



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

Stylo; Caribbean stylo

Scientific name(s)

Stylosanthes hamata

Strengths

- Can be oversown into native pasture or grown with sown grasses.
- Grows on low fertility soils.
- Highly persistent under grazing.
- Little effect of anthracnose disease.

Limitations

- Intolerant of waterlogging.
- Frost sensitive.
- Restricted to warmer environments.

Plant description

Plant: annual or short-lived, much-branched, prostrate to semi-erect perennial legume, growing to about 75cm tall.

Stems: younger stems are fine and green, with fine white hairs down one side (but no bristles as in Townsville stylo).

Leaves: comprising three narrow, pointed leaflets 1.5 to 2.5cm long.

Flowers: small (4 -5mm wide), mainly yellow, pea-like flowers with red markings.

Pods: comprising two single-seeded segments 4 - 7mm long, the upper segment bearing a short hook.

Seeds: fawn to brown or maroon in colour (often mottled), with about 270,000 seeds-in-pod or 450,000 dehulled seeds/kg. May have high levels of hard seed.

Pasture type and use

It is often sown into native pasture in the seasonally dry and wet tropics, and warmer subtropics, and provides a useful component in mixed introduced grass/legume permanent pasture.

Where it grows

Rainfall

Although mostly sown in areas receiving 700 - 900mm average annual rainfall, it may also be successful at lower (to 500mm) and higher(to 2,000mm) annual rainfalls.

Soils

It grows well on most soils with pH of 5.4 to 8.0, but not on heavy clays.

Temperature

Very susceptible to frosting.

Establishment

Companion species

Grasses: Indian bluegrass (Indian couch), sabi grass

Legumes: American jointvetch, cassia, stylo, shrubby stylo.

Sowing/planting rates as single species

Up to 4kg seed-in-pod/ha (need higher levels of commercially coated seed to give similar number of seeds/unit area).

Sowing/planting rates in mixtures

1 - 2kg seed-in-pod/ha (need higher levels of commercially coated seed to give similar number of seeds/unit area).

Sowing time

Best sown at the end of the dry season.

Inoculation

While the specific inoculum (CB 1650) is most effective for caribbean stylo, Group M inoculum (CB 756) can be used if CB 1650 not available.

Fertiliser

Although it is adapted to soils low in available soil phosphorus, an application of 100 - 200 kg/ha superphosphate at sowing will be beneficial on very infertile soils. Molybdenum (Mo) and sulphur (S) may also be necessary in some situations.

Management

Maintenance fertiliser

An application of 100 - 200 kg/ha superphosphate every 2 or 3 years after establishment (to maintain available soil P levels at about 8 ppm (mg/kg)) should improve both plant and animal performance.

Grazing/cutting

Caribbean stylo is tolerant of heavy grazing. Stocking rate should be adjusted to reduce competition from associated grass especially early in the growing season, although prolonged heavy grazing can reduce the density of the grass.

Seed production

Flowering normally commences 9 - 10 weeks after germination, and within 6 weeks of the start of the season in older plants can flower, continuing throughout the growing season. While it can set up to 2 tonnes of seed/ha in a season, commercial seed yields are usually of the order of 300 - 600kg/ha from direct heading or 800 kg/ha from vacuum or suction harvest.

Ability to spread

Caribbean stylo is spread by seed:

- through the gut by grazing cattle,
- by water movement,
- by the hook on the upper pod segment adhering to the coat of livestock.

Weed potential

It is now widespread, but is not considered a serious weed.

Major pests

There are no major insect pests.

Major diseases

Botrytis head blight is particularly serious in seed crops during periods of high rainfall as it causes death of the flower head. Web blight can damage vegetative growth during wet weather. Anthracnose, which attacks other stylos, is not a problem at this stage.

Herbicide susceptibility

Susceptible to metsulfuron-methyl (e.g. Brushoff®, Ally®).

Animal production

Feeding value

Digestibility of top-growth is of the order of 60-65%. Crude protein levels range from 17 - 24% in green leaf and 6 - 12% in the stem depending on age of regrowth and general growing conditions. Nutritive value declines rapidly with the onset of dry season leaf drop.

Palatability

Very palatable

Production potential

Liveweight gains are usually in the range of 140 - 160 and up to 200 kg/hd/yr depending on stocking rates, growing conditions and mineral limitations. They can be as low as 100 kg/hd/yr on low fertility soils.

Livestock disorders/toxicity

None recorded.

Cultivars

Cultivar	Seed source/Information
Verano	Southedge seeds Australian Herbage Plant Cultivars
Amiga	Australian Herbage Plant Cultivars

Further information

Tropical Forages database (SoFT) - Stylo; Caribbean stylo

Author and date

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