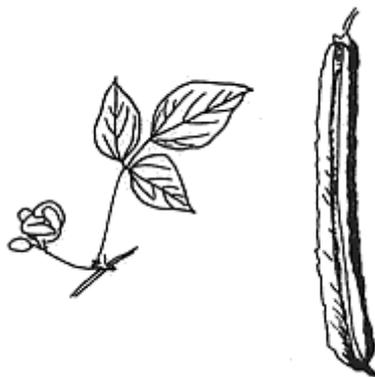


Green Manures No. TGM14

Winged bean, *Psophocarpus tetragonolobus*

Green manures are plants that are grown mainly for the benefit of the soil. They can be grown as part of a rotation or in an intercropping system to build soil fertility, or as a cover crop to protect bare soil from erosion. Full details on the benefits and practice of using green manures can be found in HDRA's booklet 'Green manures/Cover crops'.

Psophocarpus tetragonolobus are also known as asparagus pea, four-angled pea, or goa, manila or princess pea.



Growing conditions

- Annual rainfall: The winged bean requires rainfall of over 700mm.
- Altitude: It grows up to 2000m.
- Temperature: It requires temperatures of 15° C to 30° C.
- Soil type: It requires a pH of between 4.3 and 7.5. It likes well drained soils.

Nitrogen fixation

The winged bean is a legume. This means that it has nodules on its roots which contain bacteria. These bacteria take nitrogen from the air. This is known as nitrogen fixation. The plant uses this to grow and when the legume is dug into the soil, the extra nitrogen is made available to the next crop.

Cultivation

Sow the seeds 2.5 to 7.5cm deep, spaced 10cm to 60cm apart with rows 120cm apart.

Growth form

The winged bean is a climbing perennial plant which will also grow as an annual. If it is allowed to climb it will produce more foliage.

Recommended application

If the winged bean is sown as an annual cover crop, it is best to sow during the rainy season and dig in any time up to flowering.

If it is grown as a perennial intercrop, the plants need a strong durable support such as cacao, coffee, sugarcane, maize, millet or sorghum.

Human food

The immature edible pods can be used as a vegetable. Dry seeds are made into a fermented product, called 'tempeh', commonly used in Indonesia. The seed produces oil used for cooking, lighting and soap. Other parts of the plant are also eaten as a vegetable. The flowers are added to various dishes to colour them blue.

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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
Website: <http://www.hdra.org.uk>

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