

Revegetation - The do 'nothing option' "Retreat" & "Clearview" Emerald

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"It wasn't hard doing nothing"

"It's satisfying seeing kangaroos while planting cotton"

"FBA's biodiversity scheme is paying us to do what we like doing, it's a good government initiative encouraged by some very enthusiastic local people."

"I wanted to feel that I was contributing socially to doing the right thing"

Previously cleared country on Graham & Josephine Volck's property has been allowed to naturally regenerate as a means of revegetation. These areas are being recognised for their biodiversity through a Fitzroy Basin Association (FBA) stewardship program.

Graham & Josephine Volck began farming 'Retreat', a 249 hectare irrigated cotton enterprise, approximately twelve years ago. Graham identified a cleared rocky ridge that was unsuitable for development and decided to put this 36 hectares aside for biodiversity. This area was at a higher risk of salinity developing as open downs soil bordered scrub soils. Some scalding was already evident in this area as well as in a nearby field



Photo 1: Brigalow regrowth on 'Retreat'



Photo 2: There is a diverse range of animals at 'Retreat' including kangaroos

During the first two years Graham used fire in the area. He noted several negative impacts including the encouragement of Sally Wattle (*Aacacia salicina*) along with a reduction in the number of native animals and birds. As a result Graham made the decision to do nothing and allow it to regenerate naturally.

Aside from initially using an excavator to bury an old farm tip, Graham's management has been very simple:

- Avoid Fires
- Limit vehicle access
- Complete exclusion of stock
- Control Pests as required -

Graham monitors for weeds and pests. With no stock pressure, the native grasses have out-competed and replaced weeds. though recently Graham removed a mob of feral pigs that had moved in.

After twelve years of this hands-off approach to vegetation management, the vegetation is in good condition. There is good Brigalow (*Acacia harpophylla*) regrowth, few weeds and hollows and logs for wildlife habitat. There is a diverse range and good coverage of perennial grasses, including Queensland bluegrass (*Dichanthium sericeum subsp. Sericeum*) which is generally regarded as an indicator of good condition of native grasslands on heavy soils.

from 'Retreat'. After three years, Graham opted to stop using a 50Ha area that had been farmed for more than 15 years. Similar salinity issues, due to deeper scrub soils adjoining open downs, and biodiversity potential were the main motivations for returning this area to native vegetation. The management of this area is very similar to that on 'Retreat', with the exception of two house cows that graze there periodically.

While only four years have passed this area is showing a lot of promise. There is good ground cover, pioneer tree species are becoming established, and weeds present are slowly being replaced by perennial grasses including Queensland Blue Grass.

The areas on 'Retreat' and 'Clearview' are being recognised for their biodiversity through a Fitzroy Basin Association (FBA) stewardship program, directed as part of



Photo 3: "Clearview" when in cultivation



Photo 4: "Clearview" prior to project



Photo 5: "Clearview" regrowth 2006

Brigalow and/or Belah (*Casuarina cristate*) open forest on alluvial plains with cracking clay soils are an endangered community. In such a fragmented landscape, this area acts as a valuable habitat for a diverse range of animals. It is the beginning of a corridor between an area of regrowth on properties to the east and is in close proximity to the remnant vegetation along Retreat Creek. In addition to the aesthetic and biodiversity benefits, there have also been the production benefits of reducing salinity in neighbouring fields and preventing further occurrences.

Seven years ago, the Volck family started farming 'Clearview', a 276Ha block 3.5km

Central Highlands Regional Resources Use Planning Cooperative (CHRRUP) Emerald Neighbourhood Catchment activities. In return for continued management for biodiversity, FBA contribute structured payments until mid 2008. As part of this program, Graham will be monitoring these sites using photo points to record changes in the area over the two year period of the project. Through the program, Graham is using these areas in the same way he has managed them in the past. Graham is still able to undertake feral animal control activities, and maintain existing vehicular tracks, fence-lines and infrastructure.

Graham's and Josephine's commitment to biodiversity and natural resource management extends beyond these two areas of regrowth. At least fifteen percent of each farm is native vegetation including areas of remnant riparian vegetation. On-farm water storages also encourage biodiversity as they feature grassed slopes and are in close proximity to other vegetation. Additionally five years ago, Graham stocked the storage at 'Clearview' with barramundi fingerlings and has continued to manage this reticulation storage to ensure their survival.

Graham is committed to integrated pest management (IPM) and does not use any S7 insecticides and herbicides in order to reduce risk of exposure to people and the environment. Graham and Josephine have been participating in the Australian cotton industry Best Management Practices (BMP) since its inception. They have recently undergone a pre-certification audit for BMP including the two latest modules - Land & water management and Petrochemical storage and handling. By working with their local NRM sub catchment group, CHRRUP, Graham and Josephine were able to receive financial assistance to develop new maps for their BMP.



Photo 6: Storages at "Retreat" encourage biodiversity

The land we have set aside for native vegetation and biodiversity represents about 16% of our properties. It's an achievable number and by selecting the least productive country there's very little economic loss. It would be nice to see

this number matched in urban development, particularly in rapidly growing towns like Emerald



Photo 6: Barramundi thrive in the Clearview Storage

Learnings

- The benefits we gain from our natural environment and its components are collectively called 'ecosystem services'. The Ecosystem services Graham has identified as motivating this project include
 - o Salinity Remediation
 - o Habitat for wildlife
 - o Aesthetic & personal values

- Natural regeneration can potentially be a cost-effective replacement for active revegetation strategies such as tubestock planting and direct seeding. It relies on having adequate seed stores available in remaining trees, shrubs and grasses in the area. The choice as to whether natural regeneration is the most suitable method of revegetation will depend largely on the nature of the site, the time and money available and the purpose and type of revegetation. Some sites may require a regeneration trigger such as removal or control of environmental weeds, burning the area, light soil or root disturbance, smoke treatment, drainage amendments, or recontouring soils surface to trap seed and leaf litter. As with all vegetation programs, monitoring and controlling weeds & pests is important.
- There are many organisations able to provide advice and assistance for projects that conserve biodiversity.

For more information

Case Study

- Contact Susan Maas
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On Revegetation projects & managing vegetation:

- Australian Cotton Industry Best Management Practices Manual *available from Cotton Australia*
- Growing Trees on Cotton Farms *available from CRDC*
- Greening Australia
www.greeningaustralia.org.au
Ph: (02) 6281 8585

On Ecosystem services

- Ecosystem services Project
www.ecosystemsproject.org/index.htm

On Managing Brigalow Vegetation

- EPA Fact Sheet 'Retaining and managing remnant brigalow vegetation'
www.epa.qld.gov.au/publications?id=846

On Fitzroy Basin Association (FBA) stewardship program

- Fitzroy Basin Association (FBA)
www.fba.org.au
Ph: (07) 4999 2800

On Emerald Neighbourhood Catchment plan

- Central Highlands Regional Resources Use Planning Cooperative (CHRRUP)
www.centralhighlands.com.au/CHRRUP
Ph: (07) 4982 2996

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