Orchard floor improvement

Landholder	Rex Harris
Map reference	4
Land use	Macadamias
Soil Erosion Solutions Grant	$9,342 (equipment hire, soil conditioners, smothergrass turf)
Landholder's in-kind contribution	$11,598 (labour, tractor work)

The site

This young macadamia orchard had erosion and washouts between tree rows due to groundcover decline from lack of light. Runoff from the site was flowing into Skinners Creek.

The project

- The orchard floor was reshaped to create a wide spoon drain down the centre of the interrow.
- The interrow topsoil was placed under the trees.
- Shade-tolerant sweet smothergrass was established by laying turf in strips across the new spoon drain, each strip acting as a sediment trap until vegetation could spread across the whole area.
- Biological activity in the soil was stimulated by application of a vermi-compost extract and PBS (Phyto Biological Stimulant, made from kelp, fulvic acid, fish emulsion, molasses, selenium, boron and zinc) to improve soil structure by increasing the stability of soil aggregates.

Eroded channel next to macadamia tree showing exposed tree roots

The benefits

- Sediment loss to Skinners Creek has been reduced.
- The shade-tolerant groundcover will improve soil biological activity and soil health.
- Improved soil structure will reduce the soil's erodibility.

Shade-tolerant smothergrass turf strips laid between the orchard rows

Landholder's experience

What was the best thing about this project?

"...the excellent end result in both water management and protection of soil."

What was the most difficult aspect of the project?

"The worry of losing soft soil that had been placed under the trunk line during the 950mm of rain received during December 2005 to March 2006."

After the works: good grass cover between the orchard rows