Bread fruit

A. Sankari, M. Anand and R. Arulmozhiyan
Horticultural Research Station, Tamil Nadu Agricultural University, Yercaud, SALEM (T.N.) INDIA
Email : hrsycd@tnau.ac.in

Bread fruit is botanically called as *Atrocarpus altilis*. It is a staple food plant in several Pacific Islands. The starchy fruits are eaten roasted, steamed, baked and some times made into dough fruits can also be preserved by dessication as fermented paste. The bread fruit is native of Malaysia. It is cultivated in Southern regions chiefly on West Coast and Western Ghats of Niligris comprising of power Palani hills, Wynad, Courtallam and in Andamans. The fruits of seedless fruit contain a high amount of carbohydrate (27.98%). It is rich in calcium and a fair source of Vitamin A and B but poor in Vitamin C. It is said to have been served as staple food as bread for Britishers and hence the name bread fruit. In South India, it is mainly used for culinary purposes. Besides, the nutritious fruit, the milky juice from the tree may be used as sealing material for making the boats air-tight, wood for buildings and leaves as livestock feed. The bread fruit, because of its multiple uses must have attracts man's attention very early.

The fruit can be grown right from sea level upto 900 m and requires a warm humid tropical climate and plenty of rainfall. In general, the bread fruit requires an annual rainfall ranging from 2,400-3,000 mm. The optimum temperature is 15.5-370C with humidity of 70-80%.

A high humus content coupled with high fertility is the requisite of a suitable soil for cultivation of bread fruit. Lateritic red loams found in West coast and Western ghats are ideal for this crop. Good drainage of the soil is essential and lack of it causes stunted growth of the trees and premature fruit drop.

The bread fruit has not been accorded with any significant plant breeding effort or even clonal selection. There are no named varieties. However, there are two district types. viz., seeded type is not used in culinary purpose, but seeds are roasted or boiled and consumed. The seedless type is popularly cultivated and is believed to be a sport of the seeded variety. It has not seeds but a mass of whitish meaty pulp is present. In Jamiaca, a variety "Yellow Heart" is grown which is considered to be the best among all.

Seeded types are propagated through seeds. Seeds loss viability soon and they should be sown immediately after extraction from the fruit. The propagation of seedless varieties, where the fruit is developed due to stimulative parthenocarpy. It is propagated through root cuttings and air layering of root suckers. Root cuttings of about 2.5 cm in the diameter and 25 cm long should be planted horizontally. Theses plants bear fruits in about 6 years as against 8-10 years needed in the case of the seeded varieties raised from seedlings.

Pits of 1.5 m3 are dug, filled up with farm yard manure, sand and soil and formed a basin. The root suckesrs are normally planted in basins with spacing of 12 x 12 m. Horizontal planting gives 90% success, whereas it is only 40% under vertical planting. The tree is not generally manured. The natural fertility of the soil in the areas where it grows coupled with rich alluvial deposit enables the tree to attain optimum growth to produce crop. However, application of farm yare manure at 20 kg per adult tree improved the growth and yield of fruit. Shallow interculture in and around the tree basin in necessary to eradicate the weeds. Deep cultivation should be avoided as it has surface roots. It may induce the growth of sucker, which will be useful for propagation. Pepper and Vanilla can be trained over trees. *Calapogogonium muconoides* and *Peuraria phaseoloides* which are shade tolerant makes a good soil cover and effective against soil eroision.

No serious pest and disease affects bread fruit. Sometimes fruits suffer from soft rot caused by fungus *Rhizopus artocarpi* leading to rotting and fruit drop. Spraying of 1% Bordeaux mixture can check this disease.

The tree starts bearing from the fifth or sixth after planting. The fruit set can be improved by hand pollination. The technique of hand pollination is simple. The tree starts bearing from 5th – 6th year of planting. Fruits are ready for harvest 60-90 days after emergence. The fruit colour changes from green to yellowish green at maturity. The fruit should be harvested before ripening if dropped. Hence, a long pole with a hook at its tip having a cloth bag at the base of the hook should be used for harvesting individual fruits.

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