

Breadfruit Processing System

Sponsor: Compatible Technology International

Sponsor's General Mission or Business Statement: CTI works to improve the lives of people in developing countries by designing food and water technologies that are sustainable and appropriate to local cultures, and by collaborating with in-country organizations to identify needs and to achieve widespread use of our technologies to relieve hunger and poverty.

Sponsor's Advisor, Title, and Phone Number: Bert Rivers, Vice President of Operations, (651) 632-3912

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University of St. Thomas School of Engineering Academic Advisor: Dr. Camille George

Team Member Names: Cody A. Benoy (ME), Aaron P. Brooks (ME), Anthony J. Caruso (ME), Jacob M. Thomas (ME), Rachel C. Willenbring (ME)

Senior Design Clinic I-II (ENGR 480-1) 2008-09 Project Mission Statement: To design, build, test, and implement an efficient, robust, and cost-effective breadfruit processing system that is versatile enough to be used in diverse locations and environments throughout the world.

Major Design Requirements:

1. Dry fruit within 48 hours of being picked
2. Produce food quality flour
3. Cannot not rely on access to electric power
4. Entire system must be mobile
5. Must withstand tropical weather
6. Be regionally affordable (less than \$500US for all equipment)

Senior Design Project Summary: This project required a process oriented approach which included four distinct, yet interdependent steps. In order to create a final product which met requirements, team members worked closely with experts at CTI to leverage their experience and knowledge. The purpose of the project was to provide a system which produces high quality cooking flour from Breadfruit within the allotted 48 hour timeframe. In practice, this process can be accomplished within a single work day. The equipment utilized to complete said process is a combination of novel design and improvements made to existing equipment. Simplicity in design was crucial for this project, as it will be utilized in regions with limited access to power, materials, or markets.

