Tree Species No. TTS16

Atriplex lentiformis, Family Chenopodiaceae

Atriplex lentiformis *is an open and upright perennial shrub with silvery-blue green leaves that are 2cm long. It is a fast growing species but is more short lived than other* Atriplex *species. Tests in Syria showed that it died within five years of planting. It is a salt tolerant species and there is evidence that it has survived irrigation with 100% sea water in Israel. It is also a drought tolerant species that can survive long periods without water making it well suited to arid areas. It has a very important role in reforesting arid lands and is commonly used in dune and soil stabilisation projects.*

Common names: Quail brush.

Distribution: It is indigenous to south western USA and the hot arid deserts of South California and Arizona at lower elevations. It has also been introduced to other arid and semi arid areas such as Australia and Iran. It has been trialed in the Cape Verde Islands by HDRA with some success.

Ecology

Rainfall: 300-450mm, In trials on Cape Verde in 1989 it survived in conditions where only 111mm of rain fell in 9 days.

Temperature: 18.6-27.7 °C were experienced in Cape Verde. It is frost hardy, but prefers warmer winters.

Altitude: Lower altitudes.

Soil type: Will grow well on saline soils.

Botany

Height: 2.5m.

Diameter at breast height:

Crown: It has a spreading form.

Flowers: *A. lentiformis* is monoecious with male and female flowers occurring on separate plants. The male flowers occur in clusters on the end of bunches and the female flowers hang in dense groups.

Fruit: They are flat and round and are 2.5mm diameter.

Uses

Main: The ability of the quail brush to tolerate saline conditions makes it ideal for reclamation of saline lands that are subject to drought. It is commonly used as forage for sheep and there is evidence that it is browsed readily in Australia. In areas with high salinity however sheep with a high quantity of atriplex in their diet may need a three-fold increase in available drinking water. This can be partly overcome by planting with succulents such as cactus.

Other: Studies have been carried out on it suitability for use as a shelter crop for other salt tolerant species. In Cape Verde, for example, studies have been carried out to assess its suitability as a shade crop on coastal regions for *Sesbania* species.

Cultural instructions

Grow from seed either directly in the field or in a nursery. New plants can also be produced from cuttings.

Pre-treatment: Before sowing wash the seeds in running water to remove salts from the surface. Pre-soaking the seeds can reduce the germination period dramatically.

Germination: Although A. lentiformis is a salt tolerant plant in maturity, high salinity levels can prevent successful germination, it is therefore advisable to grow seedlings in a nursery.

Nursery: Sow in trays then transfer to bags.

Management: Transfer seedlings to the field once they reach 20-30cm high after 3-6 months. Cut back to ensure livestock can reach the foliage.

Other

Limitations: If used as a fodder or forage shrub the water made available to livestock should be increased due to the high salt content of the plants. This can be achieved by planting succulent such as cactus nearby to increase water production.

Produced by the Tropical Advisory Service, December 2002

HDRA - the organic organisation, Ryton Organic Gardens Coventry, CV8 3LG, UK.
Tel: +44(0)24 7630 3517 Fax: +44(0)24 7663 9229 Email:ove-enquiry@hdra.org.uk www: http://www.hdra.org.uk