

Technical note

Pasture management: current and recommended stocking rates in the Maranoa region, Queensland

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Introduction

Recent interest in Land Care issues has highlighted the need for pasture management guidelines for long term sustainable production from the pastoral lands of the Maranoa. Many landholders possess a wealth of knowledge gained from years of practical experience and while this information may be shared among family, friends and neighbours, very little of it has been documented. The aims of this project are to record current commercial management practises, obtain recommendations for sustainable production and to formulate pasture management guidelines based on local knowledge supported by scientific data.

Methods

Within each of the five major pasture land types of the region, group discussions were held with experienced graziers to document their property management strategies. The local consensus data (LCD) technique was used to obtain the opinions of the group on the management of a typical but hypothetical property (Clark *et al.* 1990). The consensus view of the meeting was recorded and verified at a follow-up meeting. Data on individual property size and livestock numbers normally carried were obtained from declarations held in QDPI property records. Equivalent cattle and sheep stocking rates were calculated, frequency distributions were derived for each pasture land type and compared with the group recommendations. Regression analysis was used to

examine relationships between stocking rate and property size.

Outcomes

Recommendations on the carrying capacities of various types of country and appropriate sized living areas for today's economic climate were determined by local graziers using their collective experience and not by government advisers. The recommended stocking rates for each pasture land type are compared with the common or most frequently occurring stocking rate class in Table 1. In the eastern Maranoa, on brigalow country, where there are more cattle-grain mixed enterprises, there was fairly close agreement between actual and recommended stocking rates. Only about 25 per cent of properties were stocked heavier than the recommended rate. However, in the box-mulga sheep country to the west, the discrepancy was greatest with 82-91 per cent of properties reporting higher stocking rates (Figure 1). On box-mulga pastures, current sheep stocking rates are about double that recommended for longer term sustainable production. Property size is often regarded as the most significant factor influencing stocking rates, but in this study, it accounted for only about 44 per cent of the variation in stocking rate. Other influencing factors may be property debt levels, attitude to climatic risks and unrealistic expectations of pasture productivity. Practical grazing management handbooks describing key pasture components and their reaction to strategic manipulation will be developed so that graziers can monitor pasture conditions on a paddock basis.

Reference

- CLARK, R.A., GRAHAM, T.W.G., KNIGHTS, P.T., LAWRENCE, D.N., MURPHY, R.L., ROWLAND, P. and SLATER, B.K. (1990) The application of the local consensus data technique to obtain experienced producers' recommendations for sustainable pasture management. *Proceedings of the QDPI Extension Conference, May 1990. Conference and Workshop Series QC90002.* (QDPI: Brisbane).

Table 1. A comparison of the declared and recommended stocking rates (SR) for different land types in Maranoa

Land type and stock type (No. properties)	Stocking rate			Proportion of properties with SR above R (%)
	Common	Average Mean \pm SD (ha/animal)	Recommended (R)	
Mitchell Grass (41)				
Sheep	0.1- 1.2	0.9 \pm 0.40	0.8- 1.2	34
Cattle	3.2- 8.1	6.6 \pm 2.76	8.0-10.0	68
Brigalow (187)				
Sheep	0.8- 1.2	1.0 \pm 0.62	N.A.	N.A.
Cattle	4.9- 6.4 ¹ 6.5- 8.1 ²	6.2 \pm 3.34 9.1 \pm 5.10	4.0- 8.0 N.A.	25 N.A.
Box Woodland (48)				
Sheep	0.8- 1.2	1.3 \pm 0.83	0.8- 1.2	21
Cattle	4.9- 8.1	9.4 \pm 5.77	7.0-10.0	46
Box mulga (89)				
Sheep	0.8- 1.2 ³	1.5 \pm 0.75	2.0- 2.8	91
Sheep	1.2- 2.0 ⁴	2.0 \pm 0.79	2.8- 4.0	82
Cattle	6.5- 9.7 ³	10.7 \pm 5.26	20.0	91
Cattle	8.1-11.3 ⁴	14.2 \pm 5.52	28.0	95
Pine (54)				
Cattle	6.5- 8.1	12.9 \pm 9.94	12.0	61

¹ NE Maranoa — Bendemere and Bungil Shires

² S and W Maranoa — Warroo and Booringa Shires

³ E and S Maranoa — Bendemere, Bungil and Warroo Shires

⁴ W Maranoa — Booringa Shire

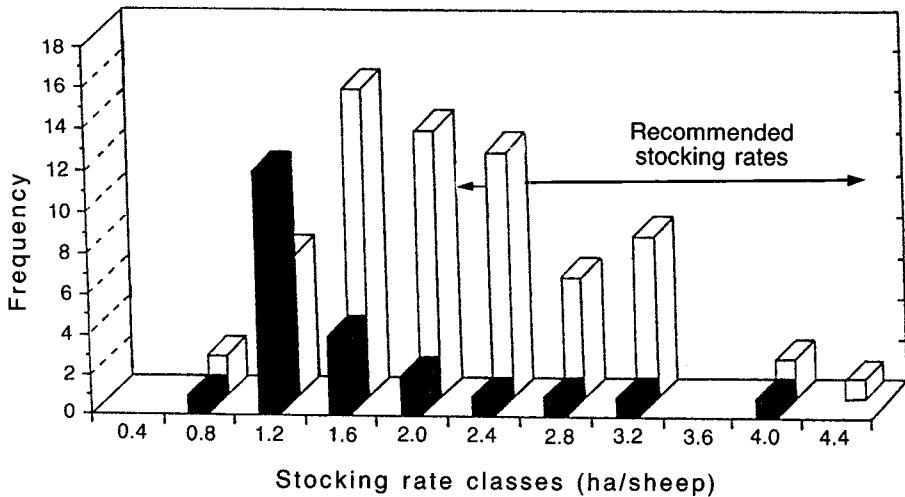


Figure 1 Actual stocking rates on box-mulga pastures in the Booringa □ and other ■ shires of the Maranoa district in relation to the recommended stocking rates.