

Macleans Ridges

macadamia orchard floor improvements

Landholder	Brad Connelly
Map reference	9
Land use	Macadamias, nursery
Soil Erosion Solutions Grant	\$6,570 (soil profiling, soil carting, grass seed, fertiliser)
Landholder's in-kind contribution	\$7,766 (labour, supply of equipment, smothergrass)

The site

This mature macadamia orchard had limited light reaching the orchard floor. Gullies had formed along the interrows leaving the trees with exposed roots. Soil was also being scoured out of orchard watercourses that had become shaded and lost grass cover.

The project

- Trees next to watercourses were pruned heavily to allow more light through for grassed waterways.
- Trees were hedged on one side to increase light availability on the orchard floor.
- The interrow soil was reprofiled to cover tree roots and form wide shallow spoon drains.
- Compacted soils were improved with a spike aerator.
- Smothergrass plugs were planted at each tree.
- Millet seed was sown over all disturbed soil areas.



The soil profiler shifts soil from the interrow into the tree row

The benefits

- The reshaping of the orchard floor has halted the gullies that had been scouring out along the tree lines.
- Grassed waterways allow water to move through the orchard with less damage.
- Sediment loss to the creek has been reduced.
- Fewer exposed roots has made harvesting easier.



Hedging of one side of the trees

Landholder's experience

What was the **best thing** about this project?

"Knowing the topsoil is going to remain where it is and improving soil biology - increased microbial flora, increased worms, improved health of plantation hopefully leading to sustainable production."

What was the **most difficult** aspect of the project?

"Timing of works with the rainfall. It was difficult to get cover to hold the very loose soil so it did not wash away with the first lot of rain."



The millet cover crop provided good short term protection