



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

## Fine stem stylo

### Scientific name(s)

*Stylosanthes guianensis* var. *intermedia*

### Strengths

- Persistent and strong coloniser on low fertility soils.
- Tolerant of heavy grazing, frost and fire because of low/buried growing points and regrows rapidly.
- Provides high quality feed when other legumes are frosted or dormant.
- Field resistance to anthracnose.
- Good palatability.

### Limitations

- Low forage yield.
- Needs good drainage.
- Difficult to harvest seed.
- Specific rhizobium requirement.

### Plant description

**Plant:** Perennial, low growing legume that has a well developed crown with buds above and below ground.

**Stems:** Fine, many branched and covered with bristles.

**Leaves:** Trifoliate with narrow pale to dark green leaflets usually with no hair on the upper surface but with a few hairs on the underside.

**Flowers:** Small and bright yellow in groups of 4 to 20.

**Pods:** Light brown, flattened, 1 seed per pod with a small coiled beak.

**Seeds:** Kidney shaped yellowish-brown, 770000 seeds (dehulled) per kg or 380000 seeds in pod/kg.

### Pasture type and use

Used in native and planted perennial grass pasture.

### Where it grows

#### Rainfall

600 to 800mm AAR.

#### Soils

Sands and sandy loams.

#### Temperature

Optimum for growth is about 30°C. Crowns of established plants have survived at -10°C.

### Establishment

#### Companion species

Grasses: Black spear grass, Indian bluegrass, Premier digit grass.

Legumes: Round-leaf cassia

### **Sowing/planting rates as single species**

Not usually planted as a single species in pastures. Planting rate for seed crops is 4 to 5 kg/ha of scarified seed.

### **Sowing/planting rates in mixtures**

1 to 2 kg/ha

### **Sowing time**

Spring and summer

### **Inoculation**

Rhizobium strain CB 82

### **Fertiliser**

Grows on low P soils but responds to added phosphorus.

## **Management**

### **Maintenance fertiliser**

Not normally used.

### **Grazing/cutting**

Regular grazing of associated grasses favours fine stem stylo and is necessary to stop grass dominance. It can be grazed heavily over summer but a short rest period in February/March helps seed production and longevity in the pasture. Continuous heavy grazing can reduce cover and allow weeds to invade and can lead to erosion.

### **Seed production**

Seed production is high but ripening occurs over a long period and it shatters easily. Yields from mechanical harvesting range from 100 to 400 kg/ha. Suction harvesting can give higher seed yields.

### **Ability to spread**

Produces high seed yields and is spread through surface movement ingestion and movement of livestock.

### **Weed potential**

Very limited. In pastures it is well grazed and in disturbed areas other (larger) plants are likely to be dominant.

### **Major pests**

No serious pests.

### **Major diseases**

Anthraxnose, little-leaf and head blight can infect fine stem stylo but are of little consequence in a grass-legume pasture.

### **Herbicide susceptibility**

Susceptible to some broad-leaf herbicides but tolerant of 2,4-D, 2,4-DB, Basagran and Blazer.

## **Animal production**

### **Feeding value**

High protein forage because of its fine stem and long growing season. It can regrow rapidly after grazing and growth can extend into cooler months.

**Palatability**

Very palatable.

**Production potential**

Forage yields in pasture are generally low but can be up to 2 tonne/ha where legume density is high. Steer liveweight gain can be increased by 50 to 80 kg/head/year with high gains extending further into the cooler months than for other tropical grass-legume pastures.

**Livestock disorders/toxicity**

None known

**Further information**

Tropical Forages database (SoFT) - Fine stem stylo

**Acknowledgements**

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**Author and date**

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