

Package of Practice

Tree Bean Farming



ADVANCING
NORTH EAST

An Initiative of North Eastern Council (NEC)

Implemented by North Eastern Development Finance Corporation Limited (NEDFi)

Tree Bean
Parkia timoriana
Fabaceae



Tree bean is a perennial legume tree vegetable of Northeastern India. It is a multipurpose tree having potential commercial and ecological significance. Tender pods are used for preparation of salad, chutney, fried. Flowers, tender pods, and seeds of this plant are edible and are a good source of carbohydrates, vitamins, minerals, and proteins compared to other legumes. It has low fats and high in fiber, which is beneficial for health.

Climate and Soil: Tree bean grows well in a wide range of agro-climatic from colder hilly regions to the hotter plains region. It grows well in an optimum temperature range from 15-27°C with annual rainfall of about 3500mm. It can grow well with an altitude up to about 3000m above msl. it is well adapted in wide range of soil. It can grow luxuriantly in light soils having good drainage properties. Deep soil with pH range of 5.5-7.5 is considered ideal.

Varieties: There is no specific varieties of tree bean so far. In India, it grows in North-eastern states, and several vernacular names are available for this species, viz, Manipur-Urohi; Khorial (Assamese); Manipuri seem (Bengali); Zawngtah (Mizo); Yongchak (Manipuri); Aoelgap (Garo); Unkamn-pinching (Naga) and Bairethai (Dimasa).

Propagation: Tree bean is propagated through fully matured blacken seeds, stem cuttings, grafting and budding. Seedlings are raised in black polybag (25 x13cm) filled with media composed of soil: sand: compost (2:1:1). Seeds are presoaked for 24 hrs to enhance germination.

Planting time: The best season for planting is onset of rainy season (June-August).

Planting: Pit of the size of 1m X 1 m X 1m may be dug during winter season. The pits are exposed to intense sunlight for diminishing harmful microorganism. Well mixed 15-20kg FYM and top soil is filled in the pit before planting. Transplantation in the field can be done when the seedlings are 6months old and 0.5m tall.

Seed rate: 100 seedlings per hectare.

Spacing: 10 m X 10 m

Manures and Fertilizers:

Weed Management: Weeding is recommended especially during initial years of planting. Pre - emergence application of weedicides like Diuron @3kg/ha or Smazine @4kg/ha is used to control of weed.

Intercropping: Ginger, Turmeric, Pumpkin, Cucumber, Bitter gourd, Soyabean, Gram, Groundnut, Cow peas, French bean and Pea etc. can be grown as intercrop.

Water Management: Providing adequate irrigation at initial year of planting and during pod development stage.

Harvesting and Yield: The plants' pod production starts at the age of 6 years; however; the full bearing stage is 10 years. Tree bean pods are generally harvested from September to March. During favourable season, a full-grown tree bean plant bears 10000-15000 pods per year.

Post-Harvest Management: Normally, pods can be stored at low temperature of 0°C - 4°C for 3 to 4 weeks.

Plant Protection Measures:

Fusarium Wilt: Soil drenching and application of fungicide Bavistin 50% WP with a concentration of 0.2% to control the infestation.

Stem borer: Monocrotophos (36 WSC) 10 ml is soaked in absorbent cotton and placed on the affected stem by removing the bark of 2.5 cm². Then the portion is wrapped with gunny or plastic papers thereby the chemical gets into the system so as to kill the stem borer. Application of carbofuran 3 G @ 5g per bore hole and plugging with mud after mechanically removing or killing the grub by introducing a needle or wire will also control the pest.

Cost and Returns of Tree Bean: (Rs./ha.)

(approx. Amount in Rs.)

Particulars	Cost & Returns
Land Preparation & development	40000
Cost of planting material	25000
Manures & fertilizer cost	20000
Plant Protection cost	16000
Cost of Irrigation	20000
Cost of Labour wages (intercultural operations)	15000
Cost of Farm machinery heiring charges and agril equipment	5000
Rental cost of land	20000
Cost of Harvesting	10000
Cost of Marketing	8000
Miscellaneous cost	5000
Total cost of cultivation	184000
Average Yield	10t/ha
Average selling price of Tree bean green pod	Rs.40/ kg
Average Total Income / Return	400000
Net Income	216000
