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Scale Up of Freeze Concentrator for Coconut Water

GRANTEE: Xavier University (XU)

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COLLABORATING PARTNER: School of Business and Management, XU

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CONTRACT AMOUNT: Php 949,850 (approximately USD20,200)

The coconut industry gets a boost

Coconut water is a waste product in desiccated coconut factories and in copra production enterprises. Through freeze concentration, coconut water can be economically stored for further commercial use. Freeze concentration is the partial freezing and subsequent separation of water ice crystals from the coconut water, thus increasing its sugar concentration. With a significant number of Filipinos relying directly or indirectly on the coconut industry, freeze concentration is a very viable option that can be explored to promote inclusive economic growth, particularly in coconut farming communities.



Research team members explain the process of freeze concentration to STRIDE representative

Given the huge demand for coconut water in the local and global markets, with consumption reaching 3.9 billion liters in 2015 and increasing demand in the US, Canada, France, and Japan, researchers from XU, with assistance from USAID STRIDE, are fabricating a scaled-up freeze concentrator for commercial use.

The objectives of this undertaking are to further equip and capacitate XU in knowledge transfer on the coconut freeze concentrator technology, strengthen partnerships with coconut industries and coco-farming communities, and formulate a sound business plan to meet the demands of the market.

Major activities to be undertaken are: a) fabrication of the freeze concentrator prototype; b) conduct of test runs that will serve as bases for modification to improve functionality resulting in better quality of coconut water; and c) actual production for local distribution to potential business partners. These processes, once in place, will provide better opportunities for coconut farmers, as well as for small and medium coconut industries, to increase their revenue. At the same time, the initiative will provide more opportunities for job creation, as people will be engaged as operators, sellers, and delivery and utility personnel.



Ongoing fabrication of freeze concentrator