Case study: Australian Food and Fibre, Moree

May 2012

Location
48 km west of Moree.

Water source
Regulated river entitlement.

Soil type
Grey vertosol soils.

Enterprises
Irrigated summer and winter cropping.

Irrigation system
Furrow irrigation.

Area irrigated
2966 ha.

Background

‘Telleraga’, 48 km west of Moree is owned by Australian Food and Fibre (AFF) and was originally a large grazing property in the Mallawa district.

The completion of Copeton Dam in 1976 enabled many farms in the Gwydir Valley including ‘Telleraga’ to diversify from traditional grazing enterprises into irrigated summer and winter cropping enterprises. It was at this time that ‘Telleraga’ began producing cotton.

This major enterprise shift necessitated the construction of large on-farm water storages, supply channels, furrow irrigated fields and drainage systems on the eastern half of ‘Telleraga’.

Over the past 15 years, a reduction in water reliability has increased the importance of reducing on-farm water losses and maximise irrigation efficiency.

Farm Manager of ‘Telleraga’, Roly King with the new lift pump installed on the property. Image: J.Easey.

‘Telleraga’ has invested significant resources into sealing leaky channels and storages and reducing field lengths. They have also implemented best practice irrigation scheduling using soil moisture monitoring equipment to maximise crop production and minimise water losses.

Included in the farm redevelopment was the construction in 2006 of two 83 ha cells within a 172 ha storage. As the eastern cell had minor seepage issues, the aim was to use the western cell as the primary storage keeping the eastern cell as a surge area.

Even though all earthworks were completed, the real benefits were not realised because a lift pump was needed to transfer water between cells.

Description of the project

This funded project saw the installation of a pump station on the cell division wall so all water pumped or captured would be stored in the

western cell, reducing evaporation and seepage losses and improving water availability to this section of the farm.

The storage that has been modified to provide two cells to reduce evaporation losses. Image: J. Easey.

Rod Jackson (NSW DPI) completing the final inspection of the new lift pump with Roly King (Farm Manager). Image: J. Easey.

The benefits

This project will potentially reduce the current water storage losses by 52% so the water savings are anticipated to be around 30 to 40 ML per year.

Landholders experience

'Telleraga' Farm Manager, Roly King said storage evaporation is one of our largest losses.

"By dividing the storage into cells we have reduced the area exposed to evaporation."

"This particular storage had some minor seepage issues in the eastern section, so we were keen to install a lift pump between the cells, with the help of this funding, to realise all the water savings from previous works completed and significantly improve the way we manage our stored water," Mr King said.

What aspects of the project proved most challenging?

Mr King found the timeframe imposed upon AFF to undertake an on-farm water use efficiency assessment, submit a Tender and then install the pump station were very challenging.

"AFF found it very difficult to get contractors to complete the installation in the time stipulated by their contract."

"Many of the Approved Irrigation Consultants were busy servicing other clients with Border Rivers-Gwydir projects under the same time pressures," Mr King said.

He added, "Slow decision making and notification of success within the funding approval process also meant that the installation of the pump station had to occur during the cotton season, when labour was most limited."

What advice would you give other irrigators?

Mr King would give other irrigators considering similar projects the following advice:

- Planning is the key to getting good outcomes
- Independent technical advice is invaluable to identify the most cost effective options to reduce on-farm losses.
- When developing an infrastructure project, make sure you time the installation for the off-irrigation season. This is the time when contractors and staff are most likely to be available.

What are your thoughts on the Border Rivers-Gwydir project?

Mr King commented that this was a great project.

"It was very worthwhile for us and I'd be keen to do more storage work if the funds were available in the future."

The Australian Government is providing $83 million to this project through its *Water for the Future* initiative.

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