

99/Q11



Producer Research Support

Improving Pasture Productivity in the Upper Augathella Region

Upper Warrego Pasture Management Group



The project

The Upper Warrego Pasture Management Group wanted to investigate effective strategies to control bean bush (*Senna pluerocarpa*), and therefore improve the pasture and beef production on country with sandy red loam soils in south-west Queensland.

Objectives

1. contain the spread of bean bush on improved pastures in the Upper Warrego Region;
2. reduce the population of bean bush on improved pastures in the Upper Warrego Region to less than 5 percent canopy for total area; and
3. develop programs to discourage bean bush establishment.

What was done

A trial site was identified at Khyber in Augathella, and 11 different bean bush control treatments were applied in July 1999.

The different treatments applied are summarised in *Table 1*.

Table 1. Initial Treatments

PLOT NUMBER	TREATMENT	RATE
80	Reclaim®	1.0 kg/ha
81	Reclaim®	1.5 kg/ha
82	Reclaim®	2.0 kg/ha
83	Graslan®	3.0 kg/ha
84	Graslan®	1.5 kg/ha
85	Grazon Foliar®	350 ml/ha
86	Grazon Foliar®	500 ml/ha
87	Round-Up®	3.0 L/ha
88	Round-Up®	1.5 L/ha
89	Slashed, Grazon Spot Sprayed	5 ml/L
90	Ploughed	

The Upper Warrego Pasture Management Group identified a trial site and applied 11 different bean bush control treatments, to eradicate the weed and therefore improve pasture and beef production.

The most effective treatment was found to be Graslan granules at 1.5kg per ha. This treatment killed 100 percent of bean bush infestation, but did not kill grasses.

Key points

- Granular herbicides were effective without prior slashing or ploughing of the plots.
- Slashing and ploughing of the plant stimulated vigorous regrowth and vegetative reproduction of bean bush.

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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
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- Sustainable and productive grazing grants.

Contact Stephen Feighan - MLA Project Manager, Producer Delivery and Adoption.
Tel (02) 9463 9245 or
sfeighan@mla.com.au

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Following prolonged dry conditions after the initial application, and the slow action of some of the treatments, it was some time before an accurate assessment of the effectiveness of the different treatments could be completed.

A field day was held at Khyber during August 2000, and the results of the initial treatments assessed. The results of this assessment are summarized in *Table 2*.

Table 2. Results of Initial Treatments

TREATMENT	RATE	RESULT
Reclaim®	1.0 kg/ha	100% Kill at all rates
Reclaim®	1.5 kg/ha	
Reclaim®	2.0 kg/ha	
Graslan®	3.0 kg/ha	100% Kill, lethal to grasses
Graslan®	1.5 kg/ha	100% Kill, non-lethal to grasses
Grazon Foliar®	350 ml/ha	Ineffective
Grazon Foliar®	500 ml/ha	Ineffective
Round-Up®	3.0 L/ha	Reduced vigour, but ineffective kill
Round-Up®	1.5 L/ha	Reduced vigour, but ineffective kill
Slashed, Grazon Spot Sprayed	5 ml/L	Ineffective
Ploughed	N/A	Ineffective

What happened?

Follow up treatments were planned for areas that were initially treated by slashing or ploughing. This approach was rejected for the following reasons:

- granular herbicides were effective without prior slashing or ploughing of the plots;
- slashing or ploughing of large areas will never be an economically feasible solution; and
- slashing and ploughing stimulated vigorous regrowth and vegetative reproduction of bean bush.

Discussion

Despite project delays due to drought, the most effective treatment was found to be Graslan granules at 1.5kg per ha. This treatment killed 100 percent of bean bush infestation, but did not kill grasses.

Ploughing and slashing was found to be an ineffective control mechanism, and prohibitively expensive.

Next steps

Producer group members are keen to extend their knowledge of the benefits of herbicides, given their initial trial success. In a series of informal discussions, DuPont have indicated they are willing to provide sufficient chemical for further trials. Assistance with the cost of application would also be required, as product can only be applied with Webb helicopters.

The group have resolved to formalise an arrangement with DuPont, and make an application for further Producer Research Support to continue the trial.