

A benchmark for stocking rate management in a highly variable climate.

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Resting pastures and adjusting stocking rate to match carrying capacity are recommended for managing year-to-year variability in forage supply. Within the Queensland Government Drought and Climate Adaptation Program, grazing benchmark properties are being established to help validate the FORAGE modelling framework. Data from well-managed properties that are in good condition provide a reference for comparison with modelled long-term carrying capacity estimates. We report on the stocking rate strategies used by an experienced grazier for one of these benchmark properties.

Improving the grazing ecosystem through planning, monitoring and managing grazing has been a goal of this grazier for twenty-five years. Stock numbers and grazing pressure are managed to improve grass quantity initially, and then quality, by favouring and encouraging “desirable” pasture species. Short grazing periods are used to minimise preferential selection while still allowing good animal performance, and rest periods are aligned to the growth rate of plants to allow pasture recovery.

Implementation of a “time-controlled” grazing system, where stock are regularly moved through paddocks, provides the flexibility to match utilisation with changes in rainfall, season and pasture. On average, the property receives an annual rainfall of 674 mm but year-to-year rainfall variability is very high (cv 48%). Since 2004, annual stock numbers ranged between 1321 and 2292, with the herd increasing or decreasing up to 38% each year. During this period, paddocks were grazed on average 58 days per year, and stock days per hectare for every 100 mm of rainfall increased from 6 in 2004 to 12 in 2018. Satellite imagery of ground cover enables the health and productivity of this property to be compared with surrounding properties. Over the last 30 years, the number of paddocks across the property with higher ground cover than the surrounding region improved from 39 (1990 – 2009) to 86 (2014 - 2019).

Additional keywords: benchmark property, grazing ecosystem, stock numbers, pasture recovery, landscape health