



South West NRM

On-Ground Project Fact Sheet

TRIALLING A ROTATIONAL TIME MANAGED GRAZING SYSTEM ON SHANNENDOAH

Landholder Name: Brett & Jenny Sheahan

Property Location & Lot on Plan: 30 kilometres north of Bollon

(Property & project location maps attached at the end of the document)

Lot on Plan:

Property Outline:

(E.g. Property description, size in hectares, enterprise, annual rainfall, and current management practice)

Shenandoah is a grazing block of 4008 ha. Wallam creek traverses the property and is fenced on both sides. 2 paddocks on the eastern side are approximately 1002 ha and 2 on the western side are 1002 ha. The country consists of approximately 3479 ha of poplar box plains and 502 ha of wooded alluvial plain with the remaining 28 ha consisting of dunehills and sand hills. The soft red soil is generally stable and relatively productive if vegetative cover is maintained. Buffel grass has been well established in some areas and recent continued rainfall has resulted in a high percentage of ground cover with areas of native herbs and grasses present, wire grass being the more dominant native grass. Where mulga is present, high density regrowth can limit carrying capacity.

Current Property Management: - Shannandoah has been operating as a beef cattle breeding enterprise for the past five years. Current carrying capacity for Shannendoah in a continuous system is estimated at 260 LSU. The property has well developed infrastructure with existing internal 4 wire electrified fencing and an artesian watering system which was installed to cater for potential development as a cell grazing system. Flowing artesian bore water is piped to storage tanks and delivered to stock in cement troughs across the property. Natural water is available in Wallam creek with 2 semi-permanent holes.

Annual average rainfall is 400mm. Rainfall for 2009 was 650mm. Rainfall for 2010 to date is 1052mm.



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Project Description

To implement a rotational time controlled grazing system the paddock sizes will be reduced to average approximately 300 Ha, depending on land type and estimated stock days per hectare. Approximately 11 kilometres of fencing will be constructed using fencing of 2 plain wires, 2 electric wires and a top barb wire. As with any high density stocking system sufficient watering points are extremely important and fencing will be designed at water points to cater for animal health, behaviour and security. All in kind labour, along with some additional water infrastructure and machinery hire will be provided by property owner Brett Sheahan.

Planning is critical to the success of this trial, right from the physical layout and water capability to the movement of the stock. Grazing charts along with property mapping and the property planning will be central tools. . South West NRM will invest in some technical support, with an initial consultation on site to investigate the best options for sub divisional fencing and water infrastructure, along with vital planning and managing for plant, animal and economic performance of the trial.

Funding Budget: \$25,000

Project Aim

The project aims to trial a cost effective time managed rotational grazing system, to maximize plant and animal production while improving ecosystem sustainability and optimizing grazing enterprise profit. It will compare a rotational system with a traditional continuous grazing system and document economic, environmental and animal performance, with return on investment being the integral indicator. Brett plans to mob together steers with dorper sheep. Calculations of rest and graze periods for pastures in the new paddocks will differ from the growing period to the non-growing period of the year. The principle is that plants require a recovery period: during the growing season (spring summer) this means the time it takes to regrow from the bottom of phase II to the top of Phase II and this is determined by rate of growth. Stocking rate will be adjusted to suit carrying capacity for each paddock, with maximum stock density used for minimum time. Ideally no more than 40% of available pasture will be grazed with each move. Moves will be based on the growth rate of the pasture and its physiological requirement for rest.

Project Outcomes

The major outcome of this project is to link grazing business enterprise profitability to environmental sustainability to achieve landscape scale conservation across South West Queensland. This project at Shannandoah will facilitate an individual landowners' adoption and involvement in driving change in modern natural resource use, attitudes and practices which will then be widely communicated through local networks. In a time managed rotational grazing system on-ground outcomes will be improved ground cover and biodiversity. Economic benefits will be achieved through stock grazing pastures at their peak nutritional levels; this should reflect good feed conversion rates and result in good market prices at sale.

Outputs

CB1.1 Events – 3 field day, approximately 30 persons attending. **CB1.2** Publications. 3 fact sheets written. 100 people **CB1.4** Media opportunities. One created. **CB5.1** Establish 4 grazing learning sites. One established **OG2.4** Fenced terrestrial vegetation. 4000ha fenced **OG14.5** Groundcover management. 30000ha with 10 farmers adopting practice change. **OG3.4** 4 Establish 4 grazing learning sites. 4000 terrestrial vegetation as learning site. **P1.1** Complete 15 NRM property plans. One plan completed. **P3.2** One Property Management Plan. **P5.1** Biophysical, economic, social plans. Three plans written, Monitoring and Evaluation plan and Return on Investment for enterprise options.

Project Monitoring:

Objectives:

Monitoring of animal, plant and economic performance is critical to the success of the trial to monitor outcomes from implementing time managed rotational grazing.

Methodology & Indicators:

The land owner currently uses a grazing chart and this will be utilized as the primary monitoring tool for the trial. The four critical pieces of management information recorded being:

- Actual rest periods for each paddock (days)
- Actual yield of each paddock (stock days per hectare)
- Stocking rate (stock days per hectare)
- Stocking rate relative to carrying capacity (stock days per hectare per 100ml rainfall)

Photo points will be established through-out the grazing system, placed strategically on the differing land and soil types.

Indicator species and plant diversity will be identified and ground cover and plant basal area measurements recorded. Simple grass budgeting tools will continually reassess and check feed availability for stock numbers. Livestock will need to be managed effectively for moves with numbers recorded on grazing charts. Tracking economic performance will be documented to calculate return on investment.

Monitoring Schedule:

Establish baseline data prior to the commencement of the project.

To assist project collaboration and holistic data analysis under the project, the initial collection and onforwarding to South West NRM, of rainfall and ongoing production monitoring data utilising grazing charts, will be the responsibility of the landholder.

Biophysical monitoring every six months in which South West NRM will be responsible for collecting, collating, interpreting and reporting data.

Two pasture monitoring transects considering pasture species and ground cover established within the project area representative of the major land type.

Two photo monitoring sites within the project area representative of the major land types.

Landholder will record seasonal events by utilising photo site when relevant and utilise the Grazing Chart as the primary monitoring tool.