

This form will allow the D-Lab staff to provide feedback and help you prepare for your project. You can download an electronic version from the D-Lab website. You should fill in a form for each project you are working on, but only one of them will be turned in to be graded.

Name: Amy Smith

Country: Ghana

Project Title: Cassava Grater

Describe the need that your project is intended to address.

- Reduces the labor necessary to grate cassava
- Increases throughput and therefore decreases the time needed to grate the cassava
- Provides a ready source of grated cassava to be used in preparing the binder for making charcoal
- Adapt an appropriate technology to be made with locally available materials and suit local capabilities and needs

What are the goals of your project?

- To identify someone who can build and repair the grater
- To build a prototype grater
- To test the grater in Asampu and New Longoro to get user feedback
- To investigate mechanisms for financing the grater
- To determine a strategy for implementing and installing the grater in the community.

Describe how the project will work. What steps will you need to take, and in what sequence? Who will be helping with this project? How will your time be organized? What preparation do you need to do? Who do you need to contact, and when? Estimate the time you will spend on the different steps.

Prior to the trip, I will communicate with our community partners to identify possible manufacturers of the grater, preferable in Offuman or Bamboi so that transportation to the manufacturer will be simplified, however it may be necessary to work with a metal worker in one of the larger towns (Techiman, Sunyani or Wenchi). I will also work closely with Somin Lee, who was on the 2.009 team that developed the grater, to discuss possible design improvements and to finalize the drawings necessary for making the grater. I will prepare documentation of the grater including pictures of the current prototype. I will pack up the parts of the grater that we will bring with us (the tooling for making the grating sheets and the mold for casting the flywheel) and familiarize myself with how these were made. Upon arriving in Offuman, I will contact the manufacturer that we identified in order to start the production of the prototype. I will

also locate a source of cement so that the community can help cast the flywheel. I will also need to find a tailor who could sew the seat. I will also need to work with Pastor George and the Chief in Asampu to discuss funding/financing for the grater and to determine how it will be used—owned by an individual who creates a micro-enterprise, owned by the school to raise money for supporting programs, etc.

I estimate that it will take about a week to make the prototype, and then a couple of days for the community to cast the flywheel. We will run field tests and interviews on three successive days, and then follow up about a week later to get additional input. Following this input, we will meet with community leaders to discuss the implementation plan and the opportunities for expansion into other villages. We will also meet with the manufacturer to discuss the market potential for the grater.

What are the benefits of your project? Who will benefit from your project and how?

The cassava grater is a labor-saving device that will benefit the village women in Asampu and New Longoro by providing a means to quickly and more easily produce grated cassava, both for human consumption and for producing binder for making charcoal out of agricultural waste.

It will also eventually provide an income generating opportunity for those producing cassava graters.

How will you assess the success of your project?

Initially, we will get feedback on the device through interviews with potential users. We will also leave behind a follow-up survey to track the use of the grater and get additional user input.

What key pieces of equipment or materials that you will need for this project. Locate a source and/or estimate a price for them.

To be purchased in-country:

- rebar
- cement
- canvas for the seat
- bicycle cranks

approximate cost: \$150

To bring from US

- tooling for making grating sheets
- pre-cut sheet metal for making grating sheets (just in case)
- molds for casting flywheel

all available from 2.009 prototype or in D-Lab

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