

Central Australian Grazing Strategies Partnership

THE PARTNERSHIP...

Studying grazing strategies requires a long-term commitment. For this reason, a Partnership was formed to co-ordinate projects that will contribute to our long-term knowledge of grazing strategies. The Partners are greatly appreciative of the substantial funding assistance granted by the Commonwealth Dept. Agriculture, Fisheries and Forestry (DAFF) under the *National Landcare Program* to conduct the following project.



Australian Government
**Department of Agriculture,
Fisheries and Forestry**

THE PROJECT...

“Rangeland grazing strategies for improved economics and resource sustainability”

Part 1: Best Practice Guidelines for Central Australian Spell Grazing Strategies

To develop industry acknowledged best practice guidelines for grazing strategies in central Australia that incorporate spelling that contribute to improved economic viability and resource sustainability. This will be achieved through:

- Trialling three different grazing strategies at a whole-of-property/ business scale.
- Documenting case studies of grazing strategies in central Australia.
- Considering economic, environmental & social aspects.



Part 2: National Synthesis of Rangeland Grazing Strategies

To develop a national perspective on practical spelling and rotational grazing strategies that are applicable to the Rangelands. This will be achieved through:

- Synthesis of trial and producer demonstration data including the following trials; Central Australian trials, MLA project (QLD), Heytesbury-MLA “Pigeon Hole” (VRD), CMAE-NHT initiative (S-W WA).
- Gaining producer insights to grazing systems by bringing producers together from different rangeland regions.
- Using models to gain a broader perspective.

THE ROLES OF PARTNERSHIP MEMBERS IN THIS PROJECT...

DK-CRC – undertaking project management and liaison with Commonwealth Dept. Agriculture, Fisheries & Forestry (DAFF), facilitating links with Desert Knowledge Cooperative Research Centre partners.

DPIFM – managing multi paddock rotational grazing strategy at Old Man Plains, conducting field work on all trials e.g. recording animal performance and pasture condition, participating in analysis of trial results and report writing.

CSIRO – developing the National Synthesis of Grazing Strategies for Rangelands.

CLMA – hosting Project Officer and facilitating project budget management, coordinating and assisting with field work and analysis of results.

INDUSTRY – members of the Steering Committee, participation in the development of case studies, Idracowra and Mt Riddock Stations will be managing grazing strategies.



**Central Australian
Pastoral Industry:
Idracowra Stn
Mt Riddock Stn**



Mt Riddock Station Trial

The grazing strategy at Mt Riddock Station comprises an eight paddock rotation with cattle spending approximately three weeks in each paddock. The total area of the eight paddocks is 70 sq.km. The pastures are dominated by buffel grass. The rotation is used to fatten Poll Hereford steers prior to sale.



Pasture sampling.

Cattle at the trough/trapyard.



The trial paddock.

Objectives

- Maximise the feed potential and productivity of buffel grass pastures.
- Manage the potential buffel has for creating a fire hazard.

Pasture Assessments are undertaken as close as possible prior to grazing and then again post grazing. There are 48 sampling sites within the treatment paddocks and twelve sites within the continuously grazed control paddocks. The monitoring sites are at 500m, 1km and 3km from water.

Sites are laid out with two parallel transects, 150m long with quadrats every 10m. This provides a total of 30 quadrats within which we collect data on *biomass/yield estimate, cover estimate, rank buffel, pasture composition, presence of all other species, cattle activity index score, defoliation index score, perennial grass basal area, erosion.*

Stock Performance

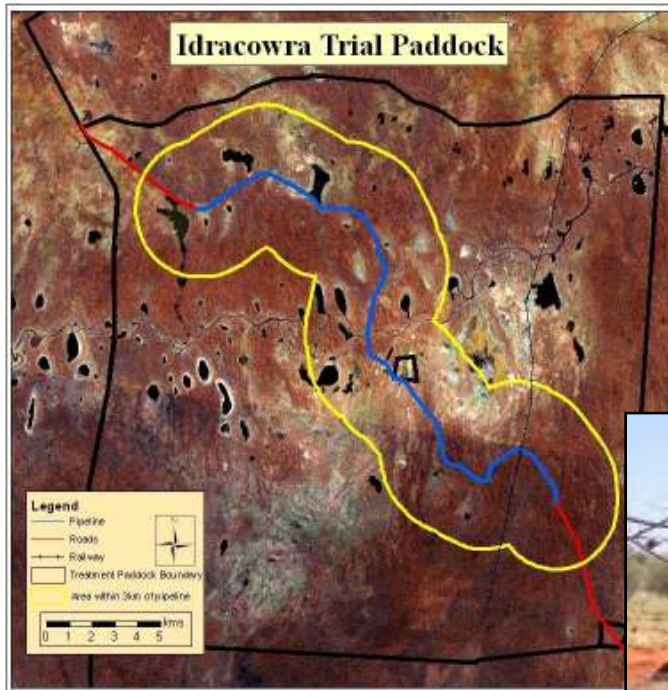
All 400 steers within the treatment paddock and 100 indicator steers within the control are individually identified using RFID tags. Measurements of weight, dentition and a visual condition score, are all taken at the start and end of the rotation and approximately every 6 weeks in between. Trial cattle are managed (supplementation, vaccinations) according to 'normal' station stock management. Management activities, animal behaviour and costs will be recorded in a trial diary and also using custom computer software packages by Saltbush Agricultural Software.

To date...

Initially the cattle congregated in groups of six or seven head. Gradually these small groups increased in size. After three months, the majority of the 400 head were grazing with no distinct herd boundaries. This type of herd behaviour suggests that cattle are using the pastures more evenly. Preliminary data supports this observation. In the control paddock, cattle are using pastures close to water very heavily whereas further out from water there are areas that are largely ungrazed. 400 head steers from the treatment paddocks were sold in July 2006. They averaged 360kg and achieved an excellent average price of \$1.88/kg. They had an average daily weight gain of 0.55kg. Positive feedback from feedlot buyers has been very encouraging with reports of low morbidity, high performing beasts. Marketing options for Mt Riddock may now include direct supply contracts.

**For further info, feel free to contact Steve & Rebecca Cadzow,
ph: 8956 9963 Email: rebeccacadzow@bigpond.com**

Idracowra Station Trial



The trial paddock.

The moving trough



The grazing strategy at Idracowra Station uses a water point moving along a 32 km pipeline at 1km per week, across a 600 sq.km. paddock. The aim is to spell country without additional fencing. The treatment paddock supports a Santa Gertrudis breeding herd of 560 head.

Objectives

- Come out of dry periods with heavier cattle in better condition.
- Use pastures more evenly and reduce the impact and extent of the grazing gradient.
- Minimise labour and capital requirements in comparison with more intensive grazing and spelling strategies.

Pasture Assessments will be done in March 2006, March 2007, Oct 2007 or in response to seasonal conditions. Three land types are being sampled; red sandy plains, annual calcareous grasslands and sand dunefields. Sites will be located along a pseudo transect in each land type at 500m, 1km and 3km from water.

Sites are laid out with 50, 1mx1m quadrats in a grid pattern over 1 hectare. The following data is collected from each quadrat; *biomass/yield estimate, cover estimate, pasture composition, presence of all other species, cattle activity index score, defoliation index score.*

Stock Performance

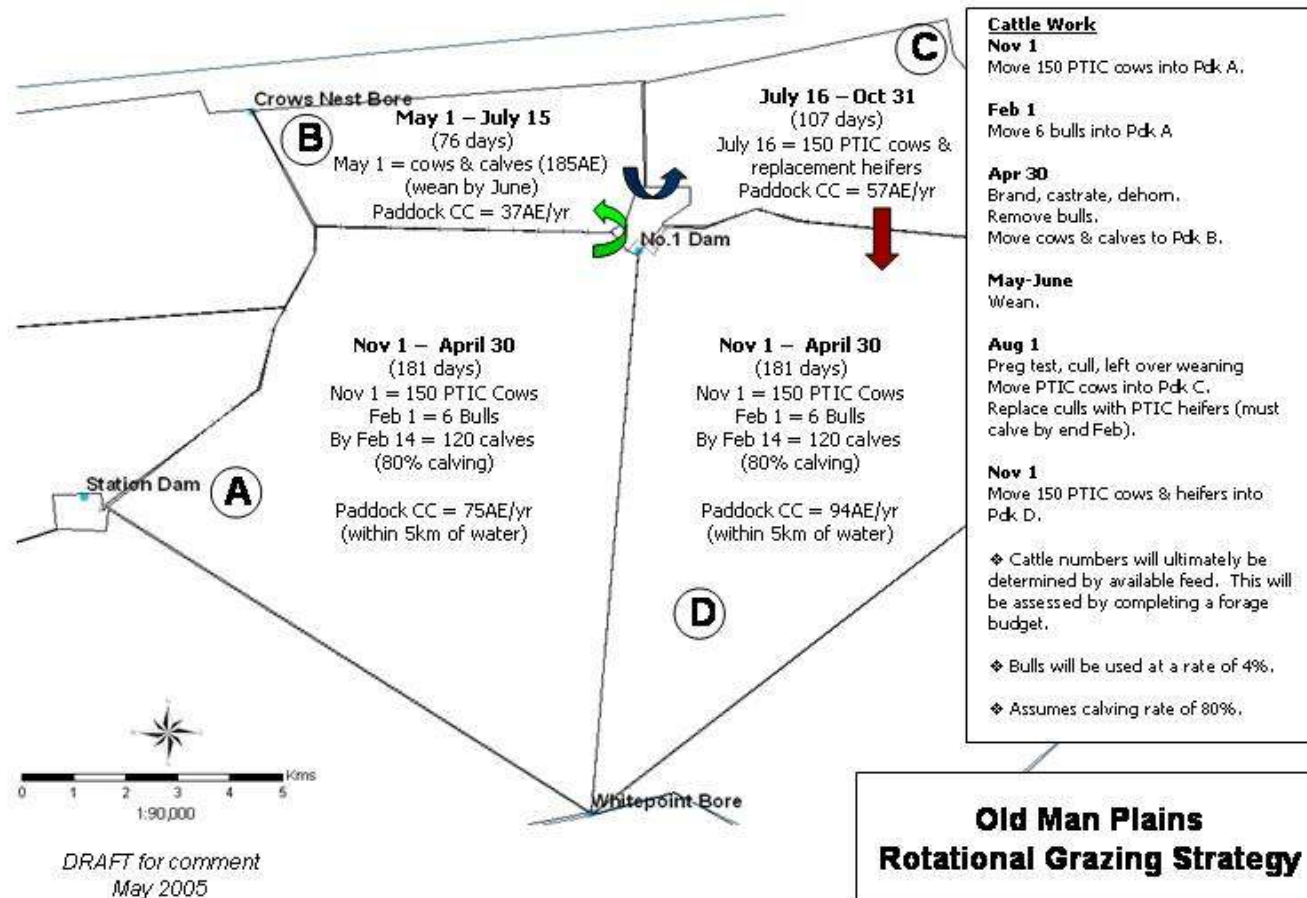
Approximately one third of both treatment and control herds have been individually identified using RFID tags. The herd will be mustered annually and the following data collected; weight, visual condition score, pregnancy status, branding rate, weaning rate and bull percentage. Trial cattle are managed (supplementation, branding) according to 'normal' station stock management. Management activities and costs are recorded in a trial diary.

To date...

Cattle behaviour will dictate the overall success of this trial. Initial seasonal conditions resulted in succulent pasture allowing cattle to graze without returning to water frequently. Thus the moving trough was temporarily stationed for the first two months. Now it is moving as planned and has passed through hard mulga country onto oatgrass plains. Cattle are also feeding about 3km forward of the trough and only feed behind to about 1-1½km. The herd dynamics have subtly changed with the bulls socialising with the mob rather than feeding alone. Sand dunes, water storage capacity and trough weight have forced the design of a MkII version, but Jim continues to be driven by the trial's success.

**For further info, feel free to contact Jim Murphy,
ph: 8956 0811 Email: murphy@assoa.net.edu.au**

Old Man Plains Research Station Trial



Preliminary Objectives:

- Decrease overheads through intensification of management using one smaller paddock at a time.
- Increase gross margin as the timing of moving stock through the paddocks allows you to control reproduction. It also means that cows are always going onto fresh feed which helps achieve good body condition.
- This system will allow pastures to be rested during the growing season and therefore will hopefully decrease land degradation.

Some of the areas of interest.....

- Matching stocking rate to carrying capacity is very important.
- Evenness of use - large paddocks need to be better watered.
- Logistics - incorporating moves with herd management.

Trial paddocks



For further info, contact Bryan Gill or Alison Kain, ph: 8951 8127 or 8951 8184 or email: bryan.gill@nt.gov.au, alison.kain@nt.gov.au

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