



## Uses and health benefits of jackfruit

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**Introduction :** Jackfruit (*Artocarpus heterophyllus* Lam.) is a multi-purpose tree popular in South India and is an inevitable fruit tree in the traditional homesteads of Kerala state. It is a versatile crop which provides multiple products for food, fodder, fuel, timber, medicine and industry (Bose *et al.*, 2003). The major areas of cultivation of Jackfruit are the eastern and southern parts of the country. These include the states of Jharkhand, Bihar, West Bengal, Uttar Pradesh, Orissa, Chhattisgarh, Andhra Pradesh, Tamil Nadu, Kerala and Karnataka. Among the tropical fruits, Jackfruit is an important underutilized fruit and often called the poor man's fruit because of its affordability and availability in large quantities during its fruiting season. Jackfruit trees are mostly grown in the homestead garden without any particular management practices. The jackfruit trees are highly productive and bear fruits regularly. The productivity of jack fruit is very high and yields upto 300-500 kg fruits per tree which mainly depends upon the age of tree and conditions under which has been grown. The individual fruit weight generally varies from 0.980-57.80 kg at maturity (Nath *et al.*, 2001). People consumed it mostly as a fruit when ripe but also as vegetable in the unripe stage. The jackfruit significantly contributes to the nutrition of people as a source of vitamins, minerals and calories. Both tender and ripe fruits as well as the seeds are rich in minerals and vitamins. It is grown and sold in the market almost everywhere in the country. The primary economic product of jackfruit is the fruit, used both when immature and when mature. The fruit pulp is sweet and tasty and used as dessert or preserved in syrup. The seeds contained in the ripe fruits are also cooked. The fruits and seeds are also processed in a variety of ways for food and other products. Jackfruit is rich in dietary fibre, which makes it a good bulk laxative. The fibre content helps to protect the colon mucous membrane by decreasing exposure time and as well as binding to cancer-causing chemicals in the colon. Fresh fruit has small amounts of vitamin-A and flavonoid



pigments such as carotene- $\beta$ , xanthin, lutein and cryptoxanthin- $\beta$ . Together, these compounds play vital roles in antioxidant and vision functions (Mondal *et al.*, 2013). However, the fruit is perishable and cannot be stored for long time because of its inherent compositional and textural characteristics. In every year, a considerable amount of jackfruit, specially obtained in the glut season (June-July) in every year goes waste due to lack of proper post-harvest knowledge during harvesting, transportation and storage both in quality and quantity. Proper postharvest technology for prolonging shelf life is, therefore, necessary. A

number of products have been developed from raw, tender and ripe fruits and seeds. The ripe fruit bulbs (excluding seed) and the rind of the ripe fruit (including perianth and unfertilised flowers) have been used for processing in a number of products. Ripe jackfruit bulbs are canned in syrup, made into jams either pure or mixed with dehydrated bulbs, *Chutney*, preserves, candy and concentrate and

**Table 1: Nutritive value of jackfruit (100 g)**

Constituent	Average value
Moisture (%)	76.2
Energy (cal)	88.0
Protein (g)	1.90
Fat (g)	0.10
Fibre (g)	1.10
Carbohydrates (g)	19.8
Potassium (mg)	107.0
Calcium (mg)	20.0
Phosphorus (mg)	41.0
Iron (mg)	0.56
carotene (mg)	175.0
Thiamine (mg)	0.03
Riboflavin (mg)	0.13
Niacin (mg)	0.40
Vitamin C (mg)	7.0

(Source: Devi *et al.*, 2014)

powder. Rinds of ripe fruit could be made into jelly.

**Uses:** This miraculous fruit has tremendous uses (Tejpal and Amrita, 2016).

– Seeds of jack fruit have diuretic and laxative effects. It can be used in treatment of ulcers, prevention of night blindness and bone loss. The fruit has also various properties like antibacterial, anti-inflammatory, anti-diabetic, antioxidant and antipyretic. It is immunity booster and acts as a remedy for snake bites.

– Jackfruit trees are used in landscaping of gardens.

– The fruit is also used to remove dye from the aqueous solutions as its leaves are excellent adsorbents.

– The leaves and other waste parts of the fruit are used as feed for livestock.

– Chips of heartwood are used as a dyeing agent.

– Its wood is used to make furniture, brush backs and various musical instruments like veena, mridangam, thimila and kanjira.

– The wood of jackfruit with good grains is a useful and a durable timber.

– The heated latex is employed as household cement for mending chinaware and earthenware, and to caulk boats and holes in buckets.

– Latex of the fruit can also be mixed with vinegar to heal abscesses, snake bites and glandular swellings.

– The leaf decoction and latex are effective in the treatment of asthma.

– The bark, due to its fibrous nature, is occasionally used in cloth.

#### **Health benefits of Jackfruit:**

– Due to its richness with anti-oxidants and phytonutrient properties, and its vitamin C content, jackfruit can cure different types of cancer such as lung cancer, breast cancer, gastric cancer, skin cancer and prostate cancer. These properties can treat cell damage and develop resistance.

– Jack fruit is free of fat and low in calories; it can help in weight loss safely and comfortably and also its consumption helps in acquiring full benefits from all other nutrients.

– As this fruit has ample potassium content, it controls blood pressure which consequently lowers the chances of heart attacks, strokes and cardio-disorder in general.

– The regular intake of jackfruit improves digestive system because of its high fibre content (3.6 g/100 g). It also improves the bowel movement and protects the colon by removing carcinogenic chemicals out of the large intestine.

– Sleeping disorders can be cured by eating jackfruit, due to its richness with magnesium and iron that assist in improving the overall quality of sleep. Magnesium also helps in preventing anaemia which is one of the major causes of insomnia.

– Although extremely sweet in taste, jackfruits are safely consumed by diabetic patients because it slowly absorbs sugar into the blood stream which enables the patients to safely consume it while getting all its health benefits. It also increases glucose tolerance for both types of diabetes.

– Due to richness of vitamin A, the fruit is good for maintaining healthy eye sight as it enhances eye vision and acts as a preventer against cataract and macular degeneration. It's also regarded as an active anti-aging component for skin radiance. It protects damaged skin caused by sun exposure and treats wrinkles.

– As typical drugs for ulcer medication leave several side effects, jackfruit is the best way to treat ulcer disorder because it contains powerful anti-ulcerative, antiseptic, anti-inflammatory and antioxidant properties.

– Jackfruit is highly recommended as a supplement of calcium for healthy bones, besides calcium, it contains vitamin C and magnesium which further assists in calcium absorption.

– Fatigue, stress and muscle weakness can also be treated by consuming jackfruit in daily diet for its rich content of vitamins such as thiamine and niacin (A portion of 100 g of jackfruit pulp provides 4 mg of niacin). It is also a perfect source of energy.

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