

Lakoocha : An underutilized fruit with nutraceutical potential

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Lakoocha (*Artocarpus lakoocha* Roxb.) popularly known as "Monkey jack", "Lakuchi" or 'Barhal' in India is an underutilized fruit tree of the family Moraceae. It is native of humid sub-Himalayan regions of India. The area of its natural distribution is from India through Nepal, Bhutan, Bangladesh, Myanmar to Malaysia where it grows in areas with annual rainfall of 700-2000 mm and a dry season up to 3 months.



It is a large deciduous tree which grows up to 5 to 14 meters tall with large leathery leaves. The tree is handsome and sometimes planted along avenues. It prefers deep permeable soils with a good supply of moisture however it grows well in sandy and alkaline soil. Lakoocha is a very hardy, vigorous and mostly disease and insect free tree, highly tolerant to frost, water logging as well as drought.

In a survey conducted by the Babasaheb Bhimrao Ambedkar University, Lucknow, India in the northern plains, not a single planned orchard of lakoocha was found and the tree was found growing in orchards of other fruits like mango and jackfruit, in kitchen gardens, backyards, sometimes on the bunds of cultivated fields or in front of houses. A considerable variability was also

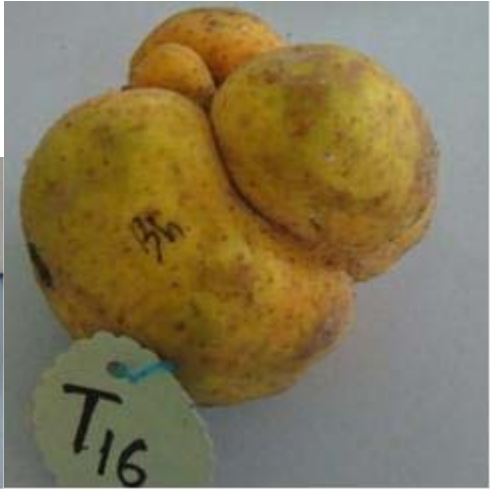
observed in the various fruit and tree parameters.



The lakoocha tree is a multipurpose tree of tropical areas having various ethanobotanic uses. It is used for timber, fuel, fodder and fruits. Bark and latex of the tree is used to cure the chronic boils and skin ailment. The bark contains tannin and is chewed like beetle nut. It yields fibre for cordage. The roots and wood yield a dye of rich colour. Both seeds and milky latex are purgative. Leaves are used as a fodder for lactating animals and also for making *pattals* (biodegradable plates for having food, made up of leaves). Lakoocha wood is used as a timber and for fuel. Raw fruits are used for the preparation of pickling and in vinegar while mature and ripe fruits are consumed fresh as well as for the preparation of *halwa* (Indian dish). The fruit also acts as a tonic for the liver. Deep yellow colour of lakoocha fruits shows the presence of carotenoids in sufficiently high quantity indicating the medicinal potential of fruits.

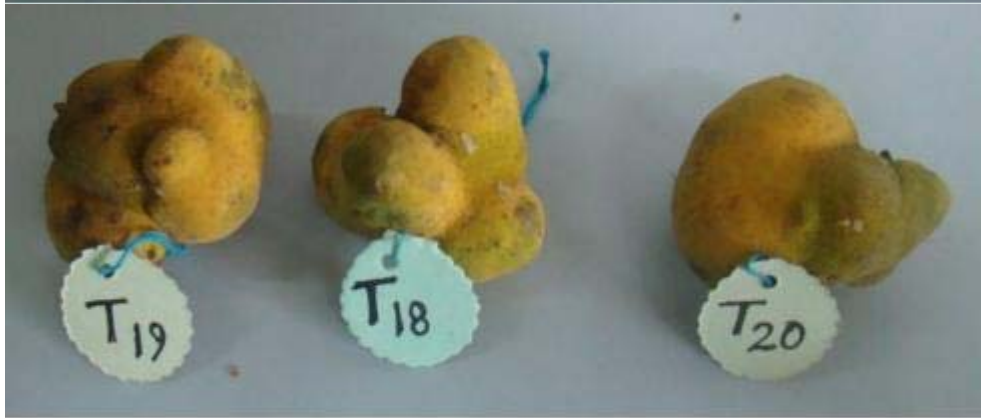
Fruits are harvested by hand or sometimes with the help of bamboo sticks which is generally avoided because ripe fruits break when they fall on the ground and become infected with fungus within 24-36 hours. Market value of fruits differs from 10 Rs./kg. to 25 Rs/kg. *Barhal* is considered to be a poor relative of the jackfruit because of its highly perishable nature, ugly fruit appearance, poor market acceptability and the relatively lower yields. Thus, despite its potential nutraceutical value, not much attention has been paid towards its improvement and utilization.





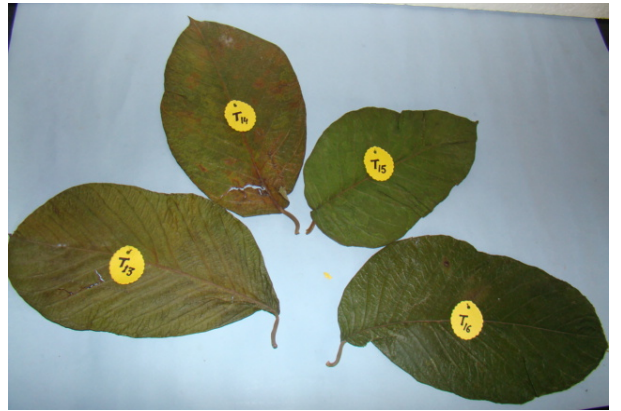














Barhal buds intact on the tree and fallen on the ground





Barhal buds (cross section)