

## Green Manures No. TGM21

Rice bean, *Vigna umbellata*

*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'.*

*Vigna umbellata* is also known as climbing mountain bean, mambi bean and oriental bean



### Growing conditions

- Annual rainfall: Rice bean requires 700mm to 1700mm rain.
- Temperature: It grows at 18° C to 30° C. It does not tolerate frost.
- Soil type: It tolerates pH 6.8 to 7.5. Cultivated varieties prefer fertile loams.

### Nitrogen fixation

Rice 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

Broadcast rice bean seeds at 60-90kg/ha.

### Growth form

Rice bean is an annual or short-lived perennial growing up to 75cm tall. It produces vining branches 1-2m long.

## **Recommended application**

Use rice bean as a cover crop/green manure to suppress weeds, add fertility and control erosion in rotation with crops. It is commonly used in rotation with rice.

Dig in any time up to flowering, approximately 60 days after sowing.

## **Human food**

Rice beans are widely used as human food in Asian and the Pacific Islands. They are eaten boiled, in soups, or with or instead of rice. Young pods and leaves are used as a vegetable. Seeds can also be sprouted.

## **Animal food**

Whole plants are used as forage for livestock, especially pigs.

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