



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

Brazilian centro

Scientific name(s)

Centrosema brasilianum

Strengths

- Well adapted to semi-arid environments
- High seed yield
- Palatable
- Has persisted under heavy uncontrolled grazing

Limitations

- Not productive under continuous heavy grazing
- Slow to form a competitive sward

Plant description

Plant: Short lived perennial climbing and twining legume. It does not produce tall swards, and tends to climb up companion plants.

Stems: Roots at the nodes under favourable conditions.

Leaves: Trifoliate, with ovate leaflets commonly 3.6 -4.3 cm long and 2.0- 2.9 cm wide.

Flowers: Large, purple, flat, 3.4 - 4.2 cm long and 3.8 -4.4 cm wide.

Pods: Mature 10 - 15 cm long, with a beak 2.0 - 2.6 long. Contain up to 14 - 16 seeds

Seeds: Cylindrical, grey - brown (fawn) in colour, 39,000 seeds/kg.

Pasture type and use

Best suited as a component of mixed permanent pastures.

Where it grows

Rainfall

1100 - 1500mm/year in tropical areas with distinct wet and dry seasons. Suited to areas with a dry season of 6 - 7 months.

Soils

Adapted to a wide range of neutral to slightly acidic soil types including sands, lithosols and red and yellow earths, but does best on well drained clay loams.

Temperature

Well adapted to the semi-arid tropics.

Establishment

Companion species

Grasses: Signal grass, pangola grass, buffel grass, Guinea grass, Setaria, sabi grass, perennial sorghum or tall finger grass

Sowing/planting rates as single species

2 -6 kg/ha depending on seed bed preparation and proposed end use.

Sowing/planting rates in mixtures

2 - 6 kg/ha

Sowing time

Early in the wet season after good opening rains, when there is likelihood of follow up rains. This will range from the first week of December in higher rainfall areas (1500 mm) to the third week of December in lower rainfall areas (1100 mm).

Inoculation

Seed can be inoculated with Centro inoculant to ensure nodulation when sowing into new areas. This is not necessary if legumes have been grown in the area previously, or if there are native legumes present.

Fertiliser

Prefers more fertile soils. Responds strongly to phosphorus and sulphur. Generally apply 100 - 250 kg/ha of superphosphate or its equivalent at establishment. Applications of potassium, molybdenum, zinc or other deficient elements may be necessary on some soils.

Management

Maintenance fertiliser

Generally apply 50 - 100 kg/ha of superphosphate or its equivalent.

Grazing/cutting

Do not graze in the year of establishment before it has set seed. There is doubt about its ability to persist in continuously grazed mixed pastures. It is generally not cut for hay because of its twining nature, which makes cutting difficult.

Seed production

Seed yields over 1,000 kg/ha have been harvested from trial plots. Seed is harvested by direct heading of a windrowed seed crop. First flowers are mid March, and flowering continues until mid June. Seed crops are generally harvested in June or July. Freshly harvested seed can have a high hard seed content.

Ability to spread

Fair in comparison with other tropical legumes. Plants will spread vegetatively up to 2 - 5 m, by climbing up companion species or adjacent vegetation.

Weed potential

Negligible. It has shown no tendency to establish outside sown paddocks.

Major pests

Seed feeding insects such as pod sucking bugs and pod borers can cause almost total loss of a seed crop.

Major diseases

None recorded to date. Small patches of leaves killed by *Rhizoctonia* sp have been found in pastures during periods of wet weather.

Herbicide susceptibility

Selective control of grass weeds and some broadleaves: tolerant of Spinnaker, Sertin and Verdict

Animal production

Feeding value

Moderate to high compared to other herbaceous tropical legumes used in the semi-arid

tropics. Crude protein (CP) of tops during the wet season (January - March) often 11 -17%. In vitro digestibility of tops can be 69 %, but is more commonly 55 - 64 %.

Palatability

In the semi-arid tropics, it is readily grazed by cattle.

Production potential

In pure swards under good growing conditions, it provides 4 -6 tonnes of high quality herbage.

Livestock disorders/toxicity

None reported.

Cultivars

Cultivar	Seed source/Information
Oolloo	-

Further information

Weblinks:

Tropical Forages (SoFT) - *Centrosema brasilianum*

NT DPI Agnote: 726 - Oolloo

Acknowledgements

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Author and date

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June 2009