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A Ndugu Farmers Limited tech
team member leading a training
on using the regenerative
agriculture app.
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COFFEE INNOVATION

Coffee Farm Development Tool to Accelerate
Coffee-based Agroforestry among Coffee Farmers

Ndugu Farmers' Regenerative Agriculture App



CHALLENGE

Soil degradation and erosion, lack of capacity on soil science and regenerative agriculture amongst local smallholder farmers leads to soil depletion, reduced coffee quality and volumes, as well as danger of erosion and deforestation. Farmers seek to expand production to improve household income and other environmental damage.

INNOVATION

NDUGU FARMERS' REGENERATIVE AGRICULTURE APP: PRODUCTION FACILITATION THROUGH REGENAG

First create a new mobile app to simplify regenerative agriculture by recommending practical actions and results, so that cooperative agents can tap into it and understand instantly cost-benefit analysis of various interventions. Next, promote regenerative agriculture by piloting specific tree combinations and intercropping in coffee gardens to test increase in revenue. Some 160 pilot beneficiaries received fruit and other trees and plants to measure the impact on soil health and income.



COMPANY DESCRIPTION

Ndugu Farmers is a social enterprise that builds communities or platforms that encourage collaboration and cooperation, combining cooperatives to work together on contracts and projects that impact their farmers. The focus lies on market access, financial access, and sustainable development projects.

KEY COMPANY STATS

NUMBER OF PRODUCER PARTNERS

23 cooperatives

NUMBER OF STAFF

15 Ndugu staff, 115 cooperative traceability agents



COST

COSTS

No direct cost to farmers. Traceable coffee premium shared with cooperatives after coffee is sold.

EFFECTS ON REVENUE

- Additional revenue from fruit trees
- Carbon credit units from agroforestry practices
- Less spend on fertilizer



PREPARATION

TIMELINE

Lead time for innovation/ mobile application development, testing and roll out to 160 lead farmers was 12 months

MATERIALS AND EQUIPMENT

Smartphone owned by Ndugu staff and cooperative traceability/ field agents

STAFFING REQUIREMENTS

Three mobile application developers, 15 Ndugu field staff, 23 cooperative agents and 160 lead farmers as pilot beneficiaries



LESSONS LEARNED

CHALLENGES

- Nurseries were not integrated (e.g. farmers would previously get coffee and fruit trees from different sources), so the project had to create the first coffee nurseries with other fruit trees and plants.
- Procurement delays made implementation of the pilots challenging in order to see results within the project period.

TAKEAWAYS

- Where farmers already had a smartphone, it was easier to create the connection and infrastructure at beneficiary level. Otherwise, value was extended through cooperative traceability/ field agents in each cooperative.
- Particularly for the EU Regulation for Deforestation-Free Products (EUDR), this app is a valuable service and demand was quite high.
- Given the demonstrated use and customers, the app is adding features to capture development of carbon credit data to monetize regenerative agriculture and transform its value.

RESULTS: NDUGU FARMERS LIMITED (UGANDA)

As a result of Ndugu Farmers' Regenerative Agriculture App:



Ndugu field agent guiding farmer using regenerative agriculture app. © Ndugu Farmers



23 AGENTS WERE TRAINED

and deployed to socialize and train stakeholders on the app



BY USING THE APP,

Ndugu Farmers is able to influence the pattern of reforestation (attracting potential carbon credit and enabling farmers to earn additional income from carbon offsetting from a commercial bank)



160 FARMERS PARTICIPATED IN THE PILOT

on crop diversification



24,000 FARMERS HAVE INCREASED THEIR INCOME

from carbon credit units as well as revenues from medicinal plants and fruit trees



DATA IS NOW INCORPORATED INTO FAIRFOOD'S TRACE PLATFORM

allowing European buyers and consumers to verify compliance with EUDR and learn more about the positive environmental impact of Ndugu Farmers' work with coffee cooperatives



Ndugu tree delivery. © Ndugu Farmers

STEP 1 Testing with four Ndugu super cooperative managers and 23 cooperative traceability agents.

STEP 2 Piloting with 160 lead farmers from 23 cooperatives led by 23 cooperative agents.

STEP 3 Scaling the mobile app services to the 115 cooperative agents so they can use it to guide the 6400 traceable farmers under Ndugu Farmers' network.

STEP 4 Opening the mobile app services by hosting it on Google Play Store for open access by interested users beyond Ndugu Farmers' network.

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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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