

Green Manures No. TGM1

Pigeon pea, *Cajanus cajan*

Green manures are plants which 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'.

Cajanus cajan is also known as red gram, congo pea and no-eye pea.



Growing conditions

- Annual rainfall: 400mm to 1,000mm. Some varieties are remarkably drought resistant and can survive annual rainfall as low as 65mm.
- Altitude: It grows best at altitudes up to 2,000 metres.
- Temperature: The preferred range is between 18° C and 29° C. Some varieties are frost tolerant.
- Soil type: The most suitable soil type is between pH 4.5 to pH 8.4. Pigeon pea tolerates a wide range of soils.

Nitrogen fixation

Pigeon pea 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 9 to 22kg of seed per hectare. Sow the seed 2.5 to 5cm deep in rows 30 to 60cm wide and of any length. Alternatively you can broadcast sow the seeds.

Growth form

Pigeon pea is a perennial woody shrub but it can be grown as an annual.

Recommended application

It can be grown as an annual cover crop to suppress weeds, add fertility and control erosion.

It can be grown in a perennial alley cropping system (trees and crops planted together in rows) as a long term green manure. The foliage should be cut at 1 metre high for use as a mulch at the beginning of the growing season or for digging into the soil. The leaves are also commonly used as fodder for livestock.

Human food

Pigeon pea green seeds and pods can be used as a vegetable. Ripe seeds are a source of flour or they can be split (dahl) and used in soups or stews. Pigeon pea seeds contain as much as 22% protein.

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