

Jackfruit (*Artocarpus heterophyllus*) “The World’s Largest Fruit”

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If I told you there was a fruit tree that produces 1000 pounds of fruit a year, would you believe me? What if I told you each fruit has 100 to 200 nutritious and tasty seeds? This tree starts to bear fruit 3 to 4 years after planting and will grow to be 50 to 80 feet tall. The young leaves are edible, the young fruits can be cooked as a vegetable and the ripened fruit provides a sweet, aromatic fresh fruit (Figure 1). If I added that the tree grows straight and tall and also provides termite resistant timber, would you believe me? All this is true of the incredible jackfruit.



Figure 1: Opened jackfruit showing flesh and seeds.
Photo by Danny Blank

Jackfruit has long been valued and cultivated in tropical Asia. Thought to originate in the rainforests of India, jackfruit has remained relatively unknown throughout the rest of the tropics. Although distributed throughout the New World and the African continent, it has remained

obscure because of poor selections characterized by their strong aroma, sticky latex and overall poor eating quality. However, with the introduction of superior varieties from Asia and Australia, the attributes of jackfruit are finally being recognized (Richard Campbell, Fairchild Tropical Gardens).

ECHO asked Angela Boss, formerly ECHO’s nursery manager and now working in Central African Republic, to interview Roy Danforth (one of the earliest members of ECHO’s network) about his experience with jackfruit. Her report follows:

“Roy started doing agricultural work in the Congo in 1981. It wasn’t until he first tasted jackfruit that he actually started to even think about doing anything with trees. The jackfruit changed the way he did agriculture. In his words, ‘Jackfruit is the most complete fruit, nutritionally speaking [it is especially high in potassium and

vitamin A and B] and in terms of pounds of fruit per tree, that I have worked with in my 28 years in Africa. It is accepted the fastest and is the most popular.' In his entire experience of planting jackfruit trees, and we are talking [about] thousands of trees, he has only seen two trees that have had any kind of disease or insect problem. He says, 'the miracle of the jackfruit is how quickly it fruits—two years from seed in our tropical region.' The jackfruit helped transform the way people thought about tree planting in the Congo. When Roy first tried to get people to plant trees, a taboo existed against planting trees. The common thinking was, 'Why plant trees if we are going to die before we ever get to eat any of the fruit?' Jackfruit, which fruits in two years, changed the way people saw tree planting and was the catalyst for Roy Danforth and Paul Noren's agriculture program. Jackfruits are remarkably adaptable, virtually disease and pest-free, and very versatile in the ways they can be prepared.

"In terms of the fruit's marketability, while in the Congo, Roy saw fruits for sale along the road (from trees he spread around) being sold and bought for three times the daily wage at the time. We are seeing the same trend in our area in CAR. One fruit can sell for nearly the daily wage here. We are also hearing of people experimenting with preparing the fruit in different ways including cakes and drinks.

"Before the war in Congo you might only find one tree planted at each person's house. However, postwar, you would find upwards of 10 trees around a single house. During the war, animals and gardens were destroyed and people found sustenance in the jackfruit fruits, including the seeds. Here in the CAR, we are finding that the jackfruit is among the top three trees requested at village seminars [other very popular fruit trees are inga and canistel]. It is compact enough that it is popular both around people's houses and in their gardens. Even the lowest quality jackfruits are favored. Among the Aka pygmies, jackfruits are a big success. You can find little nurseries of jackfruit seedlings around Aka huts throughout Southern CAR where we have introduced the tree." [End of Angela's comments.]

Jackfruit thrives in hot and humid areas with average monthly temperatures of 25 to 30°C (77° to 86°F). It does not tolerate temperatures below freezing. The ideal climate has a well-distributed rainy season (as in northwestern Congo). However, jackfruit trees have been observed doing well in an area with a 5-month dry season and 50 inches (125 cm) of rainfall (personal communication, Paul Noren, CAR). Provided with irrigation, the jackfruit's range may be extended to areas that receive even less rainfall. Jackfruit's optimal growing range extends from sea level to 2,200 ft (670 meters) (Richard Campbell). However, its upward range is limited to 4,000 to 5,000 feet (1524 meters), where quality and production may be compromised (Julia Morton)

Propagation of jackfruit is usually by seed. The seeds do not remain viable for long and need to be planted within a month. Soaking the seeds for 24 hours enhances germination. Seedlings started in pots should be carefully transplanted before getting pot-bound, as young jackfruit seedlings have fragile root systems. As with most trees, watering for the first year is critical for establishment. Jackfruit trees generally grow fast and tall, and in an optimal site can grow to 50 to 80 feet. However, trees can be kept at 10 to 20 feet with pruning for ease of picking fruits.

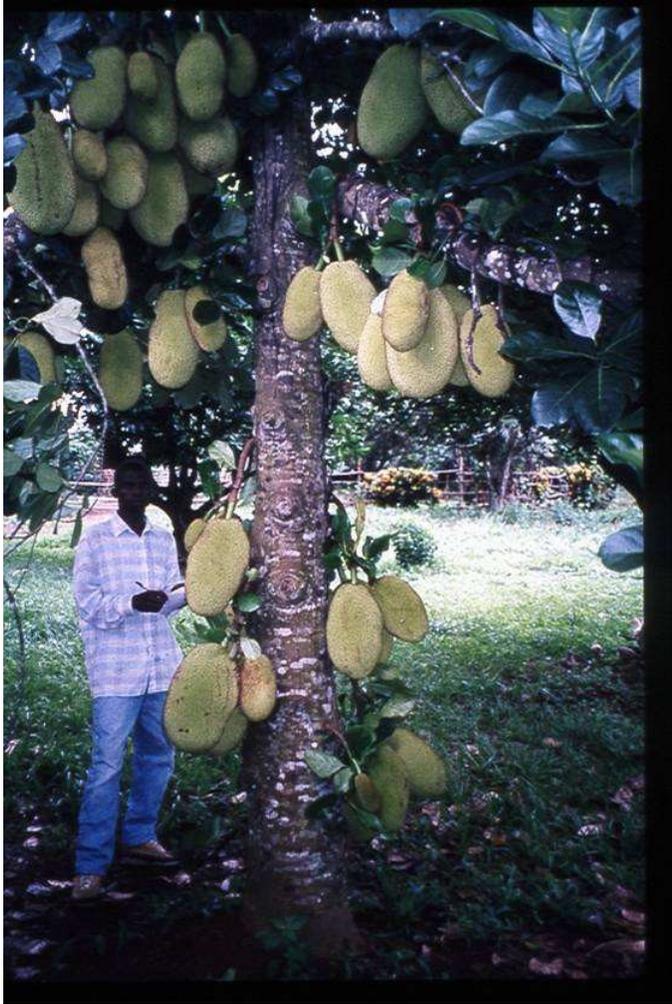


Figure 2: Jackfruit tree in Central African Republic. Fruits grow from the trunk and branches. Photo by Danny Blank.

Few trees can rival the remarkable production of a mature jackfruit tree. Trees can produce up to 1000 lbs of fruit per year. Equally impressive is the size of the individual fruits, which in some varieties exceeds 80 lbs (Figure 2). Jackfruit is a very versatile fruit crop. Young fruits are cooked as a vegetable and the ripened fruit provides a sweet, aromatic fresh fruit. Jackfruit was one of my favorite fruits to eat when I was growing up in the Philippines!

This impressive, high-yielding tree with nutritious seeds and fruit, early-bearing habit, and wide adaptability is an excellent addition

to home gardens and small farms throughout the tropics. With improved varieties now available outside of Asia, jackfruit has a promising future elsewhere in the tropics. Roy Danforth's success with jackfruit in central Africa is a testament to the impact this impressive fruit is having in the lives of many people.

Jackfruit seeds from ECHO are available seasonally from August to October. When requesting seeds, be prepared to plant as soon as you receive them, since the seeds only have a one month period of viability. We will send the seeds to you in damp sawdust as soon as we harvest them. They may be sprouting by the time the seeds arrive. Those working in agricultural development in developing countries may request one free sample packet (8 to 10 seeds).

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