

# SGSL TRIAL SITE SUMMARY #2a



## ESTABLISHMENT & MANAGEMENT TECHNIQUES FOR SALTBUSH, PUCCINELLIA, MEDICS & BALANSA CLOVER

### Tumby Bay Agricultural Bureau, Eyre Peninsula

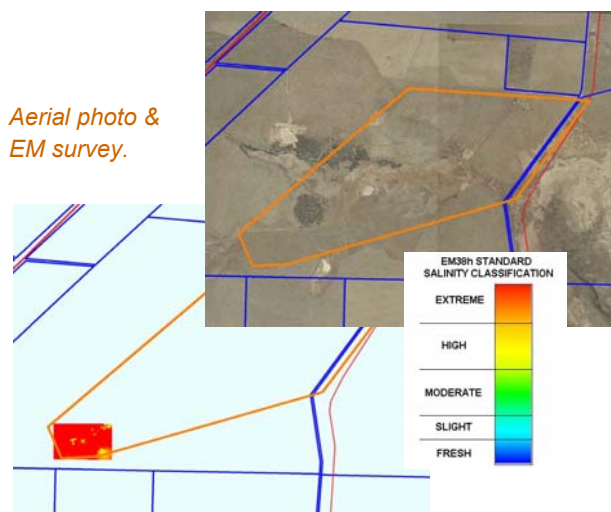
#### Research Objectives

To determine the best establishment and management techniques for saltbush, puccinellia, medics and balansa clover on moderately to highly saline ground.

#### The Trial

- Puccinellia establishment was trialed in 2003, 2004 and 2005 on highly saline ground.
- Prior to establishment, the site was roughly cultivated. Seed was spread with a 12V clover/snail bait spreader.
- In the establishment phase, 70 kg/ha 18:20 DAP was applied.
- For annual pasture maintenance, 7 kg/ha 18:20 DAP, 40 kg/ha urea and piggery waste effluent are used.
- In an adjacent moderate salinity site, a mix of puccinellia, Cavalier and Jester medic and balansa clover were established.
- Eyre's Green saltbush seedlings were planted in a range of salinity zones.

Aerial photo & EM survey.



#### Fast Facts

**Location:** Tumby Bay, Eyre Peninsula

**Soil Type:** Heavy, hard setting clays

**Rainfall:** 340mm

**Pasture Base:** Puccinellia & Eyre's Green saltbush

**Landscape:** Coastal creek flats



*The SGSL trial site is on high salinity coastal creek flats. A nearby drain helps to move excess surface water and reduce waterlogging. Water troughs are visible to the left of the fence line. Groundwater flows all the way from the Koppio Hills in the background.*

## Results

- In 2003, puccinellia establishment failed due to non viable seed.
- Learning from this, a new seed source was found and germination tests conducted.
- In 2004, establishment had mixed success. A dry year resulted in patchy establishment. Germination was poor on areas of very high to extreme salinity.
- In 2005 with a better break to the season, establishment was very successful. This resulted in a thick stand of puccinellia.
- Puccinellia will grow well in highly saline areas (including some samphire and scalded ground).
- In moderate salinity areas, puccinellia has performed well, and grows alongside other species including volunteer grasses and legumes. Jester medic has persisted, while balansa clover and Cavalier medic have not.
- Productivity has increased dramatically following puccinellia establishment.



*Puccinellia, medics and volunteer grasses on adjacent areas of moderate salinity.*



*Eyre's Green saltbush is highly palatable to stock.*



*Poor germination in very high salinity areas (2004).*



*Good establishment of the puccinellia, with a better break to the season (2005).*

- Estimated stocking rates are now 5-8 dse/ha/yr, compared to 0.5 dse/ha/yr on previously “useless” samphire dominated ground.
- Outstanding success is attributed to:
  - Persistence in getting puccinellia established.
  - Fertilising puccinellia pastures.
- Eyre's Green saltbush has successfully established in a range of salinity zones. However good drainage is required for productivity and persistence.

### Want to know more?

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