ASHUA Improved orchard drainage and groundcover

Landholders	Frank and Terry Adcock
Map reference	5
Land use	Macadamias
Soil Erosion Solutions Grant	\$1,675 (earthworks, haybales)
Landholder's in-kind contribution	\$1,700 (planning, smothergrass, labour)

The site

This is a young 4ha orchard, with good grass cover and little erosion, but some sections are relatively steep and the landholders are aware of the increasing erosion risk as their orchard matures.

The project

- > Where possible runoff was diverted towards the centre of the property to assist with filling the farm dam.
- > Spoon drains were formed in selected interrows.
- > The disturbed soil was sown with winter rye grass and sorghum to provide fast groundcover.
- Hay bales were placed within the spoon drains to slow water flow, encourage infiltration and trap sediment. The bales will be replaced by earth swales after groundcover establishes in the new drain.
- > Pots of shade-tolerant smothergrass were planted out.



Orchard slope before works

The benefits

- > Potential erosion has been prevented.
- > Improved orchard drainage fills the farm dam and increases rainfall infiltration.
- > Groundcover will survive as the orchard matures.



Newly constructed drain with sediment trap

Landholders' experience

What was the $best\ thing$ about this project?

"This project has allowed us to put in place appropriate controls, while our trees are still young, to minimise orchard floor erosion. The main benefits are being able to retain the good quality organic topsoil and more effectively manage water flow during heavy rain. A secondary benefit is being able to store some of this water in the subsoil, which would normally be lost."

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

"Managing the effects of wet weather was the most difficult aspect of the project. A number of delays in the start date occurred prior to the commencement of earthworks. Each time we planned to do the earthworks rain caused a delay. On completion of the earthworks we had another visit in the form of 200mm over 48 hours. This highlighted the importance of planning and putting in place appropriate controls to minimise erosion during this phase until the soil could be stabilised."

