



Surprises await revisit to 'Bobbara Station'

Case study: : Bobbara Station
Location: South-west slopes, NSW
Property Size: 6000 ha
Rainfall: 670 mm per annum
Enterprises: Sheep, wheat, canola, oats and lupins



Bobbara Station is located on the south-west slopes of NSW and has been managed by Neil McColl since 1990. Low-lying areas on the property were affected by salinity and waterlogging and, as reported in the first edition of *SALT* magazine, Neil undertook a project to rehabilitate one of the sites and to address some of the causes of salinity. Seven years later, Neil talks to *Lisa Gray* about the changes that have occurred.

“The landscape of Bobbara Station is mostly undulating but there are some very steep rocky hills on the property. In the past, the property was heavily cleared and the main enterprises are Merino sheep and cropping.

When I first came to Bobbara Station not a lot was known about salinity. But in 1992, a site located at the Galong crossroads had all the classic signs: the area was waterlogged, and indicator species like spiny rush, sea barley grass and cumbungi were so thick it made the area impossible to graze, let alone farm.

The paddock was 100 per cent arable in the 1950s and 1960s but, 30 years on, about eight hectares of the paddock was degraded and getting worse. The local Landcare group (Harden Murrumburrah)



was looking for a site to establish an educational project and this site was chosen because of its location on the highway between Yass and Harden.

Funding assistance from the NSW Salt Action Program allowed the group to implement a three-year project. The main aim was to stabilise the water table and

rehabilitate the discharge site without substantially reducing the area of arable land.

In the first year we revegetated the 8 ha saline site. The drought in 1994 had dried the area considerably but removing the pin rush and cumbungi was still a job and a half. The area had to be burnt, ploughed

Key points

- Major discharge site halted following large-scale revegetation and pasture improvement program.
- Conservation farming has minimised soil erosion and degradation.
- Previously saline land now back into cropping/pasture rotation.

and pushed before being sown in the autumn to salt-tolerant pastures such as tall wheat grass, puccinellia and strawberry clover. In the late winter, 2000 salt-tolerant trees were planted on mounds. In the next two years, an area of 350 ha surrounding the discharge site was limed and planted to perennial pastures consisting of mostly winter-active lucerne and to a lesser degree phalaris and cocksfoot.

In the second year the two main flow lines that drained onto the site were fenced and planted with trees. And in the third year the tops and sides of the hills facing the discharge site were fenced and 3000 trees were planted to help reduce recharge.

It's been seven years since the completion of the project and the area looks magnificent. The trees have grown very well and although the discharge site is still there, it has stopped growing. All of the paddocks that were sown to pasture have been bought back into the cropping phase.

In hindsight there's not much I would have done differently. Although I might have put more trees in at the break of slope,



Opposite page: Trees planted on the saline site (foreground) and on the hill slopes help reduce recharge. Areas surrounding the saline site have been brought back into the cropping phase.

Below: Crops and pastures are managed to maximise water use.

Above: The flow lines were fenced to protect mature trees and areas that had been revegetated.

or in intercept blocks, instead of planting as many around the discharge site.

Since completing the project I've also tried to address the problem through better farming and grazing practices.

Conservation farming techniques, such as no tillage and direct drilling were introduced to prevent soil erosion, which was endemic in this area in the 1970s and 1980s. A combination of steep slopes, granite soils and occasionally heavy rainfalls in the autumn were the main culprits. But, it's a bit of a 'Catch 22' situation because

these farming practices increase soil moisture retention in the summer and autumn.

We try to use cropping practices that enable the crops to use this moisture in the second half of the year. Wheat and canola are the main crops produced on the property with an average cropping frequency of six years out of 10. Between cropping phases all the paddocks are sown to perennial pastures.

The grazing management practices have also been changed to a full rotational grazing system. We have several large mobs of sheep, which are rotated frequently. This allows the pastures to be grazed quickly and then given plenty of time to recover. The pastures build better root systems and grow more vigorously, which increases plant water use."

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Photos: Arthur Mostead, courtesy of Murray-Darling Basin Commission

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