

Senior Design Project Data Sheet

Project #	Project Name	Project Track	Project Family
P07403	Eze Kamanu Garri Processing Project	Sustainable Products, Systems and Technologies	Sustainable Technologies for the Third World
Start Term	Team Guide	Project Sponsor	Doc. Revision
2006-2	Dr. Taylor	RIT Mechanical Engineering	3

Project Description

Project Background:

The Garri Processing Project was suggested by RIT alum, Eze Kamanu. Eze grew up in West Africa and has been involved with cassava/garri processing. Eze identified inefficiencies of current production methods – time consuming and labor intensive

Problem Statement:

Design and manufacture a garri processing machine affordable to lower class families in Nigeria. The device will improve upon one or more of the inefficient processes identified related to the processing of garri being both time consuming and labor intensive.

Objectives/Scope:

1. Development of a device capable of peeling and grating cassava.
2. The device will reduce processing time and labor required for peeling.
3. The device will eliminate reliance on a shared grating machine. The device will save time and money associated with renting the machine.
4. The final product will be durable, easy and safe to use, and affordable to lower class families.

Deliverables:

- Concept Sketches
- CAD drawings
- Material samples, benchmarking, testing
- Cost Analysis
- Initial Prototypes, mock ups
- Prototype testing – wear, stress analysis, durability
- Final concept/designs
- Final working prototype

Expected Project Benefits:

- The final product of the Garri Processing Senior Design Project will improve the quality of life for Nigerian families by providing more efficient economical methods for garri processing.

Core Team Members:

- Alissa Albert - ISE
- Anne Froustet - ISE
- Coleman Glasgow - ME
- Joey Lawson - ME

Strategy & Approach

Assumptions & Constraints:

1. It is assumed that the cassava (and yams) found in the United States are similar in skin thickness and flesh density as those found in Nigeria.
2. Must stay within budget and create a design that is affordable to lower class families.
3. Fuel/ energy sources
4. Team member technical background

Issues & Risks:

- Availability of cassava in the U.S. is limited and unknown if differences exist between cassava available in the U.S. and Nigeria.
- Unknown if time savings justifies investment
- Tariffs for product imported into Nigeria