

# Breadfruit and the Reawakened 25

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**BREADFRUIT IS CULTIVATED IN MOST OF THE PACIFIC ISLANDS.** Neglected for years and often disliked by farmers, who preferred to cut these trees to earn space for more remunerative crops, breadfruit is today seen as one of the most promising allies for countries with poor food security. Resistant, fast growing and difficult to uproot completely, breadfruit has an interesting nutritional profile, high in carbs that has it often compared to potatoes or pasta. The perishable harvested fruit is particularly complex to preserve and ship. That's where imaginative chefs and entrepreneurs from Fiji and Samoa to the Caribbean have entered the picture, creating solutions to make breadfruit accessible to a wider market and new income opportunities for farmers.



## BREADFRUIT

*Artocarpus Altilis*

Origin: New Guinea, the Maluku Islands and the Philippines

Grown: Tropical regions across Oceania, South and Southeast Asia, the Caribbean, Central America and Africa

Complex carbohydrate with high amount of Vitamin C

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## BOTANY

Breadfruit is a member of the Moraceae family, along with mulberry and jackfruit. There are hundreds of varieties - which all originated in the Pacific Islands - and common names for breadfruit, as it is cultivated in over 90 countries around the world. The tree can grow up to 85 ft/26 m tall, featuring large, dark green dissected (pinnately lobed) leaves. Both male and female flowers grow on the same tree. Breadfruit does not require pollination for the fruit to develop. Breadfruit is a grapefruit sized, compound fruit developed from the 1,500+ flowers seen as small hexagons on the fruit skin. One tree can produce several hundred fruit in a season with limited human care.

## CULINARY USE

Breadfruit is a staple food in many tropical areas of the world. Most varieties can produce fruit throughout the year (up to 450 lbs/200kg per tree per season) with low labor inputs and the fruit can be consumed ripe or unripe. Breadfruit can transform to fit many needs. Unripe or “mature” or “fit” breadfruit is starchy and needs to be cooked before eating; fully ripe breadfruit has a soft, slightly sweet white or yellow flesh. Breadfruit can be roasted, baked, fried or boiled; cooked, mature, starchy breadfruit is similar to baked potato or fresh baked bread. As breadfruit's flavor is neutral, the fruit is sometimes cored and stuffed with foods such as coconut milk or cooked meat then cooked to allow additional flavors to permeate the flesh. In Indonesia breadfruit is commonly made into fritters and eaten as a street-side snack. In Hawaii, the staple food poi, usually made from mashed taro root, is sometimes made with breadfruit and called poi 'ulu. A curry with coconut milk and breadfruit is commonplace in Sri Lanka. Puerto Ricans serve boiled breadfruit with salted cod fish, olive oil and onions and make a dessert custard with sweet ripe breadfruit. In short, breadfruit is adaptable to any style of cooking and almost any flavor profile.

Storing and transporting breadfruit remains a limitation to its widespread usage. Breadfruit trees produce bumper crops at some points in the year; fermentation is a traditional way to preserve breadfruit by leaving it to turn to a sticky, sour paste in a leaf-lined buried pit. Breadfruit are heavy and spoil quickly, unfortunate characteristics for worldwide shipping. Value-added breadfruit products such as breadfruit flour and canned breadfruit are increasing the availability of breadfruit outside of solely tropical regions.

## NUTRITION AND MEDICINAL USE

Breadfruit lives up to its name, as it is largely a source of energy from complex carbohydrates. Breadfruit contains low levels of protein and fat and a moderate glycemic index. It is also gluten free. Breadfruit is a good source of dietary fiber, iron, potassium, calcium, phosphorus, and magnesium with small amounts of thiamin, riboflavin, and niacin. Some varieties contain small amounts of folic acid. Many varieties can be a good source of provitamin A carotenoids and flavonoids. While breadfruit contains low levels of protein, it is a complete protein, providing all of the essential amino acids necessary to human health. Breadfruit has great potential to increase food security in tropical areas as a prolific, perennial producer.

## AGRICULTURE

Breadfruit, as an equatorial lowland species, grows best in tropical climates with well-drained loamy soils and low elevation. The breadfruit tree needs temperatures between 61-100 °F/16–38 °C and annual rainfall of 80-100in/200-250 cm to thrive, but the tree can survive in coral sand and saline soils. If planted in the right environment, the breadfruit tree requires little maintenance. As a perennial tree crop, breadfruit cultivation minimizes soil disturbance and erosion and can be planted in agroforestry applications.

Outside of food production, the breadfruit tree is valued for its role in boat building and other construction. The timber of breadfruit is sturdy yet light, a useful material in the construction of boats and houses in the tropics. Latex, used for boat caulking, is extruded from all parts of the tree.

## HISTORY

Breadfruit originated from seeded breadnut, *Artocarpus camansi*. Breadfruit is believed to have been domesticated and spread to Oceania during the Austronesian expansion, a ‘canoe plant’ brought by sea voyagers from its native islands of New Guinea, the Philippines and the Maluku Islands to Micronesia, Melanesia and Polynesia 3,000 years ago. The breadfruit spread by travelers and by colonizers, brought to areas of the western hemisphere as a potential source of food for slaves.

## RESEARCH

Many are studying and promoting breadfruit as a valuable tool for food security, including organizations such as the Breadfruit Institute at the National Tropical Botanical Garden (NTBG) in Hawaii and Trees that Feed Foundation, Hawaii Homegrown Food Network, and NTBG has developed the world's largest breadfruit germplasm repository to conserve the genetic diversity of breadfruit, and collaborates with researchers and students from around the world to further study breadfruit's application in regenerative agricultural systems and nutritious diets.

## CUISINE

- [Cooking Breadfruit](#) - National Tropical Botanical Garden
- [Roast Breadfruit Recipe](#) - Healthier Steps
- [Breadfruit Cooking in Tahiti](#) [Video] - Breadfruit Institute

## SOURCING

- [Breadfruit Food Company](#)

## COMMUNITY RESOURCES

- [Breadfruit Institute](#) - National Tropical Botanical Gard
- [Planting Trees to Feed People, Create Jobs and Benefit the Environment](#) - Trees That Feed Foundation
- [BREADFRUIT](#) - Hawaii Homegrown

## SOURCES

- [Breadfruit History](#) - National Tropical Botanical Garden
- [Breadfruit | Description, History, Cultivation, & Uses](#) - Britannica
- [Cooking with Breadfruit](#) - Smithsonian Magazine
- [So How Exactly Breadfruit Can Solve World Hunger](#) - Borgen Magazine
- [Breadfruit, A Tropical Superfood, Could Help The World's Hungry Tropics](#) - NPR
- [Will Breadfruit Solve the World Hunger Crisis?](#) - ArcNews
- [Breadfruit Illustration](#) - Breadfruit Botanical Art

