Producer-focused demonstration site increases engagement in northwest Queensland

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Introduction

In 2024, the McKinlay Shire in northwest Queensland experienced higher-than-average rainfall, including unseasonal winter rain. This out-of-season rain led to a decline in pasture quality and in turn livestock body condition scores (BCS), resulting in low pregnancy rates in 2025. Concerned by these impacts, a next-gen local producer contacted the Department of Primary Industries (DPI) Beef Extension team in Cloncurry, asking for assistance on managing the growth and nutrition of young female cattle in difficult conditions. An on-farm demonstration site was established with the producer aiming to help local graziers understand pasture quality in response to season conditions and the nutritional impacts on cattle.

Methods

From February to August 2025, a cattle faecal sample was collected monthly from a paddock at two properties on Mitchell grass downs in the McKinlay Shire, northwest Queensland. For each collection, a tablespoon-sized sample of faeces was taken from at least 10 dung pats in the paddock and combined. The samples were dried and analysed for crude protein (CP) and dry matter digestibility using near-infrared spectroscopy (F.NRIS). Rainfall data was recorded at each site using Farmbot™ rain gauges. A group of neighbouring producers were invited to one of the host properties for a 'neighbour day' in June 2025 to share the results and discuss management options. The neighbour day also included practical demonstrations on cattle grass intake, nutritional requirements of breeders and supplementation options to manage CP and DMD deficits.

Results

CP% declined from February to August, resulting in a drop from 16.8% to 3.6% at South McKinlay and 15.3% to 3.0% at North McKinlay. In both paddocks, DMD also declined in the same period, but remained over 52%. The neighbour day on 26 June was attended by 7 people from 5 properties. Discussions on the day resulted in 4 out of 7 attendees planning to make changes to their supplementation and breeder management programs.

Discussion and conclusion

The data collected from the host property aligned with existing scientific understanding of the decline in Mitchell grass quality during the dry season, particularly following out-of-season rainfall (Scarnecchia and Partridge, 1994). However, the use of local data helped next-gen producers and DPI Beef Extension Officers to better understand the nutritional demands of their cattle and the critical role of strategies such as supplementation, and the time of calving and weaning. The neighbour day provided a platform to discuss a range of practical topics, including cattle nutrition, lick intake management, interpreting F.NRIS results, and understanding supplement composition. The event has promoted connections between producers and the DPI Beef Extension Team. By addressing shared challenges through a practical, local demonstration, the site proved effective in bringing people together. Efforts are underway to continue hosting neighbour days. This demonstration site has become a hub for producers to share knowledge, ideas, and challenges, with facilitation and guidance provided by DPI Beef Extension Officers.

References

Scarnecchia, D.L. and Partridge, I. (1994). Managing Native Pastures. A Grazier's Guide. *Journal of Range Management*, 47(6), p.505.

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