

DESERT KNOWLEDGE CRC

The Central Australian Grazing Strategies project
Working Paper Series

A cow rotation in the Gascoyne:
Mt Augustus, WA

D. Walsh

Working Paper

58

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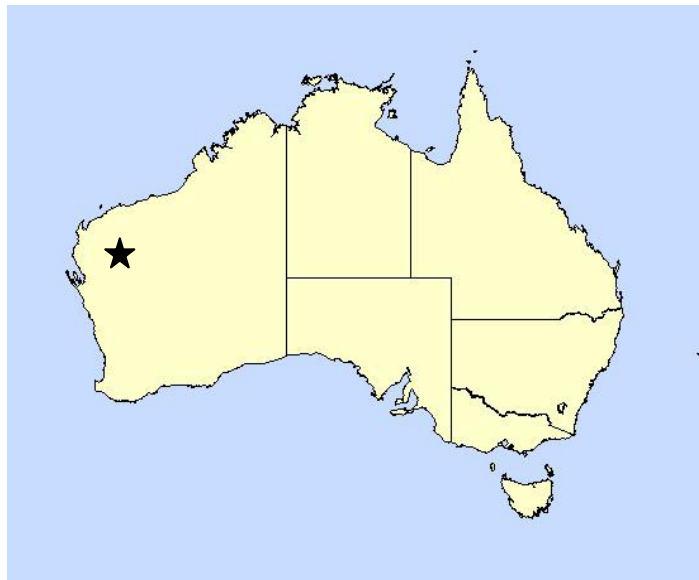
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A cow rotation in the Gascoyne

Mt Augustus, WA



Key points 405,000 hectare property in the West Gascoyne of WA	The Hammarquist family has owned Mt Augustus station in the Gascoyne region of Western Australia since 1980. The property is about 405,000 hectares, with 60,000 hectares being managed under a rotational grazing system since 2001. The Hammarquists produce Shorthorn cattle for sale to feedlotter via the Midland yards in Perth.
60,000 hectare cow rotation system	Matt Hammarquist describes Mt Augustus as crab-hole plain and river country. The dominant trees and shrubs are wait-a-while (<i>Acacia colletioides</i>), mulga and snakewood, while the prominent grasses include woollybutt and buffel grass. The average rainfall is 275 mm a year and is summer-dominant.
Improved cattle quality due to better husbandry and herd management	The grazing strategy The rotational system operates on 60,000 hectares of the most productive country in order to capitalise on the better feed and grazing potential. There are five paddocks, four of which are 10,000 hectares and one is 20,000 hectares. The paddocks are fenced with four-wire electric fencing. Each of the 10,000 hectare paddocks has seven waterpoints and there are 14 in the larger paddock. The Hammarquists move tanks and troughs between the paddocks to reduce capital costs and maximise the use of infrastructure.
Paddock size and animal health issues identified	Cattle are run in a single mob of 570 to 1,800 cows depending on seasonal conditions. The paddocks are each grazed for a fixed amount of time. The smaller paddocks are each used for three months and the bigger paddock is used for six months. Cattle numbers are adjusted to ensure that these time periods are maintained.
	Decision making for stocking rates, timing and spelling Stocking rates are determined by calculating the feed on offer for each paddock in the rotation and estimating carrying capacity. This is done by pacing out a square to estimate how big an area is required to feed one large stock unit for one day for different paddocks and land types. The feed on offer assessment is done towards the end of the wet season (April/May) which coincides with the period when pasture growth begins to wane. Key historical dates are used to make decisions on stocking rates for the coming year. Firstly, the Hammarquists assess the progress of the wet season around mid March. This verifies whether the wet season rains have fallen early, normal or late and can trigger stock adjustment decisions (particularly if the rains have been late or small). In some years rain can fall later (even into winter) but if there hasn't been any rain by the end of June, then cattle numbers are adjusted sharply to ensure there will be enough feed available to carry through until the next wet season. Paddock assessments are also done whilst cattle are using the paddocks to ensure that things are going to plan. The amount of plant biomass and the grazing pressure on preferred species, particularly close to the waters, are key indicators. An eye is kept on the grazing pressure being applied to palatable species such as crabhole grass, Gascoyne bluebush, buffel grass and

saltbushes. In terms of utilisation, Matt aims to take no more than 75% of the starting height of the grasses to ensure good recovery once rains fall again. There is a large variety of land types in the rotation paddocks and the Hammarquists tend to be conservative when estimating the feed on offer so that there remains a fair bit of feed after the cattle move on. They also keep an eye on the amount of bare ground appearing in the paddocks because they want to maintain good cover and litter levels to protect the soil surface.

Matt attended a Resource Consulting Services Grazing for Profit course in the early 2000s and uses Grazing Charts to keep track of rainfall, feed availability, stocking rates and stock movement dates. The charts are monitored on a monthly basis and stocking rates are adjusted to ensure that feed supplies last for the required amount of time. Land condition trends are monitored using two photo sites in each paddock, which are photographed twice a year. Feed on offer estimates are also undertaken at these sites as well as at other locations in each paddock.

Objectives of the grazing system

The reasons for adopting rotational grazing at Mt Augustus include:

- to improve production
- to improve land condition and prevent degradation
- to improve drought management.

Results

Livestock

Matt feels that animal husbandry and herd management has improved under the new grazing system. The cattle are noticeably quieter due to the additional handling they receive. The Hammarquists also undertake controlled mating in their grazing system, with bulls going in from the end of April until the end of August. The improved control allows them to preg-test the cows and identify and cull poor-performing individuals. The defined calving period also means that only one round of weaning and branding needs to be done each year.

Through closer handling of his cattle, Matt has also been able to identify a problem with Bovine Virus Diarrhoea in his herd. This had a significant impact on animal production after a good season in 2006 when the herd suffered high pregnancy failure rates and calf losses and a subsequent fall in replacement heifers. Matt now treats all heifers prior to mating with a pestivirus vaccine.

Matt feels that the overall quality of the cattle has improved because mickey bulls are no longer getting to the cows. The combination of good bulls over good cows has led to better quality genetics flowing through the herd. The regular handling and early marking of calves has led to improved temperament in the rotation herd. During dry times these rotation cows have been put into non-rotation paddocks and Matt feels that the improved temperament has rubbed off on the “outside” cattle too. The improved temperament and higher quality of the cattle has led to demand from repeat buyers.

Financials – costs and profits

Matt confirms that the costs of setting up the grazing system have been high. They have invested in 75 kilometres of fencing at \$1,200/km and 20 additional waterpoints ranging from \$7,000–\$20,000 each. Matt feels that their paddock sizes are still too big and this leads to increased mustering costs because they have to use the plane to move cattle between paddocks. He believes that the cost benefits achieved by other rotational systems are not currently being achieved on Mt Augustus and that running costs are similar to the more traditional “open range” system. To overcome these issues, the Hammarquists would like to reduce paddock sizes to about 5,000 hectares when seasonal conditions improve and more funds are available.

Land condition

Since the implementation of rotational grazing in 2001, the Hammarquists have noticed improvements in pasture and a reduction in run-off due to increased cover. For example, Matt notes that the grazing-sensitive Gascoyne bluebush is now coming up near waterpoints due to the longer rest periods (up to 12 months). He also notes that the grass is in much better condition on the riverbanks; these used to get heavily grazed before the new system was in place. Matt believes there is a higher level of organic matter in the soil now and intends to do some soil carbon testing to verify his gut feelings.

People

As with others in the industry, Matt sometimes finds it difficult to source staff and this has been exacerbated by the “out of season” nature of the grazing system.

Drought and pest animal management

Matt feels that the use of feed budgeting and Grazing Charts gives them better control over their feed supplies and animal performance throughout the year. In the event of drought conditions, cattle numbers are reduced and the remaining cows are put into paddocks outside of the rotation if poor conditions continue. The seasons have been average to below-average since the rotational system has been operating. Matt plans to put all new heifers and more cows into the system when seasonal conditions improve.

Kangaroo management has also improved under the new grazing system because waters in spelled paddocks are turned off. Previously, under continuous stocking, the waters were almost always in use, attracting kangaroos which damage fences in the mulga country.

Advantages of the system

Matt nominates the following as advantages of his grazing system:

- allows spelling of country
- improved quality of cattle
- improved management and husbandry of cattle.

Disadvantages of the system

Some of the disadvantages of adopting the different grazing system have been:

- property size is too big
- cost (due to paddock sizes being too big)
- getting enough water to be able to utilise all of the paddock.

Recommendations to others who want to try it

- go and see what others are doing and learn from them
- do the schools, especially the “feed on offer” and “low stress stock handling” ones.

Plans for the future

The Hammarquists plan to reduce paddock sizes in the current rotation to 5,000 hectares once funds permit. After that, they are keen to develop another 60,000 hectare system in the middle of the property. Matt is also considering putting his steers into a rotation system.

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