

## Natural resource management – an integral part of property management “Wyobie”

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Good natural resource management does not have to involve a lot of extra work or time

Removal of restrictions to flood flow on the floodplain has reduced erosion

Cleared vegetation can be kept in piles, rather than burnt, as a refuge for native animals

Leaving riparian vegetation as undisturbed as possible helps vegetation to thrive and out-compete weeds. It also filters run-off before it enters the waterway.

Good natural resource management does not have to involve a great deal of extra work and time – it should be incorporated into the overall management of the property. This is the philosophy of Richard and Julie Dowsett who manage Wyobie, a 2776 ha dryland cropping property located on the Jimbour floodplain about 40 kms north of Dalby.

Wyobie is one of nine farming units owned by Warakirri Agricultural Trust with properties located in Victoria, southern NSW and southern Queensland. The Retail Employees Superannuation Trust (REST) is the sole investor in Warakirri Agricultural Trust.



**Photo 1: Good vegetation coverage on Cooranga creek bank at “Wyobie” featuring property manager Richard Dowsett and his daughter Sophie**

Summer dominant rainfall results in dryland cotton and sorghum being the major crops grown at Wyobie. Wheat also features in the rotation and it provides good stubble cover. Mungbeans and chickpeas are grown on an opportunity basis. Annual crop production is approximately:

- 700 ha of cotton,
- 1000 ha of sorghum and
- 350 ha of wheat.

Another 700 ha is left fallow for next year’s dryland cotton which is grown on a single skip row configuration following long fallows which ensure full soil moisture profiles at planting.

Cooranga Creek flows through the northern section of the property.

The management at Wyobie has demonstrated a commitment to good natural resource management in three main areas -

- Active involvement in local Landcare activities,
- On-farm riparian management and
- Implementation of Best Management Practices and an Environmental Management System

### **Landcare activities**

Richard and Julie are active members of their local Landcare group devoting both time and resources to Landcare activities.

On the treeless plain of the Brigalow-Jimbour floodplain, the emphasis for Landcare activities has been floodplain management. This ensures unimpeded flood flow and helps to reduce erosion problems.

Activities undertaken by members of the Landcare group include the removal of un-used fences to allow movement of floodwater. Previously, flood debris became caught in fences and caused water to back up, resulting in major erosion events. The angle and direction of some cropping strips in the area have also been altered. Floodplain management is an ongoing process involving the cooperation of private landholders and the shire council. Richard acknowledges the good work of the Brigalow-Jimbour Landcare coordinator Nevin Olm in facilitating this process.



**Photo 2:** Richard's and Julie's daughter Sophie is pictured in the wide, well vegetated area located between the cropping country on Wyobie and Cooranga Creek featuring



**Photo 3 (above) and 4 (below):** Woody debris is retained in the creek on Wyobie for habitat value and trees cleared for power-line construction have been pushed into 'habitat piles' for reptiles and small mammals



Education programs organised through the Landcare group have helped to alter cropping practices on the floodplain. Practices such as zero-till are now common place. Spray drift education and the associated upgrading of spray technology (eg. nozzles) have been highly successful with no spray drift incidents reported in the season following the workshop. Appropriate application of agricultural chemicals is important in the area as crops and fallow areas are in close proximity due to strip cropping and cropping land is located near sensitive areas such as houses, creeks and waterways. Active members of the Landcare group encouraged neighbours to participate in this training.

### **Riparian management**

Wyobie is a dryland cropping property where water moves across the floodplain and cropping country into waterways. A

wide, well vegetated area is maintained between the cropping country and the creek. This strip filters water as it moves off the cropping country and into the waterway. Good vegetation coverage is evident on the creek banks and woody debris is retained in the creek. Fallen and dead trees are left in situ as a habitat feature.

In 2003, a vegetation survey was conducted by Greening Australia along Cooranga Creek on Wyobie. A large number of species were evident with 165 plant species recorded - 140 of which were native. This is about 50% of endemic species for the area. A neighbouring land holder had a similar survey done and a further 30 species were identified. It is likely these additional species also exist on Wyobie.

The survey found that the condition of the vegetation was generally good. There was good ground cover, few weed species and limited disturbance of the area. At the time it was noted that the area was dominated by mature trees, however, there is now some evidence of younger trees becoming established.

Major weed species found in the riparian zone are Prickly Pear, Tiger Pear and Lippia. Prickly Pear and Tiger Pear are chemically treated. The Lippia is an ongoing problem, however, it is confined to a relatively narrow strip on the waterline. Good grass cover on the banks has prevented the Lippia from invading the entire creek bank.



Photo 4 : A wedge-tailed eagle nest in the riparian area on Wyobie



Photo 5: A wedge-tailed eagle leaving the nest in the riparian area on Wyobie.

Even in a disturbed area things can be done to improve the habitat value of the area. On Wyobie a power-line runs close to the riparian area. During construction of the power-line trees were removed but, instead of burning the cleared trees, they were pushed into piles to provide a habitat for reptiles and small mammals.

Evidence of native animals in the creek area includes footprints, scats and nests (eg. wedged-tail eagle nest).

Bollgard II™ cotton is planted near the creek and houses to reduce the number of insecticide applications required close to these sensitive areas. For the first time this coming season (2006/07) only Bollgard II™ cotton will be planted on Wyobie.

Future riparian management options being considered at Wyobie include:

- Using mosaic burning as a management tool (eg. to encourage the establishment of young trees),
- Planting of harvestable timber and
- Undertaking Common Myna control with the assistance of the local Landcare group.

#### **BMP and corporate responsibility**

Wyobie is accredited under the Australian cotton industry's Best Management Practices (BMP) program having successfully completed the entire seven modules of the program including

the two latest modules – ‘Petrochemical storage and handling’ and ‘Land and Water Management’. Management believe high participation rates in the BMP program are important for wider community recognition of the program, there is a need to support this industry-driven initiative and BMP is well understood by neighbours.

Richard attended a one-day ‘Land and Water’ workshop organised by Cotton Australia and supported by Queensland Departments of Primary Industries and Fisheries and Natural Resources, Mines and Water (DPI&F and NRMW), Landcare and Condamine Alliance. He felt this was a good way to introduce people to land and water management issues. The workshop gave growers access to mapping resources and expertise in water use efficiency and soil, riparian and vegetation management.

In 2003, Warakirri Agricultural Trust undertook a responsibility to implement an Environmental Management Systems approach that is based upon ISO 14001 principles. This approach was developed and implemented not for the self accolade of ISO ranking, but rather for the internal gains directed at running a better and more responsive business.

As a corporate farm, there is also a need to demonstrate custodianship to investors through implementation of environmental management systems. There is also the expectation to respond to potential risks as they arise. For example, as a result of the release of a salinity hazard map by the Queensland State Government in 2004, a salinity risk assessment was performed on Wyobie. The salinity risk was found to be very low because of its location in the catchment.

## ■ Learnings

There are several things Richard and Julie have learnt with respect to natural resource management while at Wyobie. These learnings include:

- Get involved in your local Landcare or NRM group to help support and coordinate the regional efforts and in this process involve as many relevant individuals and organisations as you can.
- Leaving your riparian areas as undisturbed as possible is a viable management option as this helps the vegetation to thrive and out-compete weeds plus perform functions such as filtering run-off before it enters the waterway.
- Use your EMS or Land and Water Management module of BMP to consider the impact of your management decisions on your natural resource base. Where necessary adjust management practices to minimise negative impact.



Photo 6 : Riparian area at Wyobie

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