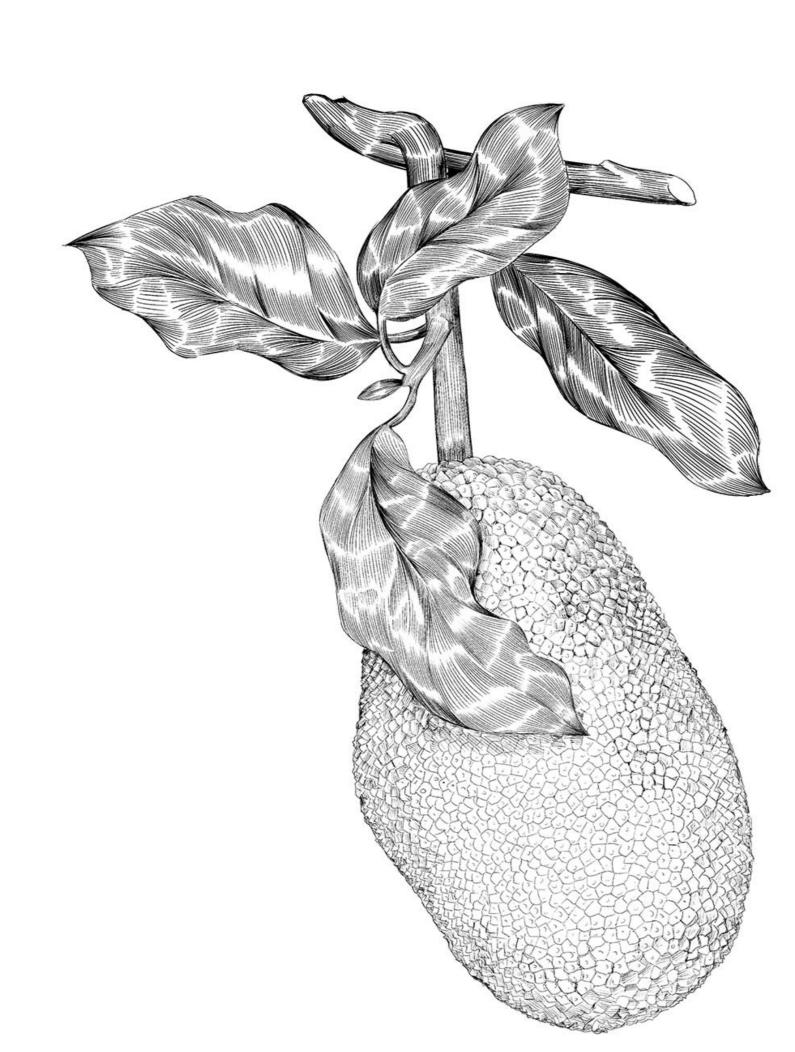
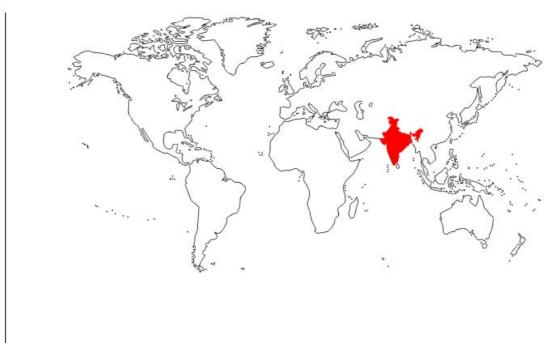
Jackfruit and the Reawakened 25

Edited by James Joseph, Jackfruit365.com

JACKFRUIT IS THE LARGEST TREE-BORNE FRUIT ON EARTH, widely diffused in tropical lowlands of India where it often grows wild. Jackfruit is a nutritional treasure trove that provides 95cal per 100g (107cal per 4oz), rich in fiber and nutrients. Nonetheless, in its home-countries jackfruit has fallen out of favor due to the difficulty of transporting the raw fruit which ripens quickly. New value added products with simpler market logistics, developed thanks to the collaboration between universities and visionary entrepreneurs, are bringing a new life to this mega-fruit that is now looked as a potential solution against non-communicable diseases.





JACKFRUIT

Artocarpus Heterophyllus

seeds

Origin: Vavilov's Indian Center, Rainforests of Western India Grown across tropical regions in Asia, Africa and Latin America Large fruit offers carbohydrate source with beneficial dietary fiber, edible protein-rich

Jackfruit is the largest tree-borne fruit on earth, widely diffused in tropical lowlands of India where it often grows wild. Jackfruit is a nutritional treasure trove that provides 95cal per 100g (107cal per 4oz), rich in fiber and nutrients. Nonetheless, in its home-countries jackfruit has fallen out of favor due to the difficulty of transporting the raw fruit which ripens quickly. New value added products with simpler market logistics, developed thanks to the collaboration between universities and visionary entrepreneurs, are bringing a new life to this mega-fruit that is now looked as a potential solution against non-communicable diseases.

BOTANY

The jackfruit tree is a member of the fig, mulberry and breadfruit family with a short trunk, dense tree top and reddish-brown smooth bark, thriving in tropical regions across South and Southeast Asia, Africa and South America. The tree produces huge ovaloid fruits, similar in size and form to a watermelon, with a green exterior covered in small bumpy spikes. These fruits grow off of the trunk and branches, reaching up to 55kg/100lb and maturing during the rainy season from July to August. Inside, jackfruits are full of pale yellow-orange plump kernels of flesh, surrounding spoon sized seeds, that connect to the core running vertically down the center of the fruit. Sticky, milky latex-like liquid is excreted when the fruit is cut that is onerous to remove from the skin with just soap and water. Oil or solvent is used in cleanup, with best practices being covering knives and hands in oil before cutting the fruit. In Tanzania, jackfruit is sold in small pieces by street vendors who fill bowls with kerosene for customers to clean sticky fingers.

CULINARY USE

The jackfruit has spread widely and integrated into many regional cuisines, thanks to its versatility. The immature young jackfruit's popularity is growing in the U.S. as a meat substitute; with a fibrous texture and bland taste that lends itself well to flavors such as BBQ, smoked, and teriyaki, jackfruit takes the place of pulled pork or chicken easily. In South and Southeast Asian cuisine, young jackfruits are often used in curries and processed into products such as noodles and chips. The unopened ripe fruit emits an unpleasant odor reminiscent of rotting onions but the flesh smells of pineapple and banana, alluding to the complex flavor profile. Ripe jackfruits are sweet and custardy, described as a taste combination of mango, banana, apple and pineapple. Custards, cakes, ice creams, mixed with rice for a Indian breakfast dish, canned in syrups for a sweet treat- all are common places to find ripe jackfruit. The seeds of the jackfruit hide an additional nutritional punch with a sweet creamy taste often compared to brazil nuts or chestnuts. The seeds are boiled, baked, or roasted and added to a variety of dishes or eaten as a snack. In periods of potential food supply crisis, such as during the spread of COVID-19 and the related lockdowns, the importance of jackfruit is recognized as it provides a "supermarket in [people's] backyard."

NUTRITION AND MEDICINAL USE

preventing constipation. The flesh also contains nutrients such as Vitamin B6, Vitamin C and Potassium, while the seeds supply protein, Potassium, Calcium and Iron. Unripe, yet mature, jackfruit is under study as a powerful food choice for people with diabetes, due to its low glycemic index and high dietary fiber.

The flesh of the jackfruit provides carbohydrates with a good amount of dietary fiber, improving digestion and

AGRICULTURE A jackfruit tree takes 5-7 years to mature to a fruit bearing stage, but at that point the tree requires very little

maintenance and can produce 100-200 jackfruits in a year (up to a ton of food). As a perennial crop, the tree produces a carbohydrate food source for drastically less work than annual crops such as rice and wheat. Jackfruit trees are well-suited to agroforestry applications; the evergreen trees are heat tolerant, drought and pest resistant and used to provide shade to gardens. Jackfruit trees can become invasive, as they form dense stands that can crowd out native vegetation in marginal areas and ecotones. Jackfruit timber is valued as termite-resistant strong wood to use for house construction, furniture building and instrument creation. All life cycle stages of the tree are highly valuable for human use. **HISTORY**

Jackfruit is native to the tropical regions of the Indian subcontinent and Malaysia, where it grows wild. Jackfruit has

been used in asian cuisine for hundreds of years as a nutritious carbohydrate source. The large fruit is eaten daily as well as prized as an ingredient in celebratory dishes such as the curry echorer shobjee, a delicacy in Bangladesh. Jackfruit has largely been a staple locally in the regions in which it grows, as its large size and speed to ripeness make it difficult to avoid spoilage in transport. Value-added and processed jackfruit products have allowed jackfruit consumption to spread, especially as its popularity grows as a meat substitute.

Jackfruit is gaining attention as a part of the solution to food insecurity in tropical areas, in part due to its

RESEARCH

nutritional profile and in part to its adaptability to climate change. Despite its promising answers for food system woes, jackfruit is no longer popularly consumed in its land of origin. In India, the fruit has gained the reputation of poor man's food and a position of inferiority compared to imported fruits. While countries such as Sri Lanka and Vietnam are home to established and growing jackfruit production, processing the fruit into a variety of products, in India the fruit is an underutilized crop. Universities and entrepreneurs are hoping to change this through the creation of new innovative products and promotional activities such as jackfruit symposiums and celebratory events. In a rapidly changing world, with population growth and climate change, jackfruits are a promising source of food and nutrition for people around the world. **CUISINE**

• Video: How to cut a jackfruit

- What is Jackfruit and How to Use it- Food Revolution • Diverse Jackfruit Recipes from India
- Jackfruit Seed Hummus- The Jolly Tomato
- The Vegan History of Jackfruit

SOURCING

- Jackfruit 365- Green Jackfruit Flour

• Jack Fruit Company- Recipes and Sourcing

COMMUNITY RESOURCES

• <u>Uptons Natural Vegan Meat Substitutes</u>

- Indian Institute of Horticultural Research- Jackfruit Products • International Journal of Food Science- Nutritional and Health Benefits of Jackfruit, a Review
- Jackfruit- Field Manual for Extension Workers and Farmers

• A Guide of Jackfruit- Cultivation and Value Addition

- **RESOURCES**
- Illustration: http://ctgpublishing.com/jackfruit-tree-botanical-illustrations-circa-1828/ • Video: Green Jackfruit, a Superfood for Diabetes
- Nutritional Assessment of a Jackfruit Meal- Ceylon Medical Journal • Jackfruit Nutritional Benefits- Healthline
- Jackfruit Glycemic Index Data
- Jackfruit, a Ginormous Fruit to Feed the World- NPR
- Jackfruit Science and Cultivation Purdue Horticulture • Invasive Species Compendium - Jackfruit
- Jackfruit's Medical Potential- green jackfruit flour's potential to prevent chemotherapy-induced Leukopenia