pastures australia

A collaboration between AWI, GRDC, MLA, RIRDC and Dairy Australia

Creeping saltbush

Scientific name(s)

Atriplex semibaccarta

Strengths

- Good early vigour
- Good drought tolerance
- Recruits well
- Provides good ground cover

Limitations

- Moderate- low nutritive value
- Poor winter growth
- Short-lived (2-3 years)

Plant description

Plant: Prostrate spreading perennial up to 1.5-2m in diameter.

Stems: Long, somewhat brittle stems.

Leaves: 1-2cm long, greyish-green oblong shaped leaves, toothed along the margin.

Fruit: Diamond shaped fruit, 4-6mm long, often reddish when fresh, brown when ripened.

Seeds: Roundish, flat red-brown.

Pasture type and use

Occurs as a naturalised plant in many pastures throughout the low-medium rainfall zone, including some of the pastoral districts. Generally regarded as a useful forage source. It is used as a cover crop between vineyards as it can form a dense mat which can suppress weed species.

Where it grows

Rainfall

Creeping saltbush will grow in areas receiving as little as 275mm average annual rainfall.

Soils

It can grow on many soil types but it is generally found on loams, clay loams and clay soils.

Temperature

Creeping saltbush grows during the warmer months of the year. It does not grow well in cold and wet conditions.

Establishment

Companion species

Grasses: Grasses will be reduced due to the mat like growth habit of creeping saltbush, but will still grow successfully. These will provide a feed source during winter when growth of creeping saltbush is low.

Legumes: Winter growing annuals such as medics and clovers will provide winter feed.

Sowing/planting rates as single species

A seeding rate of 5-7 kg/ha should be sufficient. It is important to use viable seed. Determining the viability of seed before seeding should increase the chance of successful establishment. Leaching of creeping saltbush fruits before seeding can also increase germination. Depth placement is critical when sowing creeping saltbush. Placing seed too deep will significantly reduce establishment. Good results have been obtained by placing the seed on the surface and then rolling to ensure good seed-soil contact.

Sowing/planting rates in mixtures

5-7 kg/ha should also be used in a mixture with winter growing annuals, due to the lower rates of creeping saltbush establishment and the need for adequate density to provide summer feed.

Sowing time

Creeping saltbush seedlings are vulnerable to competition from faster growing annual grass and weed species. This is particularly important given the lack of selective herbicides that can be used after emergence. Planting soon after the break of the season gives creeping saltbush a better chance of establishment. If spring rainfall is reliable, a spring sowing is also an option.

Inoculation

Not applicable.

Fertiliser

Soil tests should be conducted to determine the baseline nutrient status before application to gauge whether a response is likely. If sown with other legume and grass pastures the fertiliser requirements for these species would be sufficient for creeping saltbush.

Management

Maintenance fertliser

There is little information available on the benefits of regular fertilisation. However, it is likely that fertilisation would be beneficial especially to the companion pasture species.

Grazing/cutting

Creeping saltbush responds well to grazing, especially in late spring. However, it should not be set stocked and needs a recovery period for best results.

Seed production

Creeping saltbush can produce prolific quantities of seed. Seed production can occur within a few months after sowing and last for most of the spring-summer period.

Ability to spread

Creeping saltbush seeds readily and recruitment of new plants can be prolific. It will readily establish in disturbed sites.

Weed potential

Creeping saltbush is very common and native to most of southern Australia. Due to its ability to spread it will establish away from its original source. It has become a weed after being introduced in California.

Major pests

Red-legged earth mite and lucerne flea can cause significant damage to young plants, especially seedlings.

Major diseases

There is not much known about disease prevalence on river saltbush and significant problems have been uncommon.

Herbicide susceptibility

There is very little information regarding the herbicide susceptibility of creeping saltbush.

Caution should be followed using herbicides with this species. Creeping saltbush is generally a good competitor once established and will smother some weeds.

Animal production

Feeding value

Laboratory tests indicate that creeping saltbush has adequate levels of crude protein but is low in energy. The amount of salt can limit the potential of creeping saltbush as a valuable feed.

Palatability

Creeping saltbush is one of the more palatable saltbushes. However, this can be highly variable between sites, times and animals.

Production potential

Not much is known about animal performance from grazing creeping saltbush. However, it is likely that creeping saltbush is only suitable as a maintenance feed, particularly to assist in carrying animals over periods of feed shortage. It is unsuitable for animals with a high requirement for energy. It should not be expected that animals will fatten when grazing creeping saltbush. Supplementing with grain or good quality hay is necessary to achieve increased animal production.

Livestock disorders/toxicity

The oxalate content of creeping saltbush can be high especially in young plants. Oxalates can cause kidney damage and some caution should be taken if this is the only feed source.
The salt content of creeping saltbush is likely to increase the consumption of water by stock grazing this species. Good quality water is essential for animals utilising creeping saltbush.

Cultivars

There are no cultivars of creeping saltbush currently available.

Further information

'Saltland pastures for South Australia' by Craig Liddicoat and Jock McFarlane, Rural Solutions, SA.

Acknowledgements

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Author and date

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