



Ethno-varieties and distribution of jackfruit tree (*Artocarpus heterophyllus* Lam.) in Uganda: implications for trade, food security and germplasm conservation

¹NAKINTU J., ¹OLET A E., ²ANDAMA M., ¹LEJJU B J

¹Department of Biology, Mbarara University of Science and Technology,

²Department of Biology, Muni Univesrity

*Corresponding author: jnakintu@must.ac.ug

Abstract

Artocarpus heterophyllus Lam. is a fruit tree crop largely grown in tropical regions for its edible fruits. Though listed among underutilized crops, the demand for jackfruit in Uganda has increased. Amidst the increase in demand, the crop faces strong selective pressure and yet there is no documentation of the varieties and distribution of the crop in the country. This study therefore aimed at determining the varieties and distribution of jackfruit in Uganda using folk knowledge to provide a baseline for its production, booming market and conservation. A cross-sectional survey involving 349 participants comprising of 205 jackfruit traders and 144 jackfruit farmers from three political regions and three agro-ecological zones was conducted. Data were collected through face to face interviews using a semi-structured questionnaire and direct observations. Classification of jackfruit varieties, geographical location of the source of jackfruits for traders and the time of harvest of the fruit by the farmers were investigated. Occurrence of varieties per household was determined through on-farm visits. Data analysis techniques involved descriptive, chi-square and Cramer's V measure of association analyses. Traders mainly obtained jackfruit from Central (46.0%) and Eastern (37.6%) political regions, Lake Victoria Crescent and Mbale Farmlands (41.1%) and Southern and Eastern Lake Kyoga Basin (30.0%) agro-ecological zones. Jackfruit varieties were classified basing on fruit texture and pulp colour, revealing four ethno-varieties, soft (Serebera), firm yellow (Kanaanansi), firm red (Namusaayi) and firm white (Namata). Namata and Serebera registered the lowest occurrences in political regions and agro-ecological zones. Farmers harvested jackfruit throughout the year with a peak season in December and January. Folk knowledge provided baseline information for jackfruit variety categorization. Selection pressure exerted on Serebera and Namata demands for germplasm conservation. Since jackfruit thrives in a wide range of climatic conditions, its cultivation should be encouraged to ensure food security and sustain the increasing demand.

Keywords: *Artocarpus heterophyllus*; Ethno-varieties; Folk taxonomy; germplasm conservation; Uganda

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