98/S01

Producer Research Support

Improving Pasture Productivity

A Wattle Range Couch Grass Project

A combination of herbicide treatments and blade ploughing were trialled to determine the most effective means of controlling couch grass, and consequently increasing crop yields and meat production. The outcomes of this project show that the best way to eradicate couch grass is to blade plough once, spray and then spot spray paddocks over a few years.

Key points

- Couch grass is a very difficult weed to completely eradicate.
- Combination herbicides in conjunction with blade ploughing greatly reduce the amount of couch grass in a paddock.
- When treatment is combined with follow-up spot spraying, complete eradication is possible.

Contact details

Wattle Range Couch Grass Project
Jack Hassell / Box 121
PENOLA SA 5277

The project

Heavy infestations of couch grass are known to inhibit pasture and field crop production. Most methods of combating couch grass are only temporary, with little or no reduction seen in subsequent seasons.

The Wattle Range couch grass project was developed to identify the most effective mechanisms for long term eradication of couch grass and consequent increase in crop yields and meat production.

Objectives

- Measure the effectiveness of spraying with different insecticides, or blade ploughing, to reduce couch grass infestation long term;
- Measure increased pasture and meat production, following the eradication of couch grass; and
- Increase carrying capacity by 1.5 DSE/acre or 3.75 DES/ha.

What was done

Trial 1

Three different paddocks were boomsprayed with up to 6.5 litres/ha of Touchdown, and then spot sprayed with a 2% Round-up and 0.3% L1-700 solution in rainwater.

Trial 2

Paddocks were blade ploughed and sown with barley.

Trial 3

The paddock was blade ploughed and sprayed with 2 litres/ha Round-up and 100 mls/ha Goal. It was then sown to potatoes, and to range rape the following year.

Trial 4

A 33 ha paddock was blade ploughed and then cultivated. It was sprayed with 3 litres/ha Round-up CT 450, 625 mls/ha Banvel 200, 2 litres Liase/100 litres water and 100 mls of L1700/100 litres water.

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

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Fax (02) 9463 9393
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What happened?

All the trials showed significant reductions in the amount of couch grass in treated paddocks. It was very difficult to completely eradicate the couch grass. Trial 1 was the most effective approach, although spot spraying is very time consuming.

Trial 1

Treated paddocks went from 40%, to a neglibigle amount of couch grass with a couple of years of this treatment. Most of the couch grass was killed by boomspraying, but checking and spot spraying was essential to achieving long term results. The couch grass had to be well doused with the 2% Round-up and 0.3% L1-700 solution in rainwater to achieve the best results when spot spraying.

One of these paddocks is now into lupins after clay delving some of the paddock. Couch grass is rarely seen, and can now be managed by spot spraying only. As a result of decreasing the amount of couch grass, the lupin crop is very good. At a guess his lupin crop would have an increase in yield of 1 ton/ha at $300/ton equals $300/ha or $121/acre.

Trial 2

The amount of couch grass in one of these paddocks was reduced from 70% to 5%. The paddock was then sold as part of a blue gum plantation.

Trial 3

Couch grass was reduced from 40% to 10% with the blade ploughing and insecticide treatment. A potato producer is now share-farming these paddocks and the couch grass still remains.

Trial 4

This trial initially reduced the amount of couch grass from 40% to 10%. Spring and Summer 2001 produced very good green and dry feed, that was feet high. It was therefore difficult to treat the couch grass patches, and there is still a small amount of couch grass in the paddock.

Discussion

The outcomes of this project show that the best way to eradicate couch grass is to blade plough once, spray and then spot spray paddocks over a few years.

Unfortunately few group members kept control plots where no treatments were applied, so it is difficult to quantify the benefits of the most successful techniques.

Next Steps

Throughout the project, many of the original team members either lost interest, or sold their property. It was therefore difficult to maintain the momentum of the project. Although results for Trial 1 were very positive, the number of trial participants was very low and the amount of data collected is too small to be extrapolated long term.

Repeating these trials under more robust conditions, including control plots, would enable measurement of the long term benefits of different approaches to couch grass