

Case study

Improving pasture productivity for condition 'D' lands

Key Points

- Improving pasture productivity in Queensland's rangelands is being fast tracked in areas of poor condition (type D lands)
- Trials are occurring to identify techniques to regenerate pasture quickly to improve the areas to condition type A or B (good condition)
- Outcomes from these trials will support Queensland's four pillar policy of doubling agricultural production

Background

To ensure that funding for natural resource management in Queensland's rangelands contributes to improving agricultural productivity, Desert Channels Queensland (DCQ) is currently undertaking trials to assist landholders improve pasture productivity.

On Auteuil, a property south of Aramac, extensive work has been carried out to identify areas of poor condition. These areas are often in such condition because of large scale infestations of prickly acacia that dramatically reduce the pasture biomass. These areas often contain little to no pasture (approximately 100kg/ha), greatly reducing the ability to run stock and increasing the likelihood of erosion over time, which will contribute to a further decline land condition. This type of land is classified as type D land under the Queensland Government Stocktake program.

An example of this on Auteuil shows the low levels of pasture in the area due to the competition for light and nutrients from the woody weeds.

Typical type D condition land on Auteuil with poor pasture production

- Biomass of pasture – less than 100 kg/ha
- Carrying capacity – approx. 1 beef cattle for 40 ha
 - Estimated production value – approx. \$4/ha



Trials, however, are being implemented to transition these lands into more productive condition. Moving the area into condition type A or B is likely to significantly improve carrying capacity and the production value of the property. Using data from Stocktake manuals, improving the pasture condition from D to A/B will improve the production value by a factor of 10. This will greatly improve the financial viability for the landholder, as well as ensure that the property is sustainable into the long term. In addition

to having good pasture for stock, good ground cover will also assist in supporting native species and improving water quality.

Aspirational land condition type A or B for Auteuil following trials

- Biomass of pasture – greater than 2000 kg/ha
- Carrying capacity – approx. 1 beef cattle for 10 ha
- Estimated production value – approx. \$16/ha

The trials involve comparing two sites over five years to identify techniques required to quickly establish pasture and improve condition. As shown in the below map, site A will be fenced off from cattle and kangaroos. This site will be compared with site B which will have the dead prickly acacia pushed and the area seeded with buffel grass and no animal fencing. The results from this trial will provide clear information on how important stock exclusion is to quickly establish pasture grasses in very poor condition areas.



DCQ and the landholder will take 6 monthly records documenting pasture species, biomass, photos and any regrowth of weed species. Information gathered will provide a valuable guide to other landholders in the region who are undertaking similar programs to quickly regenerate pasture in poor condition sites.

Outcomes of the trial site

- Increased knowledge of regenerating pasture in type D condition lands.
- Significant increase in carrying capacity and production value for the property.
- Improved skills for the landholder to improve pasture production.

Maps of the areas subject to the trial

