

Package of Practice

Jackfruit Cultivation



ADVANCING
NORTH EAST

An Initiative of North Eastern Council (NEC)

Implemented by North Eastern Development Finance Corporation Limited (NEDFi)

Jackfruit
Artocarpus heterophyllus
Moraceae



Jackfruit is popularly known as poor man's food. Jackfruit is a rich source of vitamin A, C, carbohydrates and minerals. The immature tender fruits and the seeds of ripe fruits are used for culinary purposes. Ripe fruits are used for table purpose, nectars, dehydrated leathers, jelly and chips, papad etc. Pickles from immature tenders fruits. The skin of the ripened fruits & other wastes of the fruits & leaves are the excellent source for cattle feeds.

Climate and Soil: Jackfruit grows well in a warm, humid, tropical climate upto an elevation of 1500m and optimum temperature range of 22-35°C. A deep rich alluvial or open textured loamy soil or red laterite soils with good drainage and soil pH of 5.5 – 6.5 is ideal for jackfruit

Varieties: Gulabi'(rose scented), 'Champa', Hazari, Rudrakshi, GKVK-1, Swarna. Gumless jack, Muttan Varica, Singapore or Ceylon Jack, Burliar-1, Palur-1, Pechiparai-1, Hybrid Jack

Propagation: Jackfruit is propagated by Seeds, Soft wood grafting and Air layering,

Planting: Pits of size 1 cubic meter are dug and filled with top soil mixed with 10 kg FYM. The grafts are planted in the centre of the pits during June-December.

Spacing: Jackfruit is commercially planted at a distance of 8 m X 8 m.

Manures and Fertilizers: Apply 80kg of FYM to a tree annually along with chemical fertilizers of 600:300:240g NPK/plant/year for obtaining higher productivity. The fertilizers are applied in split of two doses and applied twice in a year i.e., during June –July and September – October.

Intercropping: Short duration vegetables, leguminous crops cowpea, horse gram, black gram etc. can be grown as intercrop during the first 3 years of planting to obtain more income.

After care: Jack trees are trained to a single stem, early side branches should be removed so that a uniform smooth trunk develops for a height of 1.5 – 2 M and then side branches should be permitted to arise. The flower buds appear on trunk which should be kept free of vegetative growth.

Weed Management: Integrated weed management should be encouraged by growing of cover crops, use of herbicides, inter cropping and hand weeding where ever necessary.

Water Management: Usually, Jackfruit is cultivated under rainfed condition. Protective irrigations are necessary initially at 12-15 days intervals depending on soil and climatic condition.

Harvesting and Yield: Jackfruit starts producing fruits from 7th - 8th year onwards in seedling trees. Grafted plants start to yield from 4th - 5th year. Harvest is done during March-July. On an average, Jackfruit yields about 30-40t/ha.

Post Harvest Management: Fruits are stored for 2-3 months at 5°C with 85-90% relative humidity and 1 week under room temperature.

Plant Protection Measures

Diseases:

Fruit rot: Spraying trees with young fruits using capton (0.2%) or Bordeaux mixture (1.0%) or copper oxy chloride (0.25%) at interval of three weeks during the months of Jan – Feb & March is effective in controlling the disease.



Dieback: Pruning of infected twigs followed by spraying with Carbendazim (0.1%) or Thiophanate methyl (0.2 %) or Chlorothalonil (0.2%) have been recommended.

Phytophthora Fruit rot: Spraying with Benomyl @ 1g/lit completely controls the disease.



Leaf spot: The disease is effectively controlled by spraying Carbendazim (0.1%) or Thiophanate methyl (0.2%) or Difolatan (0.2%).

Pests:

Brown weevil: Destroying fallen fruits and buds, collection and destruction of grubs and adults and spraying the trees with monocrotophos (0.035 %).

Shoot and Fruit borer: Spray monocrotophos 36 WSC 2ml/ litre or carbaryl 50 WP 0.1 %, 4gms or copper oxychloride at 0.25 % to check if there is fruit rot incidence.

Cost and Returns of Jackfruit: (Rs./ha.)

(approx. Amount in Rs.)

Particulars	Cost & Returns
Land Preparation & development	35000
Cost of planting material	27000
Manures & fertilizer cost	25000
Plant Protection cost	12000
Cost of Drip Irrigation system	20000
Cost of Labour wages (intercultural operations)	15000
Cost of Farm machinery hiring charges and agril equipment	5000
Rental cost of land	20000
Cost of Harvesting	10000
Cost of Marketing	10000
Miscellaneous cost	5000
Total cost of cultivation	184000
Average Yield	30t/ha
Average selling price of Jackfruit	Rs.15/ kg
Average Total Income / Return	450000
Net Income	266000
