

“Success with perennial pasture stands”

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MLA Funded Producer Demonstration Site

Trial Objective:

Investigation into the best economic solutions to pasture establishment, persistence and management to ensure long term productive grazing systems.

To keep up with the constant changes and challenges of agricultural grazing systems the SEPLA's has embarked on an investigation into the best economic solutions to pasture establishment, persistence and management to ensure long term productive grazing system.

The group identified the challenge that, as the climate continues to be extremely variable and the margins in farming narrow, the profitability of each enterprise needs to be continuously monitored and improved. We are continually being given advice and recommendations about the best way to establish and manage our pastures, but many of these are conflicting. With the high cost of pasture establishment, producers can ill-afford to make mistakes when trying to establish persistent and productive stands. These issues developed into this project that builds on previous research undertaken by the group.

Each of the four property owners involved determined the specific aims of the trial now being conducted on their property. These range from comparing high, medium and low seeding rates, species selection and paddock preparation and their effect on longer-term productivity of the pasture stand.

The first of the four on-farm sites were established in 2010, with the remaining three sites established in the Autumn/Winter of 2011. In addition to pasture persistence and productivity measures being taken from 2010 to 2013, soil testing has been conducted at each site.

Dry Matter Results from 2011

Overview:

Measurements to date suggest little benefit from cultivation prior to seeding, and in the case of the Avenue Oval site in 2011 dry matter production was significantly higher in some of the un-cultivated treatments compared to the cultivated treatment. With similar results at the Avenue Range site in 2010, further investigation into cultivation prior to seeding pastures, in a replicated trial, would be of benefit. It does however give

food for thought as to the reasoning behind the decision to cultivate prior to establishment of new pastures.

There were no significant differences in the dry matter production between any of the pasture mixes at the Avenue Oval and the Woolumbbool sites (establishment year). There were also few differences in dry matter production at the Naracoorte (establishment year) and Avenue Range (year 2) sites.

The real benefit from this project will be the ongoing pasture production data that will keep coming over the next few years.

Detailed Results (all figures are in kg dry matter/ha):

Avenue Oval (Table of interaction means)

	<u>Mix 1</u>	<u>Mix 2</u>	<u>Mix 3</u>	<u>Mix 4</u>
	Atomic ryegrass	Thunder ryegrass	Barberia ryegrass	SouWest Pasture Mix
	Shaftal clover	Cavalier medic	Trikkala sub clover	
	Balansa clover	Bolta Balansa clover	Gosse sub clover	
Cultivated	4957	4620	4130	4637
Uncultivated	4783	4960	5157	5813

While there was no interaction effect between mix and cultivation treatment at this site, there was an effect of treatment, with un-cultivated producing significantly more dry matter than the cultivated in mixes 3 and 4 (analysis table not shown). There was no effect of mixture.

Woolumbbool

<u>Mix 1</u>	<u>Mix 2</u>	<u>Mix 3</u>
Holdfast phalaris, Puna chicory, Tonic plantain, Seaton Park sub clover, Frontier Balansa clover	Australian phalaris, Seaton Park sub clover, Frontier Balansa clover	Fraydo tall fescue, Seaton Park sub clover, Frontier Balansa clover
2633	3463	2680

I.s.d. 1643.8

There were no significant differences in dry matter production of the mixes at the Woolumbbool site.

Naracoorte

Mix 1	Mix 2	Mix 3	Mix 4	Mix 5	Mix 6	Mix 7
Sirosa phalaris, Drover cocksfoot, Pastoral fescue, Trikkala sub clover, Goulburn sub clover			Barberia ryegrass, Platinum ryegrass, Trikkala sub clover, Goulburn sub clover			Annual mix of grasses & clover
10kg/ha	20kg/ha	30kg/ha	10kg/ha	20kg/ha	30kg/ha	
3153	3603	3850	4023	4863	2723	2513

I.s.d. 1804.2

There was an effect of mix at the Naracoorte site with mix 5 having a significantly higher dry matter production than Mix 6 and Mix 7. There was no significant difference in dry matter production between the remaining mixes.

Avenue Range (second year results)

Mix 1	Mix 2	Mix 3	Mix 4
SARDI Persian Clover Paradana Balansa Clover Gosse Sub Clover Scimitar Burr medic Sirosa Phalaris	SARDI Persian Clover Paradana Balansa Clover Gosse Sub Clover Scimitar Burr medic Barberia Ryegrass	Trikkala Sub Clover Goulburn Sub Clover Propser Tall Fescue (winter) Dovey Tall Fescue (summer) Ambassador Cocksfoot Sirosa Phalaris	SARDI 7 lucerne Puna Chicory Grouse Chicory
5370	5313	6867	3373

I.s.d. 3307.5

There was a significant effect of mix at the Avenue Range site. Mix 3 produced significantly more dry matter than Mix 4; there was no significant difference in dry matter production between the remaining treatments.

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