

Annual grass control in perennial pastures project (2019-2021)

Barley grass (*Hordeum leporinum*) has a significant impact on the ability to turn off seed-free meat and wool. Despite providing useful early-season feed, it produces prolific seeds and competes with perennial species, especially after dry periods, as the PPS group encountered in 2014-15.

Perennial Pasture Systems (PPS) in conjunction with Agriculture Victoria are undertaking an on-farm demonstration, co-funded by Meat and Livestock Australia (MLA). The aim of the project is to investigate methods of controlling annual grass in perennial pastures, particularly barley grass. This project is being carried out on PPS members farms for the next three years.

The demonstration is evaluating three main strategies for managing barley grass. They include;

- Early season competition using grazing cereal, annual ryegrass and clover
- Conventional and emerging chemical options; and
- Physical removal of seed heads including hay and silage and management through grazing.

Grazing management demonstration case study – Mooney’s Gap, Spring 2019

Who: Rod Vearing

Where: Mooney’s Gap,
Ararat, Victoria

Property Size: 1000Ha

Treatment: Grazing
Management – stocking
rate 41.5 DSE for 27
days during spring 2019

Mooney’s gap just outside of Ararat on the Pyrenees highway Purchased by Rod and his wife Bernadette in 2000. Over the past 19 years Rod has worked to improve the farm including hosting the Perennial Pasture Systems ‘EverGraze’ support site in from 2007. 10 years on this site is hosting the Farm Systems Demonstration for the control of Annual grass in perennial pasture.

Paddock history

The 12 ha site was sown to Holdfast GT and Advance AT phalaris with a sub clover mix in the Autumn of 2009. Barley grass (*Hordeum leporinum*) and Soft Brome (*Bromus hordeaceus*) grasses are beginning to become a problem throughout the paddock. These species are degrading a very valuable stand of perennial pasture, pasture expert Lisa Warn confirmed that the paddock met the requirements for ‘winter cleaning’ to be a valuable recovery tool.

This site was included as part of the Annual Grass control in Perennial pastures study to offer a non-chemical alternative to reduce barley grass with in pasture. In 2019 the site was marked, and cages installed to allow for an un-grazed (control) portion of the paddock. The paddock was destocked for 26 days in August. A strip of Gibberellic Acid was also applied to see if there was any benefit. The site was then stocked at 41.5 DSE for 27 days. When inspected in November 2019 visual composition assessments were taken along with barley grass seed head counting for all treatments.



Picture: 1 Pasture utilisation, Mooney's Gap, Spring 2019

Conclusions from year one – Grazing management

While the stocking rate was reasonably high (41.5 DSE), the pasture was quite vigorous in late winter and the pasture utilisation across the paddock was poor. The grazing was ineffective over much of the paddock however sections were repeatedly eaten by sheep giving a good simulation of an effective grazing. The pasture composition post grazing in both the effectively and ineffectively grazed areas is shown in Figure 1. Interestingly where the stock have utilised the pasture effectively the percentage composition of barley grass is lower.

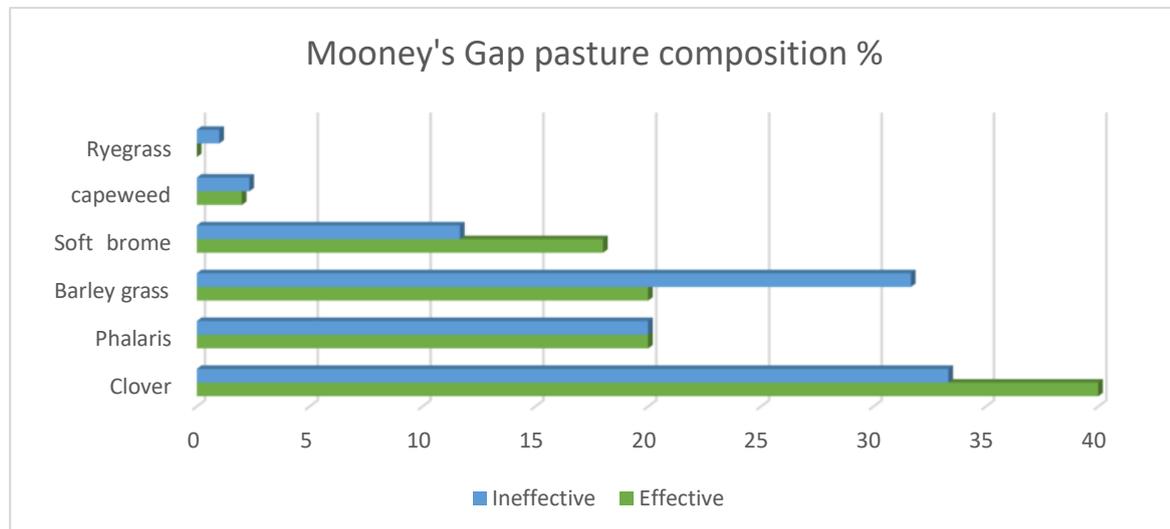


Figure 1 Pasture composition, post grazing, November 2019

The application of GA appears to have reduced the number of barley grass seed heads in the all treatment groups Figure 2. PPS considers that this effect may be due to increased completion from the phalaris growth after the GA application. This effect will be investigated further during the next two years of the demonstration.

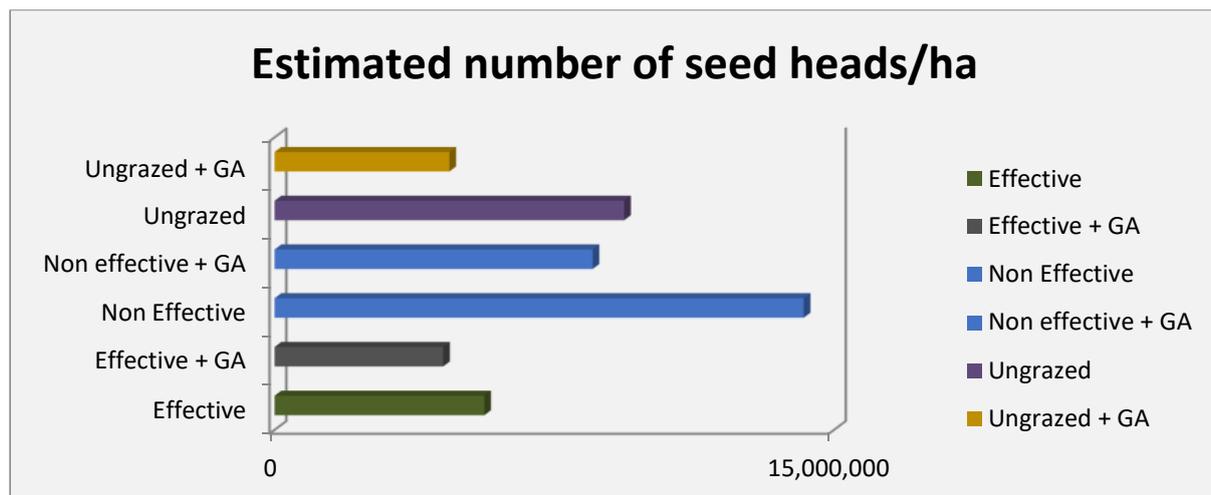


Figure 2 Barley grass count, Mooney's Gap, November 2019

In subsequent years we will trial further grazing pressures in three smaller neighbouring paddocks to increase the grazing pressure to see if this crash grazing can promise a chemical free alternative to chemicals for the control of barley grass.