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 know 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 canbroadcast sow at 10 to15kg/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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