

Green Manures No. TGM6

Cluster bean, *Cyamopsis tetragonoloba*

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'.

Cyamopsis tetragonoloba
is also known as guar



Growing conditions

Annual rainfall: Cluster bean grows in a wide range of rainfall areas, from 400mm to 2400mm. It grows best in highly humid conditions.

Temperature: The preferred range is between 8° C and 27.5° C.

Soil type: The most suitable soil type is between pH 5.5 and 8.3. It tolerates a wide range of soils and grows best in a well drained soil.

Nitrogen fixation

Cluster bean is a legume. This means that it captures nitrogen that is in the air to help it to grow. Therefore when it is dug in, as a green manure, it increases the amount of nitrogen in the soil available for the next crop.

It performs best if inoculated with guar inoculant or cowpea group 'E' inoculant.

Cultivation

Sow 6kg of seed per hectare. Sow in rows 30cm apart or more and 2.5cm deep, when soil is 21° C. Alternatively you can broadcast sow at 10 to 15kg/ha.

Growth form

The cluster bean is a bushy branching annual with a lateral root system.

Recommended application

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

Dig in as a green manure any time up to flowering.

Human food

Immature pods and seeds, gum extracted from seeds is commercially important thickening agent for food industry.

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