

Our journey towards co-creating our dehydrated jackfruit.

# MAKERERE UNIVERSITY

**FIBER  
FOODS**

**Dr. Abel Atukwase**  
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**“As the leading institution in teaching and research in food sciences, we feel responsible for promoting value addition. So when the opportunity to research young jackfruit came in, we found it our responsibility to take it on”**

## **ABOUT**

Dr Atukwase is a Senior Lecturer in the School of Food Technology, Nutrition and Bioengineering, Makerere University with over 22 years of experience in food science and technology and nutrition. His research publications cover a wide range of topics related to food production, post-harvest handling, food security, child nutrition and food safety.

## **START OF BLU PARTICIPATION**

Dr. Atukwase was involved in the early stages of BLU when academic expertise was required in the programme. His initial involvement focused on canning young jackfruit. As the leading institution in teaching and research in food sciences, promoting value addition is among the core activities of Makerere University. So when the opportunity came in, “The School of Food Technology, Nutrition and Bioengineering found it our responsibility to take it on”, said Dr. Atukwase.

## **CONTRIBUTION**

Throughout the nine months that Dr. Atukwase and his assistant Mr. Gerard Tumwine were involved in BLU, most of their work focused on laboratory experiments to develop the process for production of canned jackfruit (the first business model of BLU that eventually evolved into the focus on dehydrated jackfruit) and optimizing the quality of the product. In co-creation with Team TasteMakers from the Netherlands the team developed the process manual for canning young jackfruit. Dr. Atukwase noted: ‘We created SOPs (standard operating procedures) from harvesting the young jackfruit up to when the product is ready, while optimizing the production procedures.’ An essential achievement was tackling the browning of young jackfruit upon cutting and peeling. Their findings revealed that soaking the cut young jackfruit in ascorbic acid instead of citric acid completely solved the problem of browning.



When the programme headed towards dehydration of young jackfruit, the research team ventured into optimizing cooking and drying time. The research was conducted in three places namely; i) Food Technology and Business Incubation Centre, Makerere University, ii) Enimiro field based processing facility in Kayunga district and iii) Njoro Canning factory in Nakuru , Kenya. For canning jackfruit, the fresh jackfruit must be handled with care to ensure maximum quality. Therefore Dr. Atukwase also gave advice in terms of the perfect size and age,

as well transportation of jackfruit in crates to protect the young jackfruit for physical damage while in transit. Moreover, he figured out the issue of weight loss during transportation and advised that BLU needed to ensure that weight loss should not exceed 2.5% during transport from the field to the factory. All in all, Dr. Atukwase and Mr. Tumwine made a very valuable contribution to BLU.

Besides their detailed research, they always answered the technical questions coming from the other involved parties. Having them on board gave the BLU programme an academic body as well as credibility.



## SUMMARY

Thanks to the involvement of Makerere University, the following contributions have been made:

- Involvement of one senior researcher and one student assistant
- Nine months of engagements, e.g trials in different processing hubs
- Research to establish the optimum maturity stage for harvesting green jackfruit, development of SOPs and optimizing the production process for canned green jackfruit.

**Our - young -jackfruit is peeled, cut, and dehydrated directly after harvesting in Africa.**