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## ROTATIONAL GRAZING MANAGEMENT FOR RANGELANDS

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### INTRODUCTION

Grazing management in arid rangelands has traditionally involved extensive areas with continuous stocking. In this context, grazing management has been mainly through alterations to stocking rates. However, regardless of stocking rate, continuous grazing results in selective grazing and pastures being overgrazed but underused.

Significant variations to continuous grazing could not be considered until recently because of stock handling costs. However, innovations have permitted the use of more intensive grazing management termed "rational grazing".

### ROTATIONAL GRAZING

Rotational grazing (RG) is a long researched approach to grazing management (1). However, consideration of it for rangelands is relatively recent. It is generally viewed as part of the the "Whole property management" approach - involving the land resource, livestock and economics.

RG is grazing management which endeavours to maximise pasture viability and productivity by grazing it relatively intensively for short periods of time. The grazing periods are mainly (but not only) determined by the growth stage and growth rate of the pasture plants (2).

In arid areas, where pasture growth is largely determined by individual rainfall events and where grazing areas are large, the periods of grazing and rest relatively long.

It is important to recognise the difference between stocking rate and stocking pressure. The former is simply a numerical figure of animals per unit area whilst the latter is a measure of the impact of the stock numbers in relation to the time they are on a pasture.

The concept of RG has been commercially tested by several pastoralists in NSW and Qld.

### SOUTH-WESTERN QLD EXAMPLE

Mr D. Banks, has employed RG management since May, 1987 on "Mirramindi" (Dirranbandi). The property covers 5500 ha of open to moderately timbered country supporting windmill grass (*Chloris truncata*) and corkscrew grass (*Stipa variabilis*) dominant pastures. Buffel grass (*Cenchrus ciliaris*) was also present in some areas.

The property has been divided into eight paddocks, ranging in size from 280 to 1000 ha and grazed by one mob of 4500 wethers which spend one to two weeks in each paddock.

The following are preliminary observations:-

\* at the end of a grazing period:-

- approximately 60% of the above ground biomass of all native grass plants had been grazed.

- buffel grass was grazed uniformly with regrowth regeneration (contrasting to continuously grazed pastures).
- all forbs had been grazed to varying degrees (including galvanised burr (*Sclerolaena birchii*)).
- previously unbrowsed belah was browsed to 1 m above ground level.
- sandalwood (*Eremophila mitchellii*) was lightly browsed.
- nepine (*Capparis lasiantha*) and white cypress pine (*Callitris glaucophylla* (to 1 m high) were heavily browsed.

The observation on grazing is probably the most important - contrasting with nearby areas which are continuously, but conservatively grazed. They confirm that a large number of stock per unit area for a short period have a wider dietary intake than those under conventional management. The increased browsing of woody weeds may also provide the opportunities for economical implementation of control techniques (3).

#### FUTURE DEVELOPMENTS

There is a need to review our perspective on the place of livestock in rangelands - they must not be perceived as a "necessary evil", but rather a source of productivity which can not only profitably utilise the pastures, but which can also contribute positively to rangeland conditions. Changes in grazing systems require increased management expertise. However, the refinement and application of RG will provide pastoralists with the opportunity to increase livestock productivity whilst demonstrating land management expertise.

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