

# Products of *Jackfruit*



NEWVISION

Postharvest Management, Processing and Marketing of Jackfruits  
Postharvest Technology Division  
Bangladesh Agricultural Research Institute  
Gazipur-1701. Bangladesh



Products  
*of*  
Jackfruit

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**The Director General**  
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**Message**

I have the pleasure to write a few words on this manual that contains some useful technologies of jackfruit processing. Bangladesh is a developing country and has fast soaring economy which is largely dependent on agriculture. Substantial production of horticultural crops, especially fruits and vegetables supplement a considerable extent of nutrition requirement of our people, but its wastage and spoilage due to lack of postharvest management and technologies warrants serious concern of the policy makers and scientists of the country. As it is traditionally an agrarian country, its development is likely to base on agriculture and agro-based industries. Government has rightly put thrust on these sectors so that the agricultural produces particularly of horticultural crops can be used as raw materials in the agro-based industries.

Although a sufficient amount of fruits are produced round the year, but a huge amount of it is wasted due to lack of proper preservation and processing technologies, while a huge amount of foreign fruits enter our markets through import that helps to meet the shortage of nutrition need of our people. Jackfruit is our national fruit having excellent taste and flavor ranking 2nd in production. It is attractive in color and big in size. It is the biggest fruit in the world having high nutritious elements that can prevent diseases and increase immunity in human body. It has advantage to consume both green and ripe stage. Every 100 gm of jackfruit contains 2 gm of dietary fiber, 24 gm of sugar, 0.3 mg of fat, 34 mg of calcium, 37 mg of magnesium, 303 mg of potassium, 297 IU of vitamin A and 6.7 mg of vitamin C. The fruit also encompasses different types of antioxidants which are very essential in boosting the nutrition and immunity of human body. Sadly, farmers do not get fair price of jackfruit during glut season and as a result, sometimes it becomes rotten on the trees, and in many cases, farmers use it as animal feed.

As horticultural crops as a whole are highly perishable, postharvest management technologies are highly required. Horticultural crops, especially fruits and vegetables lose their vitality and freshness quickly. One-third of the fruits and vegetables produced in our country are wasted every year due to lack of proper postharvest management technologies. Therefore, it is important to adopt improved production technique to ensure the availability of fruits and vegetables, as well as to prevent wastage at the postharvest stage. Transportation, information and communication in the country have improved a lot compared to the past. Therefore, the amount of post-harvest loss has reduced slightly, but the postharvest management such as sorting, grading, washing, packaging, and handling management including processing technologies have yet to develop while the already developed ones need to be transferred to the concerned stakeholders. Adoption of processing technologies should be guaranteed. Therefore, the joint effort of Postharvest Technology Division of BARI and NewVision Solutions Ltd., Dhaka on "Postharvest Management, Processing and Marketing of Jackfruits" with the funding of Krishi Gobeshona Foundation is a good as well as right effort to create the innovated technologies. Hopefully, farmers, entrepreneurs, businessmen and consumers of the country will specially be benefitted by using this book. Last but not the least, thanks and appreciation are due to those who worked hard to prepare and bring the book published.

**(Dr. Debasish Sarker)**  
Director General



**The Executive Director**  
Krishi Gobeshona Foundation  
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### Message

The giant jackfruit is famous not only for its size but also for its inherent nutritional quality. It contains the required amount of protein, carbohydrate and minerals. One hundred grams of ripe jackfruit provides 48 kcal energy. Similarly, the energy available from raw jackfruit and seeds is 53 kcal and 130 kcal, respectively. However, we cannot utilize this potential of jackfruit as there is no proper storage method yet available to the farmer.

Bangladesh produces 15-20 lakh MT of jackfruit each year, and around half of it goes to waste as there is no storage facility. So, it was necessary to have some technologies for the storage and multi-purpose use of jackfruit. Also, emerging technologies require easier marketing management. Scientists of the Postharvest Technology Division (PHTD) of Bangladesh Agricultural Research Institute, Gazipur conducted research on the preservation and multipurpose use of jackfruit through the project "Postharvest Management, Processing and Marketing of Jackfruit" funded by Krishi Gobeshona Foundation. They claim to have developed 12 technologies. Using these technologies, PHTD scientists have developed more than 20 jackfruit products or recipes. NewVision Solutions Limited, Dhaka, was in charge of overseeing the promotion and marketing activities of the project. They have already completed their activities. Both institutes have jointly motivated and trained the relevant candidates. Their efforts seem small but indicate a bright future in the near future.

I appreciate their initiatives to publish all these activities as a monograph. I believe farmers, traders, entrepreneurs, students and interested persons will be benefitted from this monograph. I convey my best wishes to all concerned through this message.

**(Dr. Jiban Krishna Biswas)**  
Executive Director



## Forward

Jackfruit is an immense nutritious fruits in Bangladesh. It is the national fruit of our country for its availability and good taste with aroma when it is consumed. The fruit contains a large amount of nutrients which is needed for our body to enhance its immune system. It is the largest fruit in size and weight among the fruits grown in the world. This fruit is used as a commercial fruit in the sub-continent. Jackfruit is consumed as food throughout the year in many countries including India, Nepal, SriLanka. Different types of food products such as jackfruit chips, dehydrated products, frozen, canned products etc. are being prepared from jackfruit in many countries such as Thailand, Vietnam, Malaysia and Philippines etc. Raw jackfruit meat is known as vegetable meat. Once upon a time, jackfruit was a highly valued fruit in our country. It was customary to eat well seasoned jackfruit with rice, muri and other foods. But in the last few years, jackfruit consumption has drastically decreased because of being same harvested time of jackfruit and other fruits. Moreover, there is a huge wastage of the fruit due to lack of knowledge regarding postharvest management and value added processing technology. The wastage or postharvest loss of the fruit is one-third of the total production or more. Starting to unripe consumption, the fruit will play an important role in nutritional security as well as assist to minimize the wastage or loss of jackfruit. According to the research findings, every 100 jackfruits will provide profit only 1470 taka whereas it will be possible to make it around 3750 taka through appropriate postharvest management and value addition to the fruit. In Bangladesh, most of the people prefer jackfruit to consume as ripe fruit. But, it starts to cook from immature jackfruit as vegetables. Postharvest Technology Division of BARI has developed 4 technologies and 11 recipes for raw jackfruit such as fresh-cut, ready to cook, pickles, vegetable meat, cutlet, singara, samucha, sandwich, burger etc. This division has also developed various food products of ripe jackfruit such as jackfruit chips, leather, dried products, jam, powder, cheese, ice cream etc. which have already been supported in marketing by partner organization NewVision Solutions Limited, Dhaka through creation of micro, cottage and small entrepreneurs. More than 500 women and men, farmers, unemployed youth, entrepreneurs, traders, extension personnel, interest group etc. have been trained up and various seminars, awareness programs, promotional activities in Dhaka, Rajshahi, Chattogram, Mymensingh and different project areas have also been arranged. The entrepreneurial endeavors are being noticed during the program and many of them have expressed enthusiasm and interest. However, there are some challenges for that activities onwards. Continuation of training, financial support, provision of machinery, raw materials and packaging, providing marketing place and registration for marketing have raised up important issues by the farmers and entrepreneurs. This process will be accelerated if marketing facilities are

organized in different locations of the country by establishing more farmers' markets. It is stated that the Horticulture Research Center of BARI has so far developed 4 varieties of jackfruits. Already, orchards have been developed in different parts of the country. Therefore, jackfruit will be available throughout the year as a raw materials for the entrepreneurs and the agro-processing industry. Then, it will be possible to export different jackfruit products in foreign countries. In order to create awareness on diversified use of jackfruit and prevention of wastage, an initiative has been taken to publish a book "Products of Jackfruit" which will be useful for farmers, unemployed youth, man and women, entrepreneurs, businessmen, extension personnel etc. Overall, the developed technologies and recipes listed in the book will assist to minimize postharvest losses of jackfruit, as well as play an important role for nutritional security and employment generation through the processing of value added jackfruit products.



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