

2002/N02



Producer Research Support

Improving Coolatai Grass Productivity

Coolatai Grass Management Group



The project

The Coolatai Grass Management Group aimed to increase carrying capacity and beef and wool production on Coolatai Grass pastures by improved grazing management.

Objectives

1. Increase weight gains of cattle by 0.5 kg/hd/day;
2. Increase digestibility of Coolatai Grass pastures from less than 55% to 70%;
3. Increase the number of productive perennial species from 1-2 to more than six;
4. Achieve and maintain at least 70% ground cover;
5. Have all members of the group trained in better grazing management and adopt the improved Coolatai Grass management principles learnt from the project by June 2004;
6. Have at least 25% of members double their carrying capacity on Coolatai Grass pastures by June 2004; and
7. Have 20% of producers on the North West Slopes adopt the improved management principles demonstrated by this project by 2004.

What was done

Cattle were placed in the untreated area during a good period of rain in December 2004 to graze young, leafy Coolatai Grass. Dry mineral supplement with high protein was available continuously for the livestock.

The cattle were placed in the treated plot on 07/01/05 and weighed on 16/02/05. This was a period of hot, dry weather which quickly burnt off the leafy grass growth and caused the plants to attempt to reproduce which markedly reduced fodder quality. The mineral supplement was also available for this plot.

The Coolatai Grass invasion trial that was established in February 2004 was monitored in early 2005. There had been a significant increase in Coolatai grass in this trial. This result was expected because of the dry weather and lack of competition from other grasses under these conditions. Coolatai Grass competes very well with other species under dry conditions because of the well developed fibrous root system.

The Coolatai Grass invasion plot project was designed to evaluate the invasion of this grass into native pastures under rotational grazing but drought conditions severely limited what could be done.

The information generated by the project has greatly contributed to the better management of Coolatai Grass in northern NSW and will considerably increase productivity from this species.

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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.

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What happened?

The cattle grazed on the untreated area gained an average of 0.85 kg/hd/day which was by far the best result measured on the untreated area. Previous weight gains on the untreated area were minimal but previous grazing had been done when the Coolatai Grass was much more mature (early flowering).

Young Coolatai Grass has good energy value but is often very low in protein. There is some evidence that Coolatai Grass can have a symbiotic relationship with micro-organisms similar to that of legumes and the rhizobium bacteria. As the plants were young and leafy and at optimum quality when grazed there may have been adequate nitrogen for plant growth obtained from this association, which was complemented for the grazing animals by the mineral supplement.

Weight gains were only 0.46 kg/hd/day (about half the control plot). This was a markedly different result to previous years where the treated plot was always much better. It is anticipated that this result is directly related to the marked contrast in seasonal conditions for each period of grazing. Unfortunately the co-operator was unable to handle grazing the two plots simultaneously with two mobs which would have given a more realistic result.

The season remained dry until June 2005 except for light falls of rain in late summer/autumn which germinated the sub clover and serradella but there was insufficient moisture for these legumes to survive. There was very little evidence of legume growth. Coolatai Grass produced some growth in June/July due to the above normal temperatures but the owner needed to run stock across the whole area during this time to maximise grazing for the drought affected stock.

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Discussion

This project has highlighted the need for improved management of this grass. It has demonstrated the value of native legumes once superphosphate has been applied to the area to promote their growth. Although the drought severely affected this project it has been extremely useful in increasing producer awareness of Coolatai Grass management. Many producers in the area have expressed interest in learning how to maximise production from Coolatai Grass.

The co-operators for this project have also highlighted the benefit of using supplements for better stock performance on Coolatai Grass, and this information has been disseminated during the group activities for the project.

Drought conditions over the last few years (particularly in autumn/winter) of the project severely restricted the establishment of introduced winter green legumes, such as sub clover and serradella, but there is evidence of the value of these legumes from commercial plantings established in the better seasons.

The Coolatai Grass invasion plot project was designed to evaluate the invasion of this grass into native pastures under rotational grazing but unfortunately drought conditions severely limited what could be done.

The co-operators intend to evaluate the economics of applying superphosphate for their own benefit once better seasonal conditions return. The information generated by the project has greatly contributed to the better management of Coolatai Grass in northern NSW and will considerably increase productivity from this species.

MLA also recommends EDGENetwork

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

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