

Successful Pasture Development at Cungelella: A grazier, a researcher and a seed company's perspective

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Introduction

Cungelella is a NAPCO property located in Central Queensland's Brigalow Belt region between Springsure and Tambo. Mean annual rainfall is 598 mm pa the soils are typically low in N and P, have an alkaline pH and moderate to high clay content. The property is some 22,000 ha and mainly backgrounds NAPCO composite cattle for the company's feedlot. Pastures are predominately long established buffel grass which is rotationally grazed with strategic spelling.

Over many years a number of pasture legumes have been sown and trialed at Cungelella in an attempt to improve and enhance the sustainability of the buffel grass pastures and to improve live weight gains. To be successful in this environment a legume needs to be able to compete with buffel, survive and recover from prolonged dry and wet spells and put weight on cattle and be a good return on investment. However almost without exception the species sown to date have not met expectations. Species sown have included: Stylo's, butterfly pea, Clovers, Medics, Siratro and Burgundy bean, these species have not persisted with the buffel and the grazing regime.

Results and Discussion

In 2010 Progardes Desmanthus was the next species trialed as it had been evaluated and had persisted in old trial plots for many years in Central western and Northern Qld. Initially a 250ha old buffel grass paddock was renovated with a savannah plough and Progardes seed broadcast on the surface. Almost 6 years later this paddock is an excellent stand of Buffel and Progardes with the Progardes having a stable population of some 7plants/m². Cattle regularly gain an additional 40kg/hd compared to steers on adjacent buffel alone paddocks. The pasture has been well tested over recent years with full commercial grazing pressure and very dry and wet periods.

Since 2010 a number of other pasture establishment techniques have been utilized and some additional 2,500ha has now been sown to Progardes. Establishment techniques have included blade plough with seed drum or aerial seeding, blade plough followed by chain to create a finer seed bed tilth, cultivation with a Tilco and air seeder and very recently in an attempt to store soil moisture which is seen as critical in this environment for successful legume establishment has been to aerially apply Glyphosate herbicide and then aerial seed Progardes into the buffel litter. To date this method is proving to be successful as the competition from the buffel is initially greatly reduced; soil moisture is retained and available for the germinating and establishing Progardes legume. Later the buffel fully recovers from the herbicide and the legume has a well-established tap root system and competes with and complements the buffel.

The pasture development methods undertaken at Cungelella and the resulting productivity are models that may well be applicable to large areas of the Brigalow region and beyond.

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“Cungelella”:

Location: Between Springsure and Tambo (Central Qld)

Land type: Brigalow

Area: 22,000 ha (54,363 acres)

Rainfall: Long term mean 598 mm/year (24 inches)

Pastures: Predominately Buffel grass

Beef production: Backgrounding NAPCO composites



Discussion:

- The value of using legumes has been long recognized
- Many varieties tested over many years (stylo, butterfly etc)
- But finding a variety that is compatible & persistent with buffel on Brigalow soils has been problematic
- In 2010 while renovating a 250ha buffel paddock Progardes Desmanthus seed was sown and successfully established & remains a good stable population today, it's well grazed and productive typically producing 40kg additional LWG/hd over adjacent buffel alone paddocks.
- Since 2010 other paddocks established with Progardes
- Various establishment methods have been used eg blade plough, savannah plough, tilco, aerial and recently zero till (Roundup and aerial seeding).
- **Seed bed preparation (seed soil contact and reduced buffel competition) and having stored soil moisture are key to good legume establishment in our variable climate.**

“Cungelella” and Progardes/Buffel pasture



Progardes Desmanthus