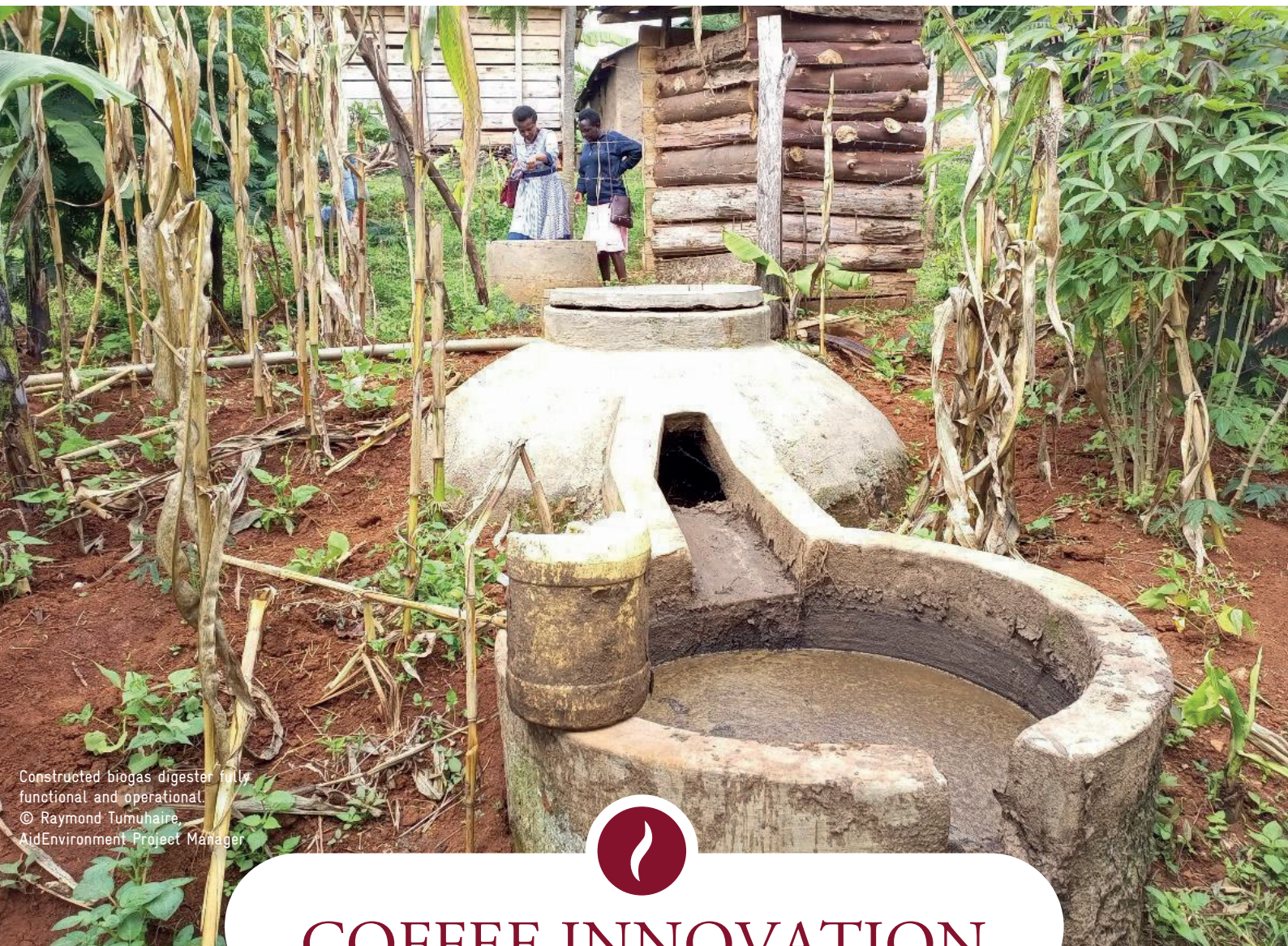


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Constructed biogas digester fully
functional and operational.
© Raymond Tumuhaira,
AidEnvironment Project Manager



COFFEE INNOVATION

Biogas Tanks: A Source of Organic Fertilizer to
Boost Coffee Production for Women in Specialty Coffee

CHALLENGE

Fertilizer can be expensive and hard to access for farmers in remote areas. Some fertilizer can also have chemicals with long-term environmental effects, but organic alternatives have traditionally been expensive and rare in Uganda.

INNOVATION

INTEGRATED REGENERATIVE APPROACH USING BIOGAS DIGESTERS TO CREATE FERTILIZER

This innovation transforms waste water and coffee processing by-products into organic fertilizer and clean cooking energy source with biogas digesters. New biogas improved cooking efficiency and reduced the burden on women (especially from firewood, which is very time-consuming to collect and has health effects). Co-financed by farmers (with either in-kind materials, labor etc. or supported by microfinance or cash contribution) and 40 % subsidized from the project (pipe, fittings, etc.), farmers had high uptake and are continuing to practice sustainable farming practices.

COMPANY DESCRIPTION

Mt Elgon Women in Specialty Coffee Limited (MTEWISCOF) is a Uganda-based Cooperative, producer, exporter and roaster. AidEnvironment (AE) East Africa is a not-for-profit sustainability research, strategy, and implementation organization working to achieve transformative sector change. AE's work in Africa is focused on integrated land and water management, and sustainable sector transformation. To support smallholders, they provide access to farming inputs, training, technology and water infrastructure, while strengthening market systems for financing and sustainable trade.

KEY COMPANY STATS

NUMBER OF PRODUCER PARTNERS

15 farmer groups and
250 individual coffee growers (170 women)

NUMBER OF STAFF

15

COST

COSTS

EUR 365 per farmer (either in-kind materials, labor etc. or supported by microfinance or cash contribution)

EFFECTS ON REVENUE

Farmers have reported an increase in income from increased coffee sales

EFFECTS ON YIELD

There is evidence through stories of change that the project has created an impact and change in livelihoods of farmers.

PREPARATION

TIMELINE

Five months

STAFFING REQUIREMENTS

Four full time staff for training and equipment installation

MATERIALS AND EQUIPMENT

- Land
- Cookstoves (from project)
- Masons

LESSONS LEARNED

CHALLENGES

- The price of materials rose, causing fewer farmers to be able to be part of the project while staying within budget.
- The construction process of biodigesters requires someone to have a technical training in building and construction of which most of the masons did not have.
- COVID-19 made connection to farmers difficult.
- Farmers lost business and suffered financially (no cash for investing in biodigesters).
- Slow adoption rates.
- Long distances to transport materials.
- Weather: Rainy season.
- Timing: Farmers have cash at the end of the harvest and at that time would be best situated to make investments like for the biodigester.

TAKEAWAYS

- The trainings conducted during the project period have inspired farmers to invest in biodigesters because they see how bioslurry (the mix of waste water and other waste) can improve the coffee plant nutrients immediately.
- Use radio programs and outreach, including one-on-one to improve participation rates utilizing trusted, affordable communications channels.
- Use existing clients as "ambassadors".
- Also created jobs from training masons (incorporated into biogas company).

As a result of Mt Elgon Women in Specialty Coffee Limited
in Partnership with AidEnvironment East Africa's deployment of biogas tanks:



Farmers demonstrate how to make a stone bund during a soil and water conservation training. © Eliakim Kibet

280 FARMERS (170 FEMALE)

were trained in operation and maintenance of biodigesters and bioslurry management and application.

320 FARMERS

were trained in better coffee management practices and soil fertility.

30 YOUNG PEOPLE

were certified in masonry to build biodigesters.

325 FARMERS

are so far earning an income from increase in coffee sales.

“Through the sensitization events deforestation was discouraged and more so the households that had the biodigesters constructed have biogas hence reducing their need for fuel wood for household energy demands.

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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