

## Shrubby Stylos

### (*Stylosanthes scabra*)

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#### DESCRIPTION

Shrubby stylos (*Stylosanthes scabra*) are vigorous perennial pasture legumes, which can grow to 2 m in height. They are erect, sparsely-branched woody shrubs with stems often more than 1 cm thick. Stems are covered with short viscid bristles, which give the plant a sticky feel. Leaves are dark-green, trifoliate, with elliptical to oblong leaflets, up to 21 mm long and 9 mm wide.



Shrubby stylos commence flowering in late April to early May in the Top End of the Northern Territory (NT). The compact seed heads contain several small yellow flowers. The pods consist of two sections. The upper section, which has a short, thick beak (hook), is 3.5 mm long. The lower section does not have a beak. Seeds are small, less than 2 mm long, pale to light brown in colour. There are about 400 000 seeds/kg with pods and 800 000 without pods.

Currently, two cultivars of shrubby stylos are available, Seca and Siran. They are similar in appearance, both being variable in height and form. Commercial Seca is a pure line with some contaminants in it, while Siran is a composite cultivar made up of three lines containing four different genes for resistance to anthracnose (*Colletotrichum gleosporioides*).

Another cultivar, Fitzroy, which is susceptible to anthracnose, is no longer commercially available. To what extent shrubby stylos are truly perennial in the NT is not certain, but in some instances a large number of older plants have died out by the end of their third wet season.

#### Climate and Soils

*S. scabra* is a native of tropical and subtropical South America where it is usually found on infertile soils.

In the NT, shrubby stylos are suited to areas receiving over 600 mm of average annual rainfall. They will grow on a wide range of soil types, with the exception of heavy clay and flooded soils. They are fairly tolerant to fire and most plants will produce regrowth after burning. They are also tolerant to drought and waterlogging but not flooding.

## Establishment

Shrubby stylos have been successfully established in drier areas by over-sowing into a burnt area of native pasture.

In the wetter areas of the Top End, establishment has been more successful when shrubby stylos are sown into a well-prepared seedbed or into an area which has been roughly cultivated at least once.

Seca can be sown at 1 kg to 4 kg/ha. There is no evidence that a specific rhizobium inoculant is required. Shrubby stylos will nodulate freely with a cowpea inoculant or with native soil rhizobia.

## MANAGEMENT

### Fertiliser Requirements

While fertiliser requirements have not been closely studied in the Top End, it is known that shrubby stylos will grow on infertile soils and have only a low response to phosphorus fertiliser.

Generally, seed should be sown with 50 kg to 100 kg/ha superphosphate or its equivalent. Maintenance dressings of 25 kg to 50 kg/ha superphosphate should be applied annually.

Applications of potassium, molybdenum or zinc may be necessary on some soils.

### Yield

As seedling vigour is low and early growth is slow, dry matter yield in first-year stands is usually no more than 3500 kg/ha. In the second and later years, yields of ungrazed stands are often 12 000 kg to 16 000 kg/ha of dry matter. However, because it is a shrub with thick stems, its edible dry matter content is often only 20% to 25% of the total yield.

Maximum seed yields in the NT have been about 300 kg/ha, while in Queensland yields of 600 kg/ha have been achieved.

### Grazing

Heavy grazing following burning and over-sowing is recommended to reduce competition from established perennial grasses. This works well as livestock will not graze young and green shrubby stylos if they are not familiar with them.

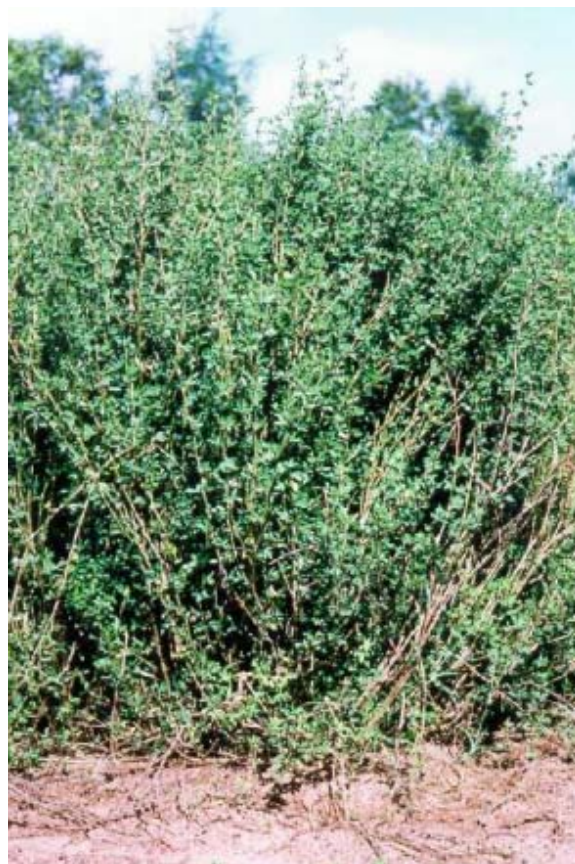
Generally, in the year of establishment, shrubby stylos should not be grazed at the end of the wet season to allow them to set seed and to let the stand thicken up.

### Mixtures

Shrubby stylos can be sown with a range of grasses, including Gayndah buffel and Nixon sabi grass.

### Hay

Shrubby stylos are not suitable for making hay because of a high content of stem material, which is not eaten by livestock.



## **PESTS AND DISEASES**

Seca is resistant to most existing strains of anthracnose but contains only one gene for resistance. The composite cultivar Siran contains four genes for resistance to anthracnose and is expected to replace Seca if Seca becomes susceptible to anthracnose.

Currently, there are no noted pests or diseases to cause economically important problems.

## **WARNING**

Pasture plants have the potential to become weeds in certain situations. To prevent that, ensure that pasture seeds and/or vegetative materials are not inadvertently transferred to adjacent properties or road sides.

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ISSN 0157-8243

Serial No. 563

Agdex No. 137

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