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In cooperation with



The team during the Coffee Decker tool awareness campaign © PDK brands

## COFFEE INNOVATION

### Coffee Decker Tool

Empowering farmers to cost-effectively add value to their coffee,  
minimize losses and improve income

## CHALLENGE

Small and medium-scale farmers in Uganda face setbacks pertaining to drying their agricultural produce such as coffee, cocoa, maize, beans and others. Equipment that can be used to quicken the process can be expensive and inaccessible. In order for farmers to realize more value addition, they need access to affordable ways of processing that fit with their work schedules.

## COMPANY DESCRIPTION

Participants are graduates of Makerere University, Bachelor of Science in Agriculture, class of 2016 who are passionate about turning agriculture into a business through commercialization, industrialization, nursery management, research, and extension. Bakugu Agricultural Technologies Limited is a company that harnesses innovation and technology to develop solutions that address daily challenges within the agribusiness space. The company has business interests in commercial plant nurseries, vegetables, fruits, grain production and export, tree and timber production, youth and women empowerment and inclusion, climate change mitigation and adaptation. They also set up agricultural estates for individuals interested in commercial agriculture through our joint-venture services.

## INNOVATION

### THE COFFEE DECKER - MOBILE COFFEE PROCESSING EQUIPMENT

The Coffee Decker Tool uses low-water honey processing and multi-tiered solar powered dryers to simplify post-harvest processing. High quality parchment is then purchased by Bakugu for a premium price. They also integrate climate resilience by promoting the integration of shade trees to reduce impact of prolonged droughts on coffee trees, and improving water use efficiency in on-farm coffee processing.

## KEY COMPANY STATS

### NUMBER OF PRODUCER PARTNERS

637 farmers

### NUMBER OF STAFF

Nine

## COST

### COSTS

Farmers paid the equivalent of USD 165 (including a 50 % subsidy, retail value USD 330) per Coffee Decker

### EFFECTS ON REVENUE

Bakugu paid a premium for coffee processed by farmers using the Coffee Decker tool

## PREPARATION

### TIMELINE

Approx. 24 months for procurement of materials, development and deployment of training, and organization of collaboration with farmer groups

### STAFFING REQUIREMENTS

Ten staff to fabricate and deliver Coffee Deckers, to deliver training and purchase parchment coffee

### MATERIALS AND EQUIPMENT

- Metal fabrication equipment and tools
- Mesh
- Wheels
- Nuts and bolts
- Solar canvas (weatherproof) covering and black canvas for base
- Flatbed trucks for transport of Coffee Decker to production areas

## LESSONS LEARNED

### CHALLENGES

- An Ebola outbreak hindered program outreach and implementation.
- Many member smallholder coffee farmers are risk-averse and very price sensitive, which led to slower adoption and results than expected.
- The economic disruptions faced by the country and failure of a partner organization to fund the coffee seedlings supplies contributed to a shortfall in the projected cashflow for the company hence making it very difficult to finance the construction of our Coffee Decker production plant and warehouse facility within the stipulated period.
- High fuel prices made reaching remote areas where these tools could have a big impact more costly.

### TAKEAWAYS

- Now having a better understanding of the market and financial pressures, the project company would consider both the medium and large-scale coffee farmers and customize the Coffee Decker tools to suit the varying coffee drying needs of the farmers depending on their scale of operation.
- The team is also looking at ways of adapting the Coffee Decker to lower cost materials so that it is more accessible to small farmers.
- They also see the potential of digital marketing and outreach, as well as new business opportunities such as constructing bigger solar dryers for drying other farm products like cacao, cassava, maize, capsicums, poultry manure etc.





Loading the Coffee Decker tools for delivery to beneficiary farmers. © Nakigozi Nuluiat

As a result of Bakugu Agricultural Technologies Limited working with farmers to deploy Coffee Decker tools:

### 673 SMALLHOLDER COFFEE FARMERS HAVE BEEN SKILLED

in use and maintenance of the coffee decker tool across the four project districts

### 4,500 SHADE TREES WERE PROVIDED

to farmers for reforestation and climate change mitigation and catever grass to prevent erosion in steep areas

### EUR 1.38 PER KG WERE PAID TO FARMERS

well above market price

### 16 COFFEE DECKERS WERE SOLD

to smallholder coffee producers, including a 50 % discount on the price, supported by the Coffee Innovation Fund

### 95 % OF THE FARMERS

that adopted the Coffee Decker tool are undertaking on-farm coffee value addition and efficient drying of their coffee

“

The tool reduces post-harvest losses and improves drying of coffee. Green bean coffee will dry in five days compared to 14 days using the open air and on the ground drying methods.

”



STEP

1

Site selection, environmental impact assessment and structural plan development

STEP

2

Procurement of developer and construction materials

STEP

3

Construction of fabrication plant

STEP

4

Equipping the production plant and coordinating outreach, training and sales

Beneficiary farmer skilling in coffee post-harvest handling using the Coffee Decker tool. © Paul Magunda

“

Through reducing post-harvest losses and improving the quality of coffee we are contributing towards the quantity and quality of coffee supplied to the market.

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The COFFEE INNOVATION FUND has been developed and funded by the German Federal Ministry for Economic Cooperation and Development (BMZ), and implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

**MISSION:** The Fund's objective is to increase the profitability of smallholder coffee farmers, and foster greater, more equitable value distribution along the supply chain through promoting innovative farming systems, transparent and inclusive business models, and access to new markets.

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