

# SGSL TRIAL SITE SUMMARY #5



## EVALUATION OF SALTLAND PASTURE ESTABLISHED BETWEEN NARROW SPACED SALTBUSH

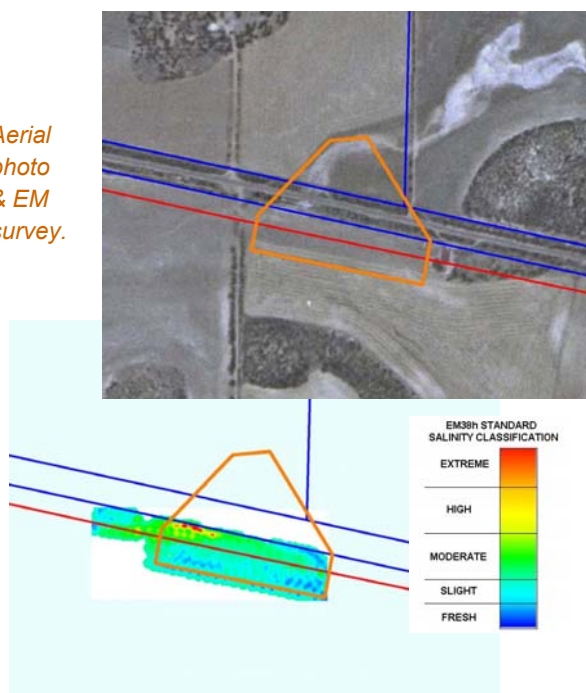
Waddikee Agricultural Bureau, Kimba, Eyre Peninsula

### Research Objectives

To evaluate pasture established between narrow spaced saltbush.

To gain information on the grazing potential of saltbush areas with newly established inter-row saltland pasture. Combined with the adjacent lucerne, to evaluate and compare the economic returns of grazing systems to cropping on marginal cropping areas.

Aerial photo & EM survey.



### The Trial

- Puccinellia and balansa clover were sown between saltbush rows in 2003.
- Narrow row spacings (9 ft) required the use of a trial plot seeder.
- At establishment, 50 kg/ha 18:20 DAP was applied.
- Weed control comprised of a knockdown herbicide application prior to sowing.
- In 2004, half the area was resown with new puccinellia seed. However drought was experienced in that year.
- In 2005, establishment efforts were held back by equipment breakdown, unavailability of the narrow trial plot seeder and a dry year.
- Species were monitored for persistence.
- Productivity was estimated through grazing day measurements.
- Piezometer measurements indicate that saline groundwater is within 1.5m of the surface.

### Fast Facts

**Location:** Kimba, Eyre Peninsula

**Soil Type:** Sands/ loams over clay on flats, adjacent to sandy rises

**Rainfall:** 340mm

**Pasture Base:** Saltbush and puccinellia

**Landscape:** Swale in a dune-swale system

### Results

- In 2003, non viable seed resulted in failed establishment of understory species.
- In 2004, half the area was planted with new puccinellia seed however establishment

## Results (continued)

failed again due to drought.

- In 2005, there was limited success with puccinellia establishing at the western end of the trial site (outside the saltbush rows). As the trial plot seeder had not been used that year, these plants had either spread from a nearby roadside stand or germinated from previously sown seed.
- Where no new plantings were undertaken curly ryegrass became dominant.
- Stocking rates for the saltbush were estimated at 4 dse/ha/yr. Approximately 300 sheep were grazed on the 7ha stand (with some hay) for 1 month during autumn.
- Lower than average rainfall frustrated puccinellia and clover establishment. While mature puccinellia plants spreading from a stand on the roadside suggest it may grow at this site, trial work indicates that successful establishment may be a hit and miss affair.
- Narrow spacing between saltbush rows make establishment more troublesome.



*Bad seed led to failed puccinellia and clover establishment in 2003.*



*Initial aims were to boost production from the understorey species between existing saltbush rows. Marginal rainfall and 9ft row spacings have made establishment difficult.*



*Revised aims are to develop a grazing system that will better integrate the saltbush stand with lucerne on adjacent rising ground.*

## Where to from here?

- Following this trial work, the goal of establishing a more productive understorey has changed.
- The new focus for improving production will be to develop a grazing system combining the saltbush and adjacent lucerne stand.
- Instead of grazing the saltbush only once per year, the goal will be to improve production through grazing adjacent stands of saltbush and lucerne more than once per year.
- To graze saltbush effectively, and counteract preferential grazing of lucerne, sheep will be locked into the saltbush paddock with supplementary hay.
- Elsewhere, saltbush plantings have been successfully integrated with nearby stubbles. Sheep graze the stubble and go into the saltbush for a green pick.
- Rob's success with lucerne has encouraged him to plant a further 60 ha on deep sands (marginal cropping areas).
- Future work will also examine the economic returns of this type of grazing system compared to marginal cropping.

## Want to know more?

### Participating Host Farmer:

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### Technical Support:

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