

Saline Pastures Trial

Results Summary

In 2019, a group of Badgebup farmers (eastern Katanning, WA) wanted to explore which pasture species would grow best on their marginal (saline) land, for use for sheep grazing. Advice from Neil Ballard (Global Pasture Consultants) and the farmers own research shaped the trial configuration and species selected.



Farmer: Stephen Barrett
Soil Type: Sodic grey clay
pH CaCl₂: 7.2 & 5.6
EC: 1.29dS/m & 0.97dS/m

Pasture Species: Silverosa Lucerne, Messina, Scimitar Medic, Italian Ryegrass, Biserrula; planted in north-south strips.

Plot size: 8ha

Sown: May 2019

Rainfall in first winter: 190mm

Fertiliser: K-Till Extra 40kg/ha



Farmer: Tim Harris
Soil Type: Sandy loam
pH CaCl₂: 5.8 & 5.5
EC: 0.23dS/m & 0.19dS/m

Pasture Species: Silverosa Lucerne, Messina, Scimitar Medic, Italian Ryegrass, Rose Clover; planted in north-south strips.

Plot size: 12.5ha

Sown: May 2019

Rainfall in first winter: 175mm

Fertiliser: MAP 50kg/ha



Farmer: Hamish Thompson
Soil Type: Sandy
pH CaCl₂: 5.8 & 5.3
EC: 0.51dS/m & 0.24dS/m

Pasture Species: Eliza Seradella, Silverosa Lucerne, Messina, Scimitar Medic, Italian Ryegrass; planted in north-south strips. One quarter of trial site was left uncultivated.

Plot size: 18ha

Sown: May 2019

Rainfall in first winter: 230mm

Fertiliser: MAP (66%) / MOP (34%) 70kg/ha



Above: Soil sampling before pasture establishment.



Below: Field day attendees at the Barrett site.



Above: Pasture cut work in Thompsons Seradella (upper photo) and Barretts Lucerne (lower).



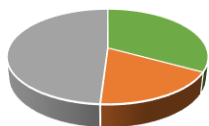
Results

In October 2019, pasture composition, NDVI and feed on offer (FOO) was assessed at the three sites. A Field Walk event was held to showcase the results of the trial to date and was well attended.

Pasture Composition Per trial strip

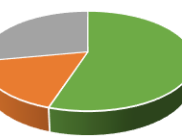
Legend: ■ Focus Pasture Variety ■ Bare Earth
■ Other (inc Guildford Grass, cotula, capeweed, volunteer medic)

Lucerne
(Barretts)



Scimitar / Medic
(Barretts)

Eliza Seradella
(Thompsons)

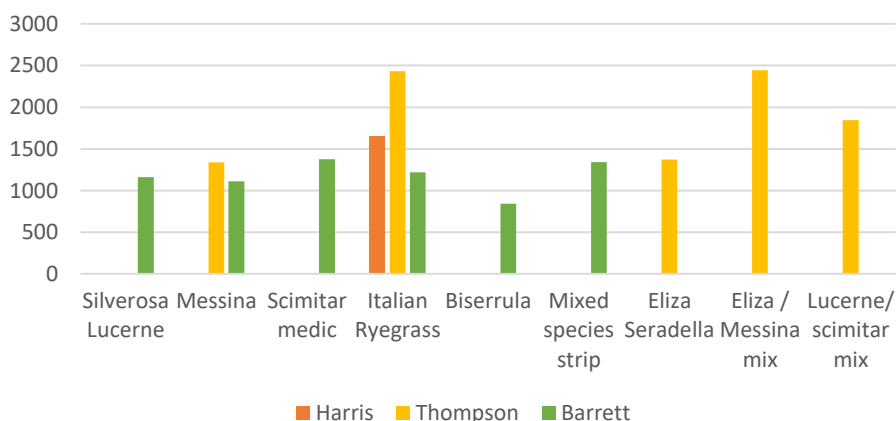


Ryegrass
(Thompsons)

Food On Offer



Average dry matter per site - kg / ha



Beyond the Trial

"In 2020 I sowed *Spartacus* barley into where the *biserrula* had been, and found that the *messina* came back well - especially in the saltier areas. I sprayed to control grasses and broadleaf, and plan to sow forage barley into the continuing site in 2021. My most successful strip was the one with the mix of all species." -**Stephen Barrett**

"Weed competition really hit my trial site, with only the *Italian Ryegrass* growing any volume of note. I abandoned the site for 2020, planting the entire area to oats. Some of the *Lucerne* came back up, but not much. Cleaning the site up well the year before establishing pastures was the big lesson here." -**Tim Harris**

"My trial produced some good feed quantities, but unfortunately longer term it got overrun with *Guildford grass*. I sprayed it out in 2020 to clean it up and try again. I think the key is to establish in phases - medics first, then control grasses, then put in the grass pasture species." -**Hamish Thompson**



Trial team at Harris' ryegrass site.

L-R: Hamish Thompson, Steve Irvine (QFH), Tim Harris, Sam Richardson (QFH), Stephen Barrett, Ella Maesepp (Landcare).

This pasture trial is part of the QFH Multiparts Productive Landcare Demonstration project, sponsored by QFH Multiparts Katanning, and delivered by Katanning Landcare. It aimed to show how integrating landcare principles into agricultural management can produce multiple positive outcomes. Contact 9821 4327 or ella@katanninglandcare.org.au

Special thanks to the farmers, John Paul Collins (DPIRD) and Steve Irvine (QFH Multiparts) for their input to this trial.