

Coolatai Grass Management Program

At "Reedy Creek", Emmaville

Overview

Coolatai grass (*Hyparrhenia hirta*) is vigorous summer growing grass that under conventional grazing practices can become rank and unpalatable leading to a pasture monoculture of low nutritional value. A managed grazing and chemical control program was conducted on "Reedy Creek" in 2010 to assess the effectiveness of this method of controlling and managing Coolatai grass.

Background

Following on from the success of the "Weather Vale" pasture system to control African Lovegrass (*Eragrostis curvula*), it was decided to conduct a trial on Coolatai grass using similar principles (refer "Weather Vale pasture Program – control and management of African Lovegrass" fact sheet, 2010, available at www.glenrac.org.au).

The "Weather Vale" pasture program consists of:

- Heavy grazing of a paddock for 3 or 4 days to ensure all quality pasture – both native and introduced – is eaten down.
- Remaining uneaten species (mostly African Lovegrass) has glyphosate applied using a Swingwiper. This ensures only the target species have chemical applied.
- The paddock is rested to allow desirable species to regenerate and set seed.
- Selected paddocks have seed broadcast and harrowed in.

The background to "Reedy Creek"

Today's Pasture Management

The "Tank" paddock was selected as the most suitable site at "Reedy Creek".

This is a 25 ha paddock of light red basalt soil that had a heavy Coolatai grass population (75% coverage). There were significant rabbit densities in this paddock.

How the Swingwiper works

The Swingwiper uses a height adjustable rotating carpet roller to apply chemical to target species. The rate of chemical application is computer controlled to ensure that there is no leakage & to ensure chemical is applied to target species only.



Landholder Jim Benton uses the Swingwiper across Coolatai grass.

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Integrated steps of the "Reedy Creek" trial

- During the summer of 2009-10, the paddock was heavily grazed and all desirable feed was eaten down.
- In March and April 2010, the paddock was wiped in two directions with Roundup 450 at 25:1 mix, using a Swingwiper.
- All rabbits were poisoned and rabbit warrens were ripped during April 2010.
- Legume seed (Arrowleaf clover, Seaton park sub & Aurora lucerne) was broadcast with single superphosphate at 125kg/ha in July 2010.
- The paddock was then lightly scarified and harrowed with pasture harrows turned upside down. This ensured that the seed was covered with a small amount of loose soil.

Trial Results

- All mature Coolatai (and other undesirable coarse grasses) were killed.
- No soil erosion occurred during heavy rains in 2010. Significant erosion would have occurred if conventional ploughing and sowing methods had been used.
- A high germination rate of legumes (both naturalised and introduced) occurred.
- All broadcast species were well represented.
- The dominance of legumes was so high that the paddock was unsafe for cattle in the spring because of the risk of bloat occurring.
- A diverse mix of native grasses was evident in late spring 2010. Chilean needle grass (*Nassella neesiana*), which had been grazed down in the previous summer, was evident in the pasture mix.



Native grasses and legumes are abundant in "Tank" paddock November 2010

Where to from here?

A follow-up trial is proposed to:

- Assess the pasture mix in the "Tank" paddock 6 months & 1 year later;
- Test methods of controlling Chilean needle grass by light pasture topping with "Roundup" to reduce seed set & by spraying during the winter when Chilean Needle grass is readily identified;
- Test a pasture cropping program incorporating managed grazing & chemical application to invasive grasses to reduce the problem of legume dominance in the spring. This will also prepare the soil for native grass regeneration the following summer.

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