CASE STUDY - MALILANGWE

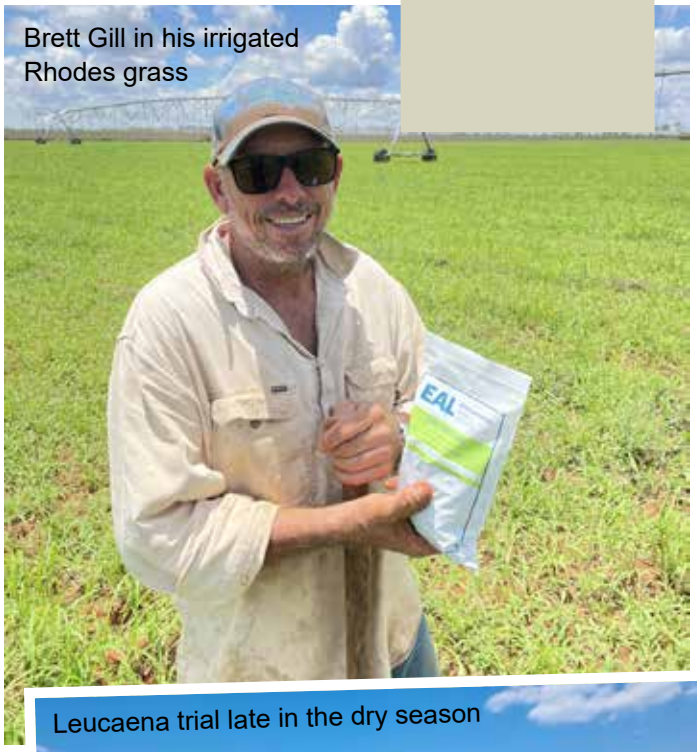
Property Name: “Malilangwe”
Location: Douglas Daly
Annual Rainfall: 1200mm
Agro-Climatic region: Semi-Arid tropical
Property size: 650 ha

Elevation: 50 m
Enterprise time: Cattle
Soils: Tippera

History

Brett and Suzanne Gill have been running Malilangwe since 2001. Since purchasing their property both Brett and Suzanne have been working hard to establish a production method that complements production and sustainability. They have achieved this through a number of different production methods.

- Multi-species pastures (Jarra, legumes, and Leucaena)
- Minimum Tillage
- Use of biological activators
- Grazing methods


Brett Gill in his irrigated Rhodes grass

Multi-species Pastures

Multi-species pastures are becoming increasingly popular in the Northern Territory as they offer a range of benefits for livestock production and land management. Brett and Suzanne have been implementing multi-species pastures in several of their paddocks. One key component of many multi-species pastures is Jarra grass, a warm-season perennial grass native to Australia that is highly productive and adaptable to a range of soils and environments. Jarra grass is often combined with other hard seeded legumes such as stylo, which provide nitrogen fixation, soil improvement, and additional forage.

The Gills have been conducting trials with Leucaena, which is a fast-growing legume tree, has the potential to be another valuable addition to multi-species pastures in the Northern Territory. Leucaena is high in protein and research suggests has the ability to reduce methane production in ruminant animals. Its deep roots can improve soil structure and water infiltration. Brett and


Leucaena trial late in the dry season

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Suzanne are careful to manage the Leucaena correctly to stop unwanted seed dispersal, which is an issue in the territory as we all know too well.

Multi-species pastures that include Jarra grass, legumes, and Leucaena can provide a range of benefits for livestock producers in the Northern Territory. These pastures can improve soil health, reduce erosion, and increase productivity and resilience in the face of climate variability. By diversifying their pasture systems, Brett and Suzanne can also reduce the risk of forage shortages and provide a more balanced and nutritious diet for their livestock.

Minimum Tillage

Bret and Suzanne practice minimum tillage when possible. The goal is to increase overall soil health and prevent erosion. While conventional cultivation is still a process used by adding a zero-till option into their farming production system the Gills have reduced their reliance on conventional cultivation during planting. This can have numerous advantages such as:

- Moisture conservation and water infiltration
- Increased soil organic matter and soil humus
- Reduced soil temperature
- Reduced risk of erosion
- Improved soil biology
- Increase resilience against climate variability
- Fuel savings
- Higher yield potential

Use of Biological Products

Brett and Suzanne have been experimenting with using Biological Stimulants as a part of their fertiliser regime. Bio products are a substance of microorganisms that can be applied with fertiliser to plants to enhance growth, yield and stress tolerance.

By improving the diversity and activity of beneficial soil microbes, Brett and Suzanne aim to create a more resilient and self-sustaining soil ecosystem, leading to improved soil fertility and plant health over the long term. Additionally, the use of soil biological stimulation products can help to reduce the need for synthetic fertilisers and pesticides, leading to reduced inputs and costs, and a more sustainable and environmentally friendly farming system.

Grazing Methods

Brett and Suzanne are very conscientious about their grazing strategies, they have implemented a highly specialized form of rotational grazing. Over the years they have developed a keen understanding of how cattle graze their country. Depending on the time of the season, type of feed available, soil type and location on the property, they will vary the intensity and length of grazing. Their grazing management decisions all boil down to one goal where they are determined to protect their soils and pasture by not overgrazing their country.

Brett and Suzanne have also adopted some more specialised grazing strategies on their irrigated pastures. Brett has been using a series of hot wires to strip graze his pastures. This involves creating a temporary fence to confine livestock to a narrow strip of pasture, which is then moved regularly. This strategy can be used to target specific areas of the pasture that need more intensive grazing while avoiding overgrazing in other areas. This has the benefit of fully utilising all of their pasture equally. It also extends the amount of time cattle can spend on high-quality pasture, leading to increased livestock weight gain while not overgrazing.

Discussion

Brett and Suzanne have managed to create a diverse production system that incorporates a number of management techniques that serve to be functional and efficient. Their efforts in minimum tillage, the use of Bio Stimulants and grazing practices all serve their management philosophy of protecting their soils. In doing so, preserve and create an all-around more resilient property. Looking to the future Brett and Suzanne are looking to continue their efforts in soil health and are trial different production methods in achieving this goal.

Brett doing soil sampling in Irrigated Rhodes

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