

98/Q10



## Producer Research Support

### Improving Pasture Productivity

Mackenzie River Big Bend Landcare Group



#### The project

Mackenzie River Big Bend Landcare Group president Paul MacKenzie said pasture research funded by the former Meat Research Corporation (now MLA) in Central Queensland had previously found that existing pasture, oversown with improved pasture legumes and grasses, can improve animal growth rates through better nutrition.

"The research found grazing pressure can be manipulated to maintain groundcover and reduce rainfall run-off and erosion. And burning pasture and manipulating stocking rates can also control wiregrass," Mr MacKenzie said.

This was the basis of the Mackenzie River Big Bend Landcare Group Producer Research Support project and aimed to:

- improve soil nitrogen and feed stocks on heavy black soil;
- improve soil profile and groundcover in lighter, phosphorus deficient tableland country; and
- provide cover and pasture density in previously cultivated paddocks.

#### Objectives

1. Oversow existing pasture with improved pasture legumes and grasses to improve animal growth rates through better nutrition;
2. Reseed pasture to improve groundcover and reduce erosion;
3. Burn pasture and manipulate stocking rates to control wiregrass; and
4. Manage grazing pressure to maintain pasture groundcover and reduce rainfall run-off.

#### What was done

Ten sites on five properties were involved in the demonstration.

#### Arizona

**Site 1 and 2:** Re-pasturing old cultivation paddocks with Butterfly Pea at 0.50kg/ha, Biloela Buffel and Gayndah Buffel at 0.25kg/ha.

**Site 3:** Established Buffel pasture ripped to 30cm deep oversown with Butterfly Pea and Secca Stylo at the rate of 0.50kg/ha to improve soil nitrogen levels. This was done in January 1999.

#### Boombah

A Biloela, Gayndah and USA Buffel mixture was planted at 0.56kg/ha, Secca Stylo at 0.28kg/ha and Rhodes Grass at 0.28kg/ha in February 1999.

#### Coreen

**Site 1 and 2:** Planted Butterfly Pea at 0.50kg/ha in May, 2000.

#### Gordon

A 45-hectare section of old cultivation country was planted to Butterfly Pea at 0.50kg/ha and Forage Sorghum at 2kg/ha in January, 1999.

The Mackenzie River Big Bend Landcare Group in Queensland were interested in looking at restoring land productivity by reinvigorating pastures through the establishment of improved grasses and legumes and the management of the pasture.

Members of the group took time out of their busy routines to conduct pasture establishment trials. Some tantalising prospects were hampered by seasonal conditions and low rainfall, working against a more positive outcome.

#### Key points

- Better quality and quantity of pasture can result from pasture improvement programs in Queensland.
- The improved grasses and legumes out-performed native Spear grass and the response to rain improves as a result of greater water penetration.
- Success depends on seasonal conditions.

#### Contact details

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## Producer Research Support

MLA Producer Research Support offers support funding of up to \$15,000 over three years for groups of producers keen to be active in on-farm research and demonstration trials.

These activities include:

- Producer Initiated Research and Development
- More Beef from Pastures demonstration trials
- Prime Time Wean More Lambs demonstration trials
- Sustainable and productive grazing grants.

Contact Stephen Feighan - MLA Project Manager, Producer Delivery and Adoption.  
Tel (02) 9463 9245 or  
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## MLA also recommends EDGENetwork

EDGENetwork offers practical field-based workshops to improve productivity and profitability for the long-term.

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## Meat and Livestock Australia

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## Improving pasture productivity

June 2006 / PIRD OUTCOMES

## Old Gordon

**Site 1 and 2:** Biloela, Gayndah and USA Buffel mixture, Secca Stylo and Verano Stylo broadcast with drum seeder at recommended rates.

**Site 3:** Broadcast Gayndah and American Buffel seed on old cultivation country using drum seeder. Seed distributed at 2kg/ha in late December 2000.

## What happened?

### Arizona

There was reasonable germination achieved due to the moisture profile in the early stages. A lack of follow-up rain meant most seedlings died out. In the following months there was little sign of Butterfly Pea. Some introduced grasses including Biloela and Gayndah Buffel appeared to have survived. On site three there was insufficient rain to germinate seed.

### Boombah

There is a higher quality of pasture and masses of feed reserves as a result of the project. The improved grasses and legumes out-performed native Spear grass and the response to rain improved greatly due to the water penetration.

The group held a field day in September, 2000. This was attended by 30 producers who were impressed by the results of the trial. There was an article on this site in the Queensland Country Life following the field day.

### Coreen

At Site 1 there was a reasonable result with fair germination but some frost damage. Site 2 returned a poor result with frost and water damage in low areas.

### Gordon

On first inspection there was minimal germination with no follow-up rain. After further inspection there was no evidence of seedlings.

### Old Gordon

**Site 1 and 2:** There were seedlings to about 2cm high. This was not expected due to weather conditions.

**Site 3:** There was an excellent strike with strong evidence of young seedlings.