Whakatū Muslim Association. The other speakers were Dennis Enright (New Zealand Biochar Ltd), Maureen Howard (host of Rewilding in Action), and John Brenkley (DCC Parks & Recreation Planning Manager).

Dunedin City Council is currently reviewing the Town Belt Reserve Management Plan, exploring ways to enhance biodiversity while minimising maintenance costs, says DCC Volunteer Projects Facilitator Hagino Baker. “Colin’s experience showed us how rapidly forests can develop using the Miyawaki-inspired method. We are considering research sites to test its effectiveness.”

“Our success proves that even small-scale interventions can drive significant environmental change, turning barren spaces into lush ecosystems that benefit both nature and the community,” Colin says. ■



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