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# USAID/Nigeria COVID-19 Food Security Challenge

## FINAL REPORT

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# ACRONYM LIST

<b>BOP</b>	Base of the Pyramid	<b>MUAC</b>	Mid-Upper Arm Circumference
<b>CLO</b>	Community Liaison Officer	<b>MSME</b>	Micro-, Small-, and Medium-Sized Enterprises
<b>EPIC</b>	Exploratory Programs and Innovation Competitions	<b>NAFDAC</b>	National Agency for Food and Drug Administration and Control
<b>FAA</b>	Fixed Amount Award	<b>NGO</b>	Non-Government Organization
<b>FSC</b>	Food Security Challenge	<b>PICS</b>	Purdue Improved Crop Storage
<b>FTF</b>	Feed the Future	<b>PLSO</b>	Partner Liaison Security Office
<b>GACON</b>	Gum Arabic Company Nigeria	<b>PSE</b>	Private Sector Engagement
<b>GAP</b>	Good Agricultural Practices	<b>RFA</b>	Request for Applications
<b>GDP</b>	Gross Domestic Product	<b>SALT</b>	Supplier Automated Logistics Transparency
<b>GFSS</b>	Global Food Security Strategy	<b>TICSOK</b>	Technology Incubation Centre, Sokoto
<b>IPCC</b>	Intergovernmental Panel on Climate Change	<b>USADF</b>	U.S. African Development Foundation
<b>IR</b>	Intermediate Results	<b>USAID</b>	United States Agency for International Development
<b>IT</b>	Information Technology	<b>USD</b>	United States Dollar
<b>KPI</b>	Key Performance Indicator	<b>USG</b>	United States Government
<b>M</b>	Mid-Stage Enterprise	<b>Y</b>	Youth-Led Enterprise
<b>MEL</b>	Monitoring, Evaluation, and Learning		
<b>MELSA</b>	Monitoring, Evaluation, and Learning Support Activity		

# EXECUTIVE SUMMARY

In Nigeria, the COVID-19 pandemic, persistent conflict, climate pressures, and rising inflation have severely impacted the food system. The result: climbing food prices, hunger, and malnutrition.

To provide rapid support in the face of COVID-19, the United States Agency for International Development (USAID)/Nigeria engaged the USAID Catalyst Project to run an open innovation challenge to foster local solutions for food security. This work complemented USAID's ongoing Feed the Future (FTF) investments in the country.

The USAID/Nigeria COVID-19 Food Security Challenge moved quickly, identifying 32 promising Nigerian micro-, small-, and medium-sized enterprises (MSMEs) with creative, locally-driven solutions for their country's food system. These MSMEs—a mix of mid-stage businesses and youth-led startups—worked across 20 different value chains and 33 of Nigeria's 36 states. Their solutions ranged from field to buyer, with some even piloting entirely new models for domestic food production. Thirty-one of these 32 grantees were new to USAID, 19 were youth-led companies, and 12 were women-owned.

Over 15 months (October 2021–December 2022), Catalyst provided funding and technical assistance to help grantees grow their businesses and achieve their goals. The results have been significant. Together, the grantees impacted 204,430 people in Nigeria, introducing 96 unique innovations, technologies, products, and approaches for food production, processing, storage, and distribution. Further, the grantee businesses experienced incredible growth and transformation over the challenge period, with grantees collectively raising nearly \$4.7 million in external funding and forging 170 strategic partnerships to advance their models.

This report details the challenge approach, its impact, and lessons learned for open innovation in crisis contexts.



# INTRODUCTION

## The Challenge

Nigeria is the most populous country in Africa, and roughly 70 percent of its people live below the poverty line.<sup>1</sup> Agriculture is a mainstay of the national economy, as roughly two-thirds of the total labor force works in agriculture, yet the country still depends on imports of grain, livestock, and fish to meet local demand. Hunger and malnutrition are widespread. The Government of Nigeria's most recent demographic and health survey from 2018 found that 37 percent of children under the age of five suffer from stunting linked to malnutrition.<sup>2,3</sup>

The country's economic progress and food security are constrained by complex, intersecting barriers; conflict and insurgent activities in the northeast have disrupted local production and supply chains and displaced over three million people.<sup>4</sup> The pressures of climate change also threaten the resilience of the country's agricultural sector, with droughts and floods heightening vulnerability.

In the interplay between food security, conflict, and climate, women's risks are both distinct and magnified. Women play key roles across the food system, but with a baseline disparity in power, resources, and access to critical inputs, land, and finance.<sup>5</sup> For this and other reasons, women are uniquely vulnerable to shocks, whether they be price hikes, extreme weather, violence, or a pandemic.

COVID-19 accentuated pre-existing fault lines in the country's supply chains and agricultural sector. The International Food Policy Research Institute estimated that there was a 13.1 percent loss of output in the country's agriculture sector related to COVID-19 restrictions and preventative measures.<sup>6</sup> Farmers struggled to access seeds and other inputs, and losses in the agro-processing sector were also significant at the height of the pandemic.<sup>7</sup> MSMEs across the country's food system struggled to stay in business, with a majority experiencing large drops in production.<sup>8</sup>

Even as COVID-19 restrictions eased and Gross Domestic Product (GDP) resumed positive growth, the impact on the sector has persisted. New shocks and threats have also emerged: inflation in Nigeria hit a four-year peak in February 2021<sup>9</sup> and has only continued to rise. The war in Ukraine drove up the prices of commodities, fuel, fertilizer, and food worldwide.<sup>10</sup> Continued disruption of global supply chains has delayed imports of both food and agricultural inputs and equipment. Between 2016 and 2022, the price of many food staples in Nigeria more than doubled,<sup>11</sup> with serious implications for already tenuous food security.

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1 <https://www.wfp.org/countries/nigeria>.

2 [https://docs.wfp.org/api/documents/WFP-0000137967/download/?\\_ga=2.130681864.680322701.1669069493-821777613.1669069493](https://docs.wfp.org/api/documents/WFP-0000137967/download/?_ga=2.130681864.680322701.1669069493-821777613.1669069493).

3 <https://dhsprogram.com/pubs/pdf/FR359/FR359.pdf>.

4 <https://www.wfp.org/countries/nigeria>.

5 <https://www.ipcc.ch/srcl/clchapter/chapter-5/>.

6 <https://www.gainhealth.org/sites/default/files/publications/documents/impact-of-covid-19-on-nigeria-food-systems-situation-report-edition-i.pdf>.

7 <https://www.gainhealth.org/sites/default/files/publications/documents/impact-of-covid-19-on-nigeria-food-systems-situation-report-edition-i.pdf>.

8 <https://www.gainhealth.org/sites/default/files/publications/documents/impact-of-covid-19-on-nigeria-food-systems-situation-report-edition-i.pdf>.

9 [https://docs.wfp.org/api/documents/WFP-0000137967/download/?\\_ga=2.130681864.680322701.1669069493-821777613.1669069493](https://docs.wfp.org/api/documents/WFP-0000137967/download/?_ga=2.130681864.680322701.1669069493-821777613.1669069493).

10 <https://www.ifpri.org/spotlight/food-prices-war-ukraine>.

11 <https://www.aljazeera.com/economy/2022/4/29/infographic-how-expensive-are-everyday-items-in-nigeria>.

# USAID's Response: Open Innovation for a Resilient Nigerian Food System

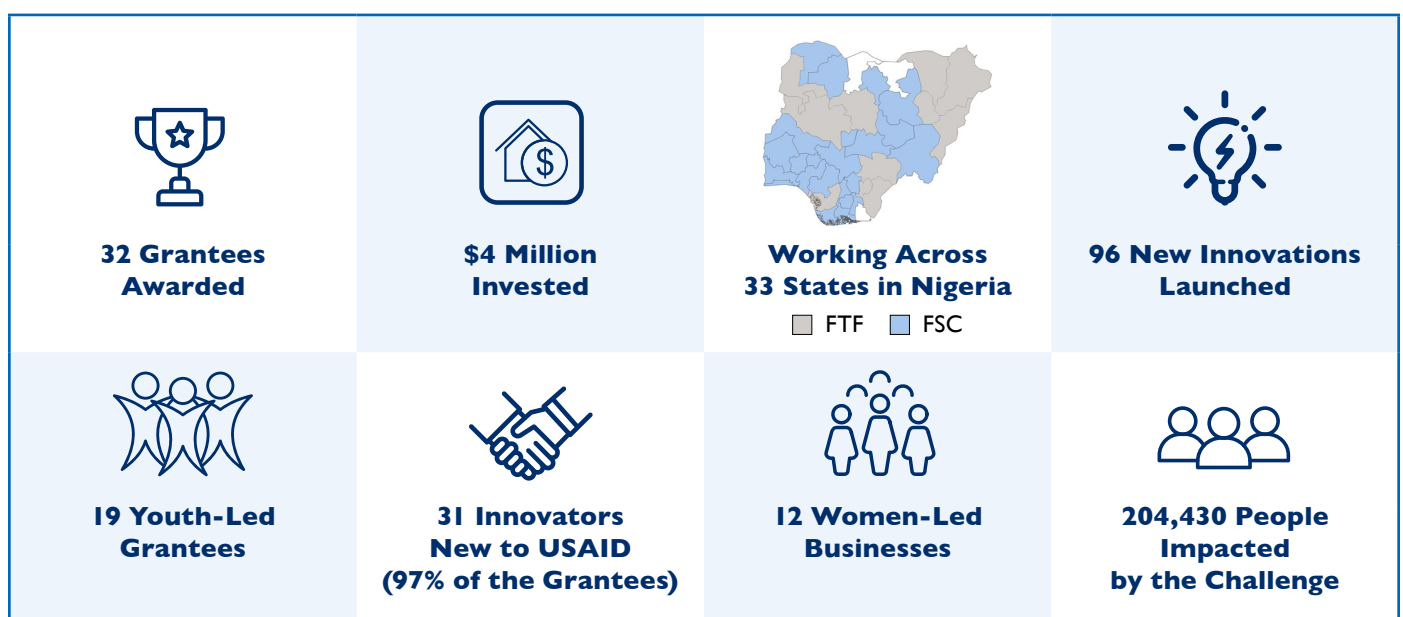
Continued and urgent investments in Nigeria's food security and food system resilience are needed to help the country recover from COVID-19 and withstand future shocks. Through FTF, the United States Government (USG) and USAID work in 11 states of Nigeria and across six value chains (aquaculture, cowpea, maize, soybean, rice, and livestock, specifically sheep and goats), under the Global Food Security Strategy (GFSS).<sup>12</sup> Over the last decade, FTF and partners have made significant strides with activities designed to reduce poverty, promote agriculture-led economic growth, improve nutrition, and strengthen household resilience.

To build on this work, USAID sought a new mechanism to more quickly channel much-needed support to local MSMEs working to boost food production. In February 2019, USAID/Nigeria approached USAID's Exploratory Programs and Innovation Competitions (EPIC) team and the Catalyst Project team to consider an open innovation competition to improve food security in Nigeria. A challenge was determined to be an ideal approach because:

- The Mission needed an innovative, fast-acting solution to bolster the local private sector to address growing food insecurity.
- Challenges are adept at engaging new USAID partners—MSMEs that need support to increase food production and distribution.
- A challenge can build upon and complement USAID/Nigeria's previous and current FTF programming.

When the pandemic hit in 2020, there was an even greater and more urgent need for a flexible fast-moving mechanism. The open innovation challenge model provided a pathway to quickly deploy funding to promising Nigerian MSMEs to help them test their business models, learn and pivot, and scale what works.

Over approximately 15 months—from October 2021 to December 2022—the USAID/Nigeria COVID-19 Food Security Challenge supported 32 Nigerian innovators to mitigate the effects of COVID-19 on Nigeria's food chains by scaling sustainable, local food-based models and increasing income for smallholder farmers.



<sup>12</sup> <https://www.feedthefuture.gov/country/nigeria/>.

# CHALLENGE APPROACH

## Deploying Open Innovation for Rapid Crisis Response

The USAID/Nigeria Food Security Challenge channeled funds and technical assistance to 32 promising Nigerian enterprises—each with a solution to strengthen the country's food system as it recovers from the impacts of COVID-19 and faces new challenges ahead.

Below, the report explores the challenge's approach—and specifically, how the team shaped challenge design and implementation to make it an effective tool for delivering fast support in a time of crisis, while still laying the deliberate groundwork for long-term impact. The report focuses on three key parts of the challenge's approach: (1) design and launch; (2) acceleration and technical assistance for the grantees, and; (3) monitoring, evaluation, and learning (MEL) for adaptive management.

### WHAT IS A CHALLENGE?

Challenge competitions use open calls for innovation to identify a broad range of approaches to a known problem for which the best solution is unclear. They allow challenge administrators, such as USAID, to make small, calculated bets on a range of promising solutions, business models, or strategies. Under this structure, some of the interventions will fail to achieve impact at scale, while others may achieve significant results.

Challenges like the USAID/Nigeria COVID-19 Food Security Challenge often do this by engaging new actors—such as local MSMEs—to support development and humanitarian goals. Remaining open to ideas from these unique solvers and creating a space to learn and adapt helps surface new approaches and impactful ways of working.



## Design and Launch

In February and March 2021, the Catalyst team worked closely with EPIC and key members from the USAID/Nigeria Private Sector Engagement (PSE) and FTF teams to design the scope of the challenge.

For this challenge's design, key priorities<sup>13</sup> were:

- **Speed**, or getting funds into the hands of private sector innovators—and translating those funds into work on the ground—as quickly as possible;
- Identifying a **range of high-promise MSMEs** from across Nigeria's agricultural value chains, representing different regions, levels of business maturity, and models for boosting food security and farmer incomes;
- Promoting the **involvement of women and youth** in Nigeria's food system; and
- Supporting solutions for **sustainable agriculture and climate resilience**.

<sup>13</sup> <https://www.usaid.gov/innovation/nigeriacovid19>.

The team launched the Request for Applications (RFA) on April 12, 2021. The challenge solicited applications from two main categories of Nigerian MSMEs: (1) youth-led enterprises (Y), with founders under the age of 29, and (2) mid-sized enterprises (M), with at least 1,000 existing customers. From all applicants, the challenge RFA sought innovative solutions to:

- Increase food and agriculture system productivity and efficiency across key value chains;
- Increase incomes for base of the pyramid (BOP) women and men in rural and urban areas;
- Promote climate and environmental resilience;
- Develop and promote innovative local models for the production, processing, and marketing of highly nutritious foods; and
- Increase demand for nutritious foods.

Catalyst conducted an intensive communication and outreach campaign to solicit high-quality applications from across Nigeria's 36 states. The project team received and screened 506 applications, which were then evaluated by a team of 50 expert judges over a two-week period. Through the judging process, the project team selected and interviewed 47 finalists over three weeks. Representatives from USAID/Nigeria participated in each finalist interview.

Finally, based on a rigorous due diligence process, the Catalyst team issued 32 fixed amount award (FAA) grants to MSMEs addressing food security across various value chains, operating in 33 Nigerian states. Thirty-one of these 32 grantees were new partners for USAID, 19 were youth-led businesses, 13 were mid-stage, and 12 were women-owned. Mid-stage grantees were awarded between \$75,000 and \$150,000. Grantees in the youth category, which had a simplified application process, received between \$25,000 and \$75,000.

USAID and Catalyst announced the 32 challenge winners through a virtual, high-profile event on November 30, 2021, featuring speakers from the Nigerian Ministry of Agriculture and Rural Development, the Ministry of Agriculture in Kaduna State, the Ministry of Agriculture and Natural Resources in Delta State, and USAID/Nigeria. The event was attended by 176 people.<sup>14</sup>

## KEY SUCCESS FACTORS FOR DESIGN AND LAUNCH

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- To solicit high-quality applications, the project team tapped trusted networks and invested time in individual outreach. The team mapped key stakeholders, leveraged existing FTF networks, and hired a local communications consultant with extensive experience in the sector. They then reached out directly to high-potential stakeholders to encourage them to apply. The team also shared outreach templates for use by potential influencers and amplifiers to spread the word quickly. The process surpassed expectations, generating applications from every state in Nigeria and across diverse value chains.
- The project team created a simplified version of the application for youth applicants to lower the barrier to entry for early-stage businesses. This made it more feasible for solvers new to USAID to apply for and be selected for funding.
- Catalyst conducted informational webinars to inform applicants of processes and document requirements, improve the quality of applications, and expedite due diligence assessments.
- The Catalyst team conducted informational webinars for challenge judges to standardize evaluation criteria and scoring for youth-led and mid-stage applicants.
- Although time-consuming, finalist interviews were important for understanding grantee business models and how USG funding could be catalytic. These interviews were done in partnership with USAID as a key component of the selection process.
- Finally, the project team incorporated co-creation into the final due diligence process, helping short-listed companies clarify and strengthen their approaches in advance of implementation.

<sup>14</sup> [Virtual Launch Event Recording and Slide Deck Presentation.](#)



***“The application process, finalist interview, and [pre-award due diligence] were very rigorous. At the same time, it served as a learning curve for us and also exposed us to a lot of positive experiences as an organization going forward.”***

— MELKIM WALLOCKS (Y)

***“As a first-timer organization in development, the whole application process was competitive and engaging. We enjoyed and learned from the process. It helped us to put in place structures for our organization to be ready for other similar opportunities and processes.”***

— ORISHA FARMS NIGERIA (Y)

## Acceleration

The design and launch phase focused on defining the objectives and parameters of the challenge and identifying aligned, driven innovators with promising business models. The next question was: how does the Catalyst Project set them up for success?

The 32 grantees were highly diverse. Their businesses were at various stages of development—some were startups, just getting off the ground, while others were mid-stage enterprises with established track records. They were operating in 33 states of Nigeria across 20 value chains, deploying a range of business models. Through the challenge, the Catalyst team sought to understand each grantee’s trajectory to help them strengthen their solution, laying the groundwork for sustainability and growth beyond the life of the grant. To do this, Catalyst provided acceleration and technical assistance through three channels:

1. Institutional capacity building;
2. Needs-driven workshops; and
3. Collaboration and networking.

See the [Challenge Impact: Grantee Business Capacity, Sustainability, and Scale](#) section for details on the challenge’s acceleration approach and an exploration of how grantees’ businesses grew and changed over the course of the challenge period.

## KEY SUCCESS FACTORS FOR ACCELERATION

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- Even in a fast-moving challenge, it is important to invest in identifying and hiring dedicated on-the-ground staff. Due to COVID-19, the Catalyst team originally planned a fully-remote acceleration approach. However, as the country began to re-open, Catalyst reworked its strategy and hired a local agricultural expert and a local grants manager. These local staff members ultimately made a significant difference in troubleshooting and supporting acceleration, networking, and capacity-building goals. On a short-term basis, the project team also engaged Nigerian experts in debt and financing to help grantees plan for and pursue additional investment. Their understanding of the local context was a critical asset.
- As part of the acceleration approach, the project awarded additional funding to grantees who demonstrated strong performance against their interim targets, as validated in site visits. This allowed high-performing grantees to further accelerate their impact. A total of \$76,414 was awarded to five grantees—[Flourish ColdChain Limited](#), [Gum Arabic Company Nigeria Limited \(GACON\)](#), [Nnachet Farms](#), [Orisha Farms Nigeria](#), and [Revemi Trade Limited](#)—mid-way through the implementation period. The team also decreased the scope and budgets of three low-performing grantees. [Farmplify Agriculture Development Limited](#), [Tractor on the Go](#), and [Uzoebo Nigeria](#) had their grants reduced by a total of \$70,608 due to underperformance against their original tasks.
- Partnership development is a key and enduring source of value for grantees, and it should be emphasized even in a streamlined challenge structure. Grantees were very eager for connections, introductions, and partnership-building support. (Said one grantee, *“This is as valuable as the grant funding.”*)

## MEL and Adaptive Management

Given the challenge's objectives and context, the project needed a MEL system that was:

- **Streamlined and straightforward**, to fit the 15-month timeline and not pose undue monitoring burdens on the grantees;
- **Focused on communication and technical assistance**, with frequent virtual touch points as well as in-person support from a third-party monitor and the on-the-ground team. This was especially key given that 97 percent of grantees were new to the USAID ecosystem and unused to USAID reporting and grant management; and
- **Built for adaptive management**, to let the challenge team detect quickly if and when grantees got off track to ensure quick support and course correction.

Catalyst developed a Results Framework (see [Annex II](#)) and Key Performance Indicators (KPIs) to track progress at the grantee and challenge levels. The challenge's [Monitoring and Evaluation Plan](#) described how data would be collected and shared.

The challenge's six objectives, eight KPIs, and eight grant-specific indicators support the overall FTF goal of sustainably reducing global hunger, malnutrition, and poverty. The objectives and KPIs also fit within three of the Mission's intermediate results (IRs) for their FTF programming. Catalyst reported on each of these to [USAID/Nigeria's Development Information Solution](#) and [Monitor](#). With support from Catalyst, the grantees each developed grantee-level MEL plans in line with the challenge results framework.

Detailed descriptions of the challenge's impact and results across these objectives can be found in the below sections on [Challenge Impact: Food Security](#) and [Challenge Impact: Grantee Business Capacity, Sustainability, and Scale](#).

<b>FTF Goal: Sustainably reduce global hunger, malnutrition, and poverty.</b>	
<b>Challenge Goal:</b> Source, support, and accelerate private sector companies to sustainably increase food and agriculture productivity that has been limited by the impacts of COVID-19 in Nigeria.	
<b>Objective 1</b>	<u>Increase food production, processing, and distribution.</u>
<b>Objective 2</b>	<u>Develop and promote innovative and local food-based models.</u>
<b>Objective 3</b>	<u>Increase income for women and men at the BOP.</u>
<b>Objective 4</b>	<u>Increase winners' capacity to implement and sustainably scale solutions.</u>
<b>Objective 5</b>	<u>Increase sustainable productivity and environmental resiliency through climate-smart approaches.</u>
<b>Objective 6</b>	<u>Increase engagement with the private sector to achieve FTF objectives.</u>

Due to COVID-19 travel restrictions, the Catalyst team originally focused on a virtual, remote monitoring approach. However, during the challenge's implementation period, restrictions eased, and Catalyst pivoted, adapting its approach and budget to include site visits—directly or through third-party monitors—with all 32 grantees. The team engaged third-party monitors to access ten grantee project sites in northern Nigeria, where security challenges prevented direct visits by Catalyst. These third-party monitors were local experts with knowledge of the targeted areas. They successfully navigated the region

using customized site visit plans and risk management methodologies, including security briefs provided by USAID's Partner Liaison Security Office. Similarly, USAID/Nigeria's Monitoring, Evaluation, and Learning Support Activity (MELSA) conducted monitoring visits to five grantees. Their findings enhanced the challenge's outcomes by recommending practical solutions—including improved grantee financial management systems and motorcycle safety training courses for delivery personnel—that were later implemented by Catalyst and grantees. Across the board, site visits were vital windows into grantees' obstacles and impact on the ground. They also allowed the project team to validate grantees' reported progress and extend hands-on technical support and constructive feedback.

These site visits complemented data collection by grantees and remote monitoring. Catalyst used a range of communications channels—monthly meetings, email check-ins, and a WhatsApp group for the cohort—to make it easy for grantees to connect with the team to adjust, ask questions, and report on indicators, as well as to discuss shared challenges or potential collaboration with their peers.

## CHALLENGES AND ADAPTIVE MANAGEMENT

The challenge was designed to respond to a crisis. That meant moving fast, operating in difficult conditions, and adapting to quickly changing realities on the ground. The Catalyst team knew the grantees would not be implementing their approaches under ideal conditions; there would be obstacles, and an adaptive management approach would be essential to honing their models and securing impact.

Several shared challenges defined grantee context:

- **Supply chain disruptions and shipping delays.** All grantees reported challenges and delays in procuring key equipment, much of which was not available in Nigeria and had to be purchased on the international market. Due to global supply chain issues, the delivery and installation of key machinery was often delayed. Catalyst encouraged grantees to front-load purchases at the start of their grants to avoid unnecessary delays and cost increases.
- **Heightened security challenges.** The escalation and spread of violence, insurgency, banditry, kidnappings, and the farmer-herder crisis in northern Nigeria, particularly in Kaduna State, posed great risks to grantees over the course of project implementation. Grantees employed a range of measures, including hiring local staff, piloting technological solutions, limiting travel, and selecting alternative, less volatile states for project implementation.
- **High inflation.** Price fluctuations compounded by high inflation led to increases in the costs of goods and services beyond grantee project budgets. To respond, grantees made cost contributions, streamlined their models, or cut costs in other ways.



A shipment of rice milling equipment arrives for Melkim Wallocks.

© MELKIM WALLOCKS

To push forward in the face of these—and other—challenges, grantees embraced an adaptive management approach. As they tested their business models against real-world conditions, many grantees refined their solutions to better fit their operating environment or meet the needs of target customers. For example, [Energy Assured Nigeria Limited](#) started with a monthly subscription fee for their mobile solar water pumps, but they soon found that farmers wanted greater insight and

control and hoped to only pay for the water they actually used. In response, Energy Assured Nigeria Limited piloted mini-grids and smart meters that allowed farmers to track their water usage and pay accordingly. This new mini-grid solution is now a core part of Energy Assured Nigeria Limited's business plan, with 2023 growth focused on mini-grid solution development. Afrimash Company Limited offers another example of successful adaptation: given a general shortage of information technology (IT) workers, Afrimash was struggling to hire the staff it needed to upgrade its digital solutions, so it created a "Paid Tech Academy" that let early-career IT developers gain work experience for a monthly stipend. This helped Afrimash fill key gaps in its IT team, refine its e-commerce platform, and roll out three new tech tools for farmers and field agents.

## SPOTLIGHT: NAVIGATING SECURITY CHALLENGES

Security in Kafanchan, Kaduna State posed significant challenges for GACON as it worked to engage farmers and professionalize local ginger production. *"The spate of criminality affected ginger farmers as most of them stopped going to their farms for fear of being killed or kidnapped,"* GACON staff reported. *"Most processing companies were shut for fear of killing or kidnapping of staff."* The company and its farmers adapted as best they could. Farmers synchronized their work schedules to coincide with local security protection, and GACON had machinery and equipment meant for installation in Kafanchan transferred and installed in the company's Kano Facility.

## KEY SUCCESS FACTORS FOR MEL

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- This project featured a complex context for MEL. There were 32 grantees working across 33 of Nigeria's 36 states under highly challenging conditions. The Catalyst team sought to maximize the budget for the grantee portfolio, while still providing sufficient coordination and support. Ultimately, Catalyst designed an approach that would be cost-effective yet centered around one-on-one assistance, with a team of two short-term MEL Fellows supervised by a MEL Specialist. This worked well—it kept costs down but provided grantees with the hands-on support they needed for learning, adapting, and reporting.
- The project team standardized its MEL templates and consciously aligned USAID reporting with the grantees' business interests. For each grantee, the team ensured that selected indicators met USAID reporting needs and aligned with information that the grantee was either already collecting or that would benefit their business moving forward.
- The project team conducted three internal data validation exercises, including one mid-way through for corrective action, addressing challenges around indicator definition and disaggregation, and one before each fiscal year reporting cycle to ensure data quality and validity.
- Flexibility is key. The original challenge awarded one-year grants, but Catalyst proposed extending 12 grantees beyond the one-year timeline to take advantage of additional harvest cycles. This enabled selected companies to amplify participation and impact.

# CHALLENGE IMPACT

## Food Security

The 32 challenge grantees work in over 20 agricultural value chains,<sup>15</sup> with solutions and business models that touch every stage of an agricultural product's lifecycle. Across these many solutions, the grantee portfolio was united in seeking to boost the incomes, resilience, and food security of smallholder farmers and agricultural communities.

Below, this report explores the impact of the challenge and its grantees on food security in Nigeria. First, the report will review relevant objectives and indicators in the [Challenge Results Framework](#); then, it will look more closely at grantees' impact across seven key categories for food security. All portfolio-level indicators are gender disaggregated, but this detail was not collected for some grantee-level results.

### Increase Food Production, Processing, and Distribution (OBJECTIVE 1)

Indicator	Number of Grantees Reporting	Target	Results
<b>Portfolio Indicator:</b> Number of technologies, practices, and approaches under various phases of research, development, and uptake as a result of USG assistance. (EG.3.2-7)	32	48	96 unique technologies, practices, and approaches. Total by phase <sup>16</sup> (research, testing, uptake): 125
<b>Grantee-Specific Indicator:</b> Number of individuals in the agriculture system who have applied improved management practices or technologies with USG assistance. (EG.3.2-24)	17	Not required	18,038 applying new practices (of 22,065 individuals engaged by reporting grantees)
<b>Grantee-Specific Indicator:</b> Number of hectares under improved management practices or technologies with USG assistance. (EG.3.2-25)	11	Not required	7,750
<b>PSE3 Disaggregate Indicator:</b> Number of grantees who reported expanding their geographical reach during the lifetime of the grant.	32	Not required	Six grantees with documented geographic expansion <sup>17</sup>

In the challenge period, grantees introduced 96 unique innovations, technologies, products, and approaches for food production, processing, storage, and distribution—exceeding the project's target by 100 percent. In many cases, these solutions used technology to create new linkages and efficiencies in agricultural value chains, such as [Reeddi Technologies Limited's](#) TempOwn equipment rental service or [SmartAgro Technology's](#) digital food logistics platform, Aisiki. Some grantees, like [Hasanta Integrated Farm Enterprises](#), focused on demonstrating new production practices that increase yields, and others used challenge funds to bring new products to market, like [Springboard's](#) cricket bread and [Sosai Renewable Energies Company's](#) dried goods and stew pastes, produced through its solar drying hubs. Nine grantees have received or are in the final stages of receiving certification from Nigeria's National Agency for Food and Drug Administration and Control (NAFDAC) to sell their food products on a greater scale.

<sup>15</sup> Rice, tomatoes, plantains, insects, poultry, maize, wheat, soybean, sorghum, cowpea, millet, cassava, ginger, palm nut, coconut, groundnut, fruit, aquaculture, ginger, and eggs.

<sup>16</sup> Includes 25 innovations under research, 26 in field testing, 39 available for uptake, and 35 with demonstrated uptake by the public. The total of 125 counts some innovations more than once, as they moved through different stages of development and uptake.

<sup>17</sup> Grantee data reported through the USAID/Nigeria COVID-19 Food Security Challenge: Grantee Exit Survey: Access to New Markets.

## SPOTLIGHT: NEW TECHNOLOGIES AND APPROACHES FOR NIGERIA'S FOOD SYSTEM<sup>18</sup>

### Food Production: 47 New Technologies, Practices, and Approaches

FarmSpeak Technology (Y) launched and onboarded 3,500 farmers to FS Manager, a mobile- and web-based platform with accounting software, disease diagnosis tools, and an electronic farm diary with real-time data captured from FarmSpeak's poultry house monitoring system Penkeep.

### Food Processing: 13 New Technologies, Practices, and Approaches

With products produced through its women-led solar drying hubs, Sosai Renewable Energies Company (M) has expanded its market from three states to 32 states in Nigeria, with end-users in the United States, United Kingdom, and Turkey.

### Food Distribution: 25 New Technologies, Practices, and Approaches

Freshmarte Global Services (Y) provides a digital platform called FarmCorps to help agro-processing and food companies aggregate produce from smallholder farmers. With USAID support, Freshmarte added two new digital services: (1) Seedr, a data-driven, mobile platform to help extension officers provide targeted advisory service to farmers, and (2) a Buyers Web Platform, for food companies to issue production contracts to smallholder farmers.

### Food Storage: 11 New Technologies, Practices, and Approaches

Kitovu Technology Company (Y) launched and enrolled over 300 farmers for their StorageX service, which allows farmers to store grains and sell at higher prices during the lean season.

## Develop and Promote Innovative and Local Food-Based Models (OBJECTIVE 2)

Indicator	Number of Grantees Reporting	Target	Results
<b>Portfolio Indicator:</b> Number of individuals participating in USG food security programs. (EG.3-2)	32	80,331	204,430, with 53,169 women (26 percent) and 145,511 men
<b>Grantee-Specific Indicator:</b> Number of innovative and local-food based models facilitated by USG assistance.	8	Not required	32

<sup>18</sup> To create these counts, Catalyst divided the grantees into four groups (food production, food processing, food distribution, and food storage) according to their primary impact areas in the [Food Security Deep Dives](#) section. Here, food production includes all grantees focused on expanded access to inputs and mechanized farming or improved management practices for on-farm productivity; food processing includes all grantees focused on improved agro-processing; food distribution includes grantees focused on strengthened market linkages; and food storage includes grantees focused on reduced post-harvest losses. Finally, the six featured grantees for Increased Environmental Resiliency and Improved Nutrition were distributed across these four groups—production, processing, distribution, and storage—wherever they individually fit best.

## EXPANDING REACH AND IMPACT

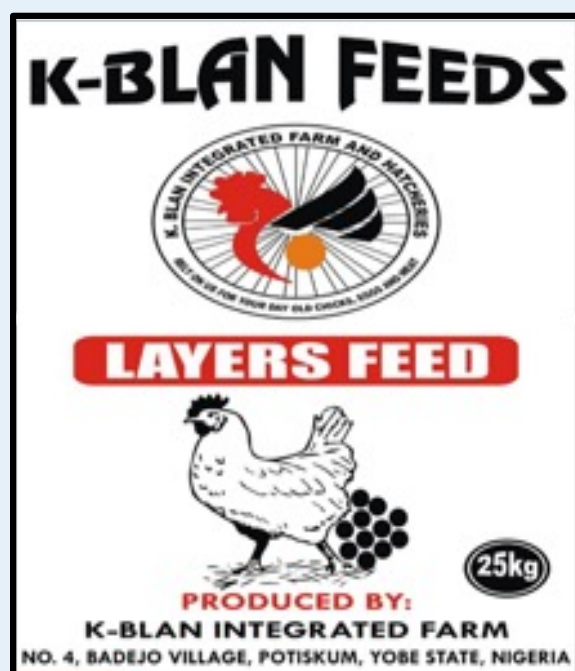
Challenge grants were awarded at the height of the pandemic, and grantees envisioned relatively limited engagements with communities and stakeholders. However, as COVID-19 restrictions eased, the 32 grantees expanded their outreach efforts and their impact to engage many more farmers, consumers, trainees, and partners across Nigeria's food system. Furthermore, 12 grantees were given additional funds and/or time to expand their operations over additional harvest cycles.

Ultimately, the challenge impacted 204,430 people, exceeding its target by 154 percent.

## NEW LOCAL MODELS FOR FOOD PRODUCTION

COVID-19 exposed critical fractures and gaps in Nigeria's food system, including an overreliance on agricultural imports. Between 2016 and 2019, the value of the country's agricultural imports was four times higher than its agricultural exports in the same period.<sup>19</sup> Grantees responded by addressing key barriers that inhibit local production and local markets for agricultural products. Several grantees—such as Ayosifam Integrated Service, Hasanta Integrated Farm Enterprises, Kakasku Blan Integrated Farm and Hatcheries, Melwing Nigeria Limited, Orisha Farms Nigeria, Revemi Trade Limited, Springboard, and others—took it further and were looking to create new, local food-based models with holistic solutions that span farmer adoption to consumer demand.

### SPOTLIGHT: KAKASKU BLAN INTEGRATED FARM AND HATCHERIES'S HOLISTIC MODEL FOR POULTRY FARMING IN NIGERIA (Y)



Kakasku Blan is working across Nigeria's poultry value chain—selling day-old chicks to help farmers start their own poultry ventures, investing in poultry feed production to sell to smallholder farmers at affordable prices, and producing and selling organic fertilizer from chicken manure. With funding from USAID, Kakasku Blan increased its poultry feed milling capacity from one ton per day to one ton per hour, its organic fertilizer production by 6x, and its sale of day-old chicks from 300 chicks to 10,000 chicks per month. As part of this work, Kakasku Blan trained 335 farmers on poultry production and organic fertilizer application, and its new website serves as a learning platform for farmers. Kakasku Blan's holistic model for Nigeria's poultry value chain helped 500 smallholder farmers gain consistent access to affordable inputs and best practices to expand their poultry farms.

<sup>19</sup> <https://www.fao.org/nigeria/fao-in-nigeria/nigeria-at-a-glance/en/>

## SPOTLIGHT: SPRINGBOARD LAUNCHES NEW VALUE CHAIN IN NIGERIA: CRICKET FARMING (M)

The COVID-19 pandemic made clear Nigeria's need to diversify incomes and invest in new avenues for local food production. Springboard's answer? Cricket farming. In most countries in Africa, wild-caught insects have been part of the human diet for a long time. Crickets are affordable and very nutritious, with high protein content and essential micronutrients.

Through the challenge, Springboard launched an entirely new model and value chain in Nigeria, as it was the country's first cricket-farming venture. With USAID funding, Springboard worked across the chain from farm to consumer to establish 23 cricket farms (13 of which were women-led) and a bakery to make and sell cricket-fortified bread. The farms were supplied and trained by a Springboard-run demo farm in Ondo state.

Each cricket farm produces 4-5 kilograms of crickets every 6-7 weeks. After each cricket-rearing cycle, Springboard buys the crickets back from farmers for \$16 per kilogram to produce cricket flour and eventually cricket bread, which is sold at the same cost as traditional bread. Springboard's bakery has sold 25,000 loaves of cricket bread since mid-July 2022. In October, Springboard received NAFDAC certification, unlocking a wider market for its cricket bread, with 85 retailers now distributing to consumers in new markets.

This innovation offers a sustainable, local food-based model that delivers impact on several key fronts. It provides a year-round supply of affordable, high-protein food for the most vulnerable; creates new pathways for income generation in rural areas, benefiting cricket farmers, bakery staff, and retailers; and reduces the climate and environmental footprint of protein production.

***“Cricket rearing is fast. Within seven weeks, I can have mature crickets for sale to Springboard, so there is regular income, unlike growing cassava and plantain.”***

— MADAM HABIBATU

***“On the first day of bread sales, it was difficult to convince people to buy unless they had tasted the bread. Springboard gave us extra loaves to use as tasting for people who want to try before they buy. Once they tasted the bread, they immediately bought it. It tastes better than the wheat bread we have. Now, people rush for the loaves. We always sell all the loaves by noon.”***

— BREAD SELLER, AKURE



Springboard's cricket-fortified bread for sale.



## Seven Areas of Impact: Food Security Deep Dives

To better understand the grantees' progress and innovations, the report will now look in more detail at how they engaged across seven key—not mutually exclusive—impact categories for food security.

1. Expanded Access to Inputs and Mechanized Farming
2. Improved Management Practices for Increased On-Farm Productivity
3. Increased Market Potential Through Improved Agro-Processing
4. Reduced Post-Harvest Losses Through Improved Storage
5. Strengthened Market Linkages
6. Increased Sustainable Production and Environmental Resiliency
7. Improved Nutrition

These categories reflect how the grantees engaged across the food system, including the roles they played and the impact they sought to create. These categories contribute to one or more of the overarching objectives in the [Challenge Results Framework](#). In each category, the report will feature grantees with highly aligned models. Many grantees worked across multiple impact areas, but for reporting purposes, each grantee is aligned with one primary category.

### 1. EXPANDED ACCESS TO INPUTS AND MECHANIZED FARMING

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With a population that is expected to rise to 400 million by 2050, Nigeria needs to invest in modern, mechanized farming practices to ensure food security.<sup>20</sup> Access to quality inputs and mechanized farming can unlock new levels of productivity. It can also save time, freeing farmers to care for their families or engage in other income-generating activities.<sup>21</sup>

However, for many farmers, such a transition is out of reach. Tens of millions of farmers in Nigeria are unable to access farm inputs—fertilizer, seeds, and equipment—directly, efficiently, and affordably. Farmers in remote regions might go through several layers of middlemen to access critical farm inputs, leading to a significant increase in costs. Nigeria stands out on this front, as the World Bank's 2019 *Enabling the Business of Agriculture* report ranked Nigeria 65th out of 101 countries for its agribusiness and regulatory ecosystem, noting farmers' lack of access to seeds, fertilizer, water, farm machinery, and finance.<sup>22 23</sup>

Given the small average farm size in Nigeria, mechanization in the country is low, with human labor cultivating over 70 percent of the arable land. Tractor density is one percent of the global average, with a scarcity of working tractors in the country.<sup>24</sup> Women face additional barriers, as access to critical farming inputs and equipment is disproportionately limited for women farmers in Sub-Saharan Africa.<sup>25,26</sup>

The grantees below worked to address these challenges by connecting Nigerian farmers to the tools, inputs, and finance they need to increase yields and incomes.

20 <https://www.fao.org/nigeria/fao-in-nigeria/nigeria-at-a-glance/en/>

21 <https://pim.cgiar.org/2021/12/16/gender-and-mechanization-exploring-differential-effects-on-rural-men-and-women/>

22 <https://openknowledge.worldbank.org/bitstream/handle/10986/31804/9781464813870.pdf?sequence=7&isAllowed=y>

23 <https://www.ifc.org/wps/wcm/connect/673c0e3f-3e77-4ddc-923b-903c5db6af15/CPSD-Nigeria.pdf?MOD=AJPERES&CVID=nkzEgpy>

24 <https://img1.wsimg.com/blobby/go/f0d4ab33-1bbe-4fb1-8102-c3fb2349cd6a/downloads/Nigerian%20Agricultural%20Mechanisation%20Sector%20Stu.pdf?ver=1620646920447>

25 [https://www.afdb.org/fileadmin/uploads/afdb/Documents/Events/DakAgri2015/Women\\_and\\_Agriculture\\_The\\_Untapped\\_Opportunity\\_in\\_the\\_Wave\\_of\\_Transformation.pdf](https://www.afdb.org/fileadmin/uploads/afdb/Documents/Events/DakAgri2015/Women_and_Agriculture_The_Untapped_Opportunity_in_the_Wave_of_Transformation.pdf)

26 <https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/Library/Publications/2019/UN-Women-Policy-brief-11-The-gender-gap-in-agricultural-productivity-in-sub-Saharan-Africa-en.pdf>

## SPOTLIGHT: AFRIMASH CONNECTS FARMERS TO HIGH-QUALITY, AFFORDABLE INPUTS (M)

Afrimash Company Limited is working to decrease the number of middlemen in Nigeria's agricultural input supply chain. It provides an online platform that connects small- and medium-sized farmers to a variety of quality inputs from verified suppliers. A network of field agents based across Nigeria help farmers access and use the platform..

Through the challenge, Afrimash improved its e-commerce platform, adding Interactive Voice Response technology to allow customers to call and interact with sales assistants and an Agent Mobile Application to help field agents place farm input orders for farmers on their mobile phones. Afrimash also recruited, trained, and deployed 1,100 field agents (30 percent of whom were women) across 11 FTF target states. These field agents registered nearly 133,000 farmers, of which roughly 6,600 became active, paying customers on the Afrimash platform. Afrimash estimates that farmers see an average of 30 percent cost savings on farm inputs purchased through the platform. The company itself doubled its monthly revenue over the challenge period.



© AFRIMASH COMPANY LIMITED

Featured Grantees	Challenge Impact Highlights
<p><b>Afrimash Company Limited (M)</b> Afrimash Company Limited provides an online platform that connects farmers to a variety of quality inputs from verified suppliers. Afrimash Company Limited combines its e-commerce platform with field agents based across Nigeria to help farmers adopt and use the platform.</p>	<ul style="list-style-type: none"> <li>• Exponential increase in registered farmers, from 20,000+ to 152,000+</li> <li>• Approximately 6,600 new registrants are active, paying customers accessing farm inputs through Afrimash's online platform</li> <li>• Users see 30 percent cost savings on farm input purchases</li> </ul>
<p><b>D.E.T. Services (Y)</b> D.E.T. Services provides fertilizer to farmers on a subscription basis. Through the challenge, D.E.T. Services acquired agricultural drones for crop monitoring and to apply agricultural inputs, such as customized fertilizer blends, to farmers' fields.</p>	<ul style="list-style-type: none"> <li>• Increased subscribers for fertilizer application service from zero to 393 farmers (282 men, 111 women), with a subscriber waiting list of more than 700 farmers</li> <li>• Increased capacity from one spray drone covering ten hectares per hour to two spray drones with a combined capacity of 28 hectares per hour</li> <li>• Increased annual revenue from \$30,000 to \$100,000+</li> </ul>
<p><b>FARM Network Services (M)</b> FARM Network Services provides farmers with access to agro-inputs at affordable rates through a network of Agro Service Centers for equipment hiring, Agro Service Shops for farm inputs, and Agro Service Points for the processing and packaging of rice. Through the challenge, FARM Network Services prepared a 600-hectare section of farmland in Nasarawa State as a demonstration plot for mechanized rice farming.</p>	<ul style="list-style-type: none"> <li>• Signed contract farming agreements with 600 smallholder rice farmers (304 men, 296 women)</li> <li>• Participating farmers each received one hectare of land, training on sustainable rice paddy production, access to equipment, and input financing</li> <li>• Farmers harvested 1,500 tons of rice, increasing their average yields by 66.67 percent through mechanized farming</li> <li>• Increased participating farmers' incomes by over 50 percent</li> </ul>

Featured Grantees	Challenge Impact Highlights
<p><b>Reeddi Technologies Limited (Y)</b> Reeddi Technologies Limited built a fully insured digital marketplace called TempOwn, which allows farmers to rent agricultural equipment and tools that are listed on the platform by agricultural equipment providers.</p>	<ul style="list-style-type: none"> <li>• The new TempOwn rental platform has 169 active users (126 borrowers and 43 lenders, with 135 male and 34 female users)</li> <li>• Over 85 users rented farming equipment through the platform</li> <li>• Over \$3,200 worth of rental transactions have been processed on TempOwn since its launch in October 2021</li> </ul>
<p><b>Tractor on the Go (M)</b> Tractor on the Go offers a tractor-hailing application that helps farmers access tractors and equipment for mechanized farming. Farmers make payments through the app or through field agents, and the app uses Google Geolocation to bring the equipment directly to farmers.</p>	<ul style="list-style-type: none"> <li>• Added 584 new customers for its tractor-hailing service</li> <li>• Decreased harvesting costs by an average of 68 percent</li> <li>• Reduced harvesting time by 80 percent</li> <li>• Partnered with the Badagry State Ministry of Agriculture for mechanization services on 2,500 hectares of land, which will directly impact at least 1,000 farmers</li> </ul>

## 2. IMPROVED MANAGEMENT PRACTICES FOR INCREASED ON-FARM PRODUCTIVITY

Grantees also focused on boosting agricultural yields and productivity across multiple value chains through new approaches, technologies, and technical assistance for improved on-farm management.

Access to training in good agricultural practices and on-farm extension services is critical for smallholder farmers as they incorporate new technologies and approaches on their farms. However, Nigeria lags in this area. In 2020, the African Seed Access Index ranked Nigeria at the bottom of a list of 15 African nations for its ratio of available agricultural extension officers to farmers,<sup>27</sup> noting that Nigerian farmers have a harder time accessing extension services than farmers elsewhere on the continent. This gap is particularly detrimental for female farmers, who produce less than their male counterparts across Sub-Saharan Africa.<sup>28</sup> Women struggle to secure critical inputs, land, and finance, and they have comparatively limited access to agricultural extension services, training, and information.

While the next seven grantees featured focused on improved management practices, technical assistance and farmer training were important elements of many grantee models. Across the portfolio, grantees trained thousands of farmers on good agricultural practices or climate-smart agriculture.

<sup>27</sup> [https://wp.tasai.org/wp-content/uploads/2022/06/nga\\_2020\\_en\\_country\\_report\\_oct2021\\_web.pdf](https://wp.tasai.org/wp-content/uploads/2022/06/nga_2020_en_country_report_oct2021_web.pdf)

<sup>28</sup> <https://openknowledge.worldbank.org/bitstream/handle/10986/17790/860390WP0WB0ON0osure0date0March0180.pdf?sequence=1&isAllowed=y>

## SPOTLIGHT: MELWING NIGERIA LIMITED OFFERS PLANTAIN FARMERS A FRESH START (M)

Since 2018, Melwing has worked with smallholder plantain farmers in the Niger Delta Region of southern Nigeria, purchasing and processing their crops into plantain flour, plantain chips, and “Melwing Food,” a staple food product.

During the COVID-19 pandemic, farmers struggled to get their plantains to market. Crops were wasted, and farmer incomes dropped. When the time came to start again, farmers had even less available capital to invest in their farms, causing yields to further suffer.

Melwing aimed to break this cycle by providing farmers access to finance at the start of the growing season, a guaranteed market for their crops, and technical assistance to improve productivity. With USAID support, Melwing expanded its operations in five states, hired 12 community liaison officers (CLOs) who recruited and trained 300 farmers in good agricultural practices, and extended a stipend of roughly \$120 to participating farmers at the start of the growing season to help them implement improved management practices on their farms.<sup>29</sup> At harvest time, these farmers had a guaranteed and fair buyer in Melwing.

With Melwing’s stipend and technical assistance, farmers increased plantain yields and the average volume of sales from 65 kilograms to 230 kilograms (254 percent), boosting monthly revenues from an average of \$50 to \$180.

The challenge was also transformative for Melwing’s business. Through new equipment for its processing activities, Melwing saw a 275 percent increase in its production capacity, from 800 kilograms to three tons of plantains per month. It also reduced its time to process plantains by 75 percent and vastly increased the distribution of its products, expanding from 25 to 40 distributors, with more than 1,500 new end users. This has contributed to a 144 percent increase in monthly revenues for Melwing.



© MELWING NIGERIA LIMITED

A farmer presents her plantains at the Melwing collection point in Oruama, Abua, Rivers State, Nigeria.

### Featured Grantees

#### EZFarming (Y)

EZFarming is a marketplace that helps farmers finance their businesses and sell their produce by connecting them to a network of micro-lenders and produce buyers. Through the challenge, EZFarming expanded its farm estate model by supporting smallholder farmers in Osun State to scale their farms and expand their production capacity.

### Challenge Impact Highlights

- Increased network size by 443 people, including 50 youths
- 200 trained farmers received an additional two acres of land each to farm rice and maize
- Farmers saw a 39 percent increase in yield, increased incomes, and a guaranteed market for produce through EZFarming’s partnership with mSellar, which connects farmers directly with processors

<sup>29</sup> **Note:** Loans were not provided with USAID funding.

Featured Grantees	Challenge Impact Highlights
<p><b>Farmspeak Technology (Y)</b> Farmspeak Technology improves on-farm management through tech solutions designed for small-scale poultry farmers. Penkeep is a poultry house monitoring system that automates the monitoring and management of conditions such as temperature, humidity, and air quality. The mobile- and web-based app FS Manager provides accounting software, disease diagnosis tools, and an electronic farm diary with real-time data captured from Penkeep.</p>	<ul style="list-style-type: none"> <li>• Increased subscribers for FS Manager from 200 to 3,500 (2,300 male, 1,200 female poultry farmers)</li> <li>• Reached 1,000 farmers through monthly virtual training sessions on poultry farming best practices and community outreach activities</li> <li>• Produced 400 units of Penkeep</li> </ul>
<p><b>Hasanta Integrated Farm Enterprises (Y)</b> Hasanta Integrated Farm Enterprises produces and processes oven-dried catfish and trains smallholder aquaculture catfish farmers in good management techniques. The company uses heated water to improve the catfish hatching process, reducing the hatching time from 24 hours to 14 hours and increasing the hatchability rate to 85 percent.</p>	<ul style="list-style-type: none"> <li>• Trained 850 fish farmers (293 men, 557 women) on modern fish farming and processing</li> <li>• 50 existing fish farmers adopted Hasanta's fish hatchery system, increasing their incomes by 40 percent</li> <li>• Farmers reported a 70 percent increase—through training and access to quality fish seeds from Hasanta—in their hatchability, improving their volume of production and profit</li> <li>• Procured and installed 65 hatchery ponds and 45 nursery ponds, for a 500 percent increase in Hasanta's catfish hatchery production capacity</li> <li>• New equipment increased processing capacity from 200 to 1,000 kilograms of oven-dried catfish monthly</li> <li>• Increased revenue from an average of \$1,726 to \$7,160 monthly</li> </ul>
<p><b>Melwing Nigeria Limited (M)</b> Melwing purchases plantains at market value and processes them into plantain flour, plantain chips, and “Melwing Food,” a staple food product made from unripe plantains and soybeans. Through the challenge, Melwing engaged CLOs to recruit new plantain farmers and provide ongoing technical assistance to boost yields.</p>	<ul style="list-style-type: none"> <li>• Engaged and trained 300+ new plantain farmers in farming best practices</li> <li>• Farmers increased the average volume of sales from 65 to 230 kilograms of plantains (a 254 percent increase)</li> <li>• Farmers increased average monthly revenue from \$50 to \$180 (a 260 percent increase)</li> </ul>
<p><b>Orisha Farms Nigeria (Y)</b> Orisha Farms works to expand cage culture aquaculture, which involves farming fish on existing bodies of water with specialized cage frames and nets. This system increases productivity and profitability compared to earthen or artificial ponds.</p>	<ul style="list-style-type: none"> <li>• Trained 116 youths and women in aquaculture best management practices</li> <li>• Supported four trained farmers to farm their own fish using Orisha Farm's cages on the Lagos Lagoon</li> <li>• Demonstrated cage culture aquaculture as a sustainable and viable local production method, increasing Orisha Farm's production capacity from 12 to 28 tons annually</li> <li>• Increased the volume of sales by 250 percent</li> <li>• Over 27 women fishmongers now buy and resell fish from Orisha Farms</li> </ul>

Featured Grantees	Challenge Impact Highlights
<p><b>Reveni Trade Limited (Y)</b> Reveni Trade Limited connects smallholder farmers to domestic and international markets. Through the challenge, Reveni purchased Grid sensors to track and ensure the quality of agricultural products as they move from farms to buyers. They also expanded their farmer base, giving farmers free access to Reveni’s tech-enabled Eki Farmers Support Program, a suite of technology solutions that includes training on good agricultural practices, environmental and security early warnings (droughts, floods, crime, kidnappings, conflict), and access to market information.</p>	<ul style="list-style-type: none"> <li>• Provided 2,500 smallholder cassava farmers (46 percent men, 54 percent women) with access to Reveni’s Eki Farmers Support Program, which includes training on good agricultural practices developed with the Ministry of Agriculture</li> <li>• Sent out early warning alerts about impending droughts to 500 farmers, enabling them to adjust planting times and save land preparation costs of up to \$765 per hectare</li> <li>• Created agreements with six smallholder farming communities to supply 200 to 500 tons of cassava tubers annually</li> <li>• Doubled production of packaged garri</li> <li>• Sold 700 tons of fresh cassava tubers to four large-scale processors</li> <li>• The company’s annual revenue increased from \$5,400 to \$92,857</li> </ul>
<p><b>Royal Blue Contractors Limited (M)</b> Royal Blue Contractors Limited—a leading input distribution company in Nigeria for fertilizers, seeds, and agro-chemicals—and East-West Seed use demonstration farms, agro-inputs dealers, and seed delivery via motorbike to get high-quality seeds into the hands of smallholder farmers.</p>	<ul style="list-style-type: none"> <li>• Trained 6,433 (3,420 men, 3,013 women) farmers on good agricultural practices, with 1,640 adopting improved seed technology</li> <li>• Established 75 demonstration farms to showcase new types of seeds to 225 smallholder farmers</li> <li>• Through promotion activities, field promoters and agro-dealers sold vegetable seeds worth \$20,256</li> <li>• Improved yields for tomato farmers from 1.2 to 12 tons per acre (a 900 percent increase)</li> <li>• Increased farmer incomes from \$125 to \$1,247 between January to September</li> </ul>

### 3. INCREASED MARKET POTENTIAL THROUGH IMPROVED AGRO-PROCESSING

Despite the size of its agricultural sector, Nigeria is a net food importer.<sup>30</sup> For the country to combat its growing dependence on agricultural imports, it needs to increase domestic capacity for agro-processing.<sup>31</sup> Agro-processing—or post-harvest activities that preserve and prepare raw commodities—boosts the shelf-life and value of raw materials and contributes to local food security and stability.<sup>32</sup> It also opens doors: A strong agro-processing sector has been identified as a key “missing link” in connecting African smallholder farmers to domestic, regional, and international markets.<sup>33</sup>

The following grantees all bring a focus on value-added processing, helping farmers expand the earning potential of their crops.

<sup>30</sup> <https://www.pwc.com/ng/en/assets/pdf/afcfta-agribusiness-current-state-nigeria-agriculture-sector.pdf>.

<sup>31</sup> <https://agrilinks.org/post/africas-journey-self-reliance-through-improved-food-security-policy>.

<sup>32</sup> <https://futureafricaforum.org/the-new-age-of-agro-processing-in-africa/>.

<sup>33</sup> [https://www.g20-insights.org/policy\\_briefs/linking-smallholder-production-with-value-added-food-markets/](https://www.g20-insights.org/policy_briefs/linking-smallholder-production-with-value-added-food-markets/).

## SPOTLIGHT: NNACHET FARMS EXPANDS THE MARKET FOR NIGERIAN CATFISH (Y)

Nigeria is one of the world's major producers of farmed catfish, with the sector providing food and livelihoods to millions, but Nigerian catfish farmers face serious obstacles to growth. After harvest, farmers are compelled to sell immediately and often at low prices, or they risk spoiling their stock.

Nnachet Farms expands the market and extends the shelf life of fresh catfish by processing it into dried catfish and catfish oil. With USAID support, the company invested in the catfish supply chain, training 2,000 catfish farmers in best practices for catfish farming, processing, and fish feed formulation. After this training, 19 farmers established their own catfish farming operations, 58 expanded their existing farms, and 12 secured new employment in the sector. Nnachet Farms also procured new equipment, increasing its catfish processing capacity by 269 percent.

The company has more than doubled its customer base, added 17 new distributors, and entered new markets (including shipments to Amsterdam). With this growth, the company can now sign formal offtake agreements with smallholder catfish farmers, offering a consistent, guaranteed market for their products.



© NNACHET FARMS

A Nigerian man handles sliced catfish.

### Featured Grantees

#### Ayosifam Integrated Service (Y)

Ayosifam Integrated Service processes cassava into high-quality garri flour and garri derivatives, such as laundry starch and animal feeds.

### Challenge Impact Highlights

- Increased garri production capacity from 100 to 900 kilograms per day through new automated equipment to cook, clean, and package high-quality garri and garri flour
- Formed two cassava cooperatives with 20 members each
- Implemented cluster farming for agricultural mechanization
- Increased sourcing of fresh cassava by 500 percent
- Increased customer base from 500 to 4,050 customers

#### GACON (M)

GACON processes and exports agricultural produce, herbs, and botanicals. Nigeria is the third-largest producer of ginger, but it is often sold at low prices or rejected by the international market due to poor processing and handling. GACON aims to increase production and improve the quality of ginger sold on the international market.

- Formed 36 ginger farming cooperatives (360 farmers)
- Provided a guaranteed market to farmers for their product, leading to a 50 percent increase in volume sold and a ten percent increase in selling price
- Increased GACON's production capacity by 50 percent from 800 to 1,200 tons per year, with expanded staff and new processing equipment, including 22 solar dryers.
- Trained 360 farmers in good agricultural practices to improve ginger quality and yields
- Trained farmers went on to train an additional 2,520 ginger farmers (935 men, 1,585 women)
- Purchased 560 tons of fresh ginger from farmers, with plans to buy an additional 1,668 tons by January 2023
- Doubled the number of international buyers for ginger products

Featured Grantees	Challenge Impact Highlights
<p><b>Melkim Wallocks (Y)</b> Melkim Wallocks is a rice processing company based in Kaduna. Through the challenge, the company purchased equipment to shift from a single milling to a double milling rice process to increase production, improve quality, and reduce the amount of broken rice.</p>	<ul style="list-style-type: none"> <li>• 400 percent increase in production capacity</li> <li>• 185 percent increase in customers</li> <li>• 300 percent increase in monthly revenue</li> <li>• Increased sourcing from ten to 95 tons of rice paddy per month from two rice farming cooperatives</li> </ul>
<p><b>Nnchet Farms (Y)</b> Nnchet Farms works in catfish processing, drying, and packaging for the production of oven-dried catfish, catfish suya, and catfish oil.</p>	<ul style="list-style-type: none"> <li>• Increased fresh catfish processing capacity from 6,500 to 24,000 kilograms per year</li> <li>• Increased catfish drying capacity from 4,800 to 14,200 kilograms per year through new equipment</li> <li>• Increased from 362 to 979 customers (with 17 distributors).</li> <li>• Trained 2,000 catfish farmers</li> <li>• With the training, 19 established their own business, 58 expanded their existing business, and 12 secured new employment in the sector</li> <li>• Created new branded packaging to meet grocery store standards</li> <li>• In the final stage of NAFDAC approval for their oven-dried catfish</li> </ul>
<p><b>Sosai Renewable Energies Company (M)</b> Sosai Renewable Energies Company operates a network of women-led solar drying hubs, through which it dehydrates fruits and vegetables purchased from smallholder farmers and then sells dried products and pastes through local and international markets.</p>	<ul style="list-style-type: none"> <li>• Increased production of dried products from 840 to 39,000 kilograms monthly</li> <li>• Trained 1,564 farmers (266 men, 1,298 women) on good agricultural practices and climate-smart agriculture</li> <li>• 74 farmers reported a 95 percent increase in revenues and a 90 percent reduction in food loss through training and use of the solar drying hubs</li> <li>• Introduced three new products (dried onion, stew mix paste, and stew mix powder)</li> <li>• Currently finalizing NAFDAC registration</li> <li>• Expanded market from three to 32 states in Nigeria, with end-users in three additional countries (the United States, United Kingdom, and Turkey).</li> </ul>

## 4. REDUCED POST-HARVEST LOSSES THROUGH IMPROVED STORAGE

In Nigeria, farmers lose about 50 percent of their farm produce and about 30 percent of grains before they reach the market.<sup>34</sup> Inadequate transport and storage facilities are major challenges that are only exacerbated in northwestern Nigeria, where farmers must also contend with violence and instability. In 2022, the Government of Nigeria estimated that post-harvest losses cost the country about \$7.84 billion annually.<sup>35</sup> Further, grain and food prices rise dramatically in the period between harvests from May to August, but due to post-harvest expenses and a lack of viable storage solutions, farmers are pressured to sell immediately after harvest instead of waiting until the lean season when prices are higher.

<sup>34</sup> <https://agrilinks.org/post/nigerian-companies-are-using-innovative-approaches-reduce-food-loss-and-boost-smallholder>.

<sup>35</sup> <https://www.premiumtimesng.com/news/more-news/548219-post-harvest-nigeria-loses-n3-5trn-annually-minister.html>.



It's a vicious cycle, one that leaves farming households with limited buying power to meet their own food security needs. The below grantees introduced various solutions to help farmers better preserve and store crops, get more products to market, and allow farmers to sell when the price is right.

## SPOTLIGHT: FLOURISH COLDCHAIN LIMITED KEEPS IT COOL (Y)

Without refrigeration and viable cold storage solutions, Nigerian farmers lose a significant fraction of their crops—and their incomes—to spoilage. Through the challenge, Flourish Coldchain Limited brought efficient and affordable solar fridges to eight different states to extend the freshness of vegetables, fruits, and meat. Its refrigerators are powered by a small solar panel and battery that can keep them running for 1.5 days without sunlight, consuming a quarter of the energy of a regular fridge. Farmers can access and pay for this service in small installments through a pay-as-you-go model or through a store-and-pay-later approach.

Over the challenge period, nearly 6,000 farmers and rural market women used Flourish Coldchain Limited's solar fridges for over 48,000 kilograms of agricultural products.

By preventing food losses, these customers saw an average increase in revenues of 35 percent. The challenge also let Flourish innovate its business model, introducing new approaches to unlock its services to a wider array of customers. These include a new B2B service called Flourish CoolBox, which will provide on-demand, last-mile coldchain deliveries for businesses in Africa. More than 100 businesses are already signed up.

*"The USAID/Nigeria COVID-19 Food Security Challenge has helped us position our business for growth,"* notes Flourish Coldchain Limited. *"We have expanded our business across eight states and attracted external investments for regional expansion."* Through the challenge, the company attracted nine new business partnerships and secured \$500,000 in new investment.



Two men stand by solar-powered fridges.

© FLOURISH COLDCHAIN LIMITED

### Featured Grantees

#### FarmImpact Limited (Y)

FarmImpact provides post-harvest loans and Purdue Improved Crop Storage (PICS) bags to smallholder farmers to enable them to store, save, and sell their crops later during the lean season when prices are higher.

### Challenge Impact Highlights

- Delivered loans (averaging \$122 each)<sup>36</sup> and PICS bags to 1,000 clients (20 percent women)
- On track for a 100 percent repayment rate
- 1,000 smallholder farmers were able to sell at up to 35 percent higher prices
- Farmers who received the loan retained about 53 percent more maize than their counterparts

*"After completing my harvest, I used the loan to invest in a small supply of peanuts, which I used to make and sell cooking oil. This way, I was able to make enough each month to avoid selling my crops. I even used my new income to buy two extra bags of maize and one extra bag of cowpeas. I've never held my harvest for this long! I am so happy that I now will be able to sell my crops for a much higher price after Ramadan in late May or June."*

— AISHA, FARMIMPACT LIMITED CLIENT

36 Note: Loans were not provided with USAID funding.

Featured Grantees	Challenge Impact Highlights
<p><i>“I feel freedom and respect from my family that I have not had before. I can buy things without asking my husband for permission. And when my husband is struggling with money, I am able to contribute and pitch in.”</i></p> <p>— UMMI, FARMIMPACT LIMITED CLIENT</p>	
<p><b>Farmplify Agriculture Development Limited (M)</b></p> <p>Farmplify Agriculture Development Limited is a digital marketplace that connects farmers to multiple end-users in agricultural processing, exporting, storage facilities, retail stores, restaurants, and catering services. Through the challenge, the company set up a grain storage warehouse and e-commerce training center.</p>	<ul style="list-style-type: none"> <li>• Established a 4,000-ton-capacity grain storage facility, with an e-commerce training hub for farmers</li> <li>• Registered 413 commodity buyers and 1,015 new farmers on its digital marketplace</li> <li>• Farmplify’s aggregation and storage model helped farmers maintain the quality of their grains, increase their bargaining power through a clustered selling approach, and improve their incomes by 14 percent</li> <li>• Expanded market size from three to five states</li> <li>• Increased monthly revenue from \$54,054 to \$81,081</li> </ul>
<p><b>Flourish Coldchain Limited (Y)</b></p> <p>Flourish Coldchain Limited provides efficient and affordable refrigeration systems to off-grid communities to help extend the freshness of vegetables, fruits, and meat. Through the challenge, Flourish deployed affordable solar fridges in eight different markets and mobile coolers. Its refrigerator models are powered by a small solar panel and battery that can keep the fridges running for 1.5 days without sunlight. These refrigerators consume a quarter of the energy of a regular fridge and can be accessed and paid for by farmers through a pay-as-you-go model with minimal payments.</p>	<ul style="list-style-type: none"> <li>• Deployed 24 solar fridges in eight markets</li> <li>• Increased customers for solar fridges from 250 to 5,918 farmers and rural market women</li> <li>• Customers saw a 35 percent increase in revenue from reduced losses and corresponding sales</li> <li>• Secured \$500,000 in additional investment</li> </ul>
<p><b>Kitovu Technology Company (Y)</b></p> <p>Through the challenge, Kitovu Technology Company launched a new grain storage service called StorageX. Farmers bring their threshed and cleaned grains to a StorageX warehouse to be dried by the company’s solar-powered dryer. The company then provided farmers with hermetically sealed PICS bags to store their dried grains, and connected farmers to buyers for their stored products.</p>	<ul style="list-style-type: none"> <li>• Developed and launched the StorageX platform and electronic warehouse receipt system</li> <li>• Enrolled 306 farmers on the platform</li> <li>• Established and operationalized six active warehouses in Niger and Gombe, with a combined capacity of 1,200 tons</li> <li>• Secured supply contract from AFEX Commodities Exchange for the supply of 3,000 tons of maize, soya bean, and sorghum, valued at over \$1 million</li> <li>• Increased ease of sale of produce, with 100 percent of participating farmers’ produce sold</li> <li>• Impacted 173 farmers’ incomes through an average market price appreciation of 23 percent</li> <li>• Generated over \$100,000 in revenue during the project period</li> </ul>

## 5. STRENGTHENED MARKET LINKAGES

More than 80 percent of farmers in Nigeria are smallholder farmers, and for many, market access is a significant challenge.<sup>37</sup> Given weak transportation infrastructure, low levels of digital literacy and access, a scarcity of market information, and limited bargaining power, farmers struggle to connect with consistent, fair buyers for their products.

The following grantees focused on connecting farmers to new markets, buyers, and end users to unlock higher, more stable incomes for farming communities.

### SPOTLIGHT: SMARTAGRO TECHNOLOGIES LIMITED GUIDES PRODUCE FROM FARM TO SHELF (Y)

Africa's food distribution network is heavily fragmented. Farm products move through layer upon layer of middlemen, driving down earnings for farmers and inflating prices for vendors and consumers. Furthermore, over 40 percent of perishable food is lost along this supply chain.

SmartAgro Technologies' online food logistics platform, Aisiki, aggregates demand from registered vendors—restaurants, grocery stores, and neighborhood shops—and offers free next-day delivery on orders. On established collection days, participating farmers drop off the requested produce at the nearest Aisiki collection center, where products are inspected, sorted, weighed, and transferred to the company's fulfillment center. Farmers are paid within 24 hours, at 20 percent higher prices than they would receive from middlemen. With challenge funds, SmartAgro Technologies refined its Aisiki software, expanded its customer service platform, and acquired a solar-powered cold storage facility at its fulfillment center to keep fruits and vegetables fresh until they are sold. Since November 2021, the company has onboarded 611 new farmers and 1,097 vendors, growing its procurement capacity by 13x. With its new cold storage facility, it has already seen a 95 percent decrease in food loss, and participating farmers have seen a 35 percent increase in their volume of sales.

SmartAgro Technologies facilitated a partnership with a fintech company to adopt a buy-now-pay-later policy, letting vendors pay a minimum of 40 percent upfront with the remainder paid interest-free at a later date. This policy helps vendors, many of whom are women, expand their businesses, buying in larger quantities and paying once they have sold the produce. It also provides a kind of safety net. For example, when one customer's shop was damaged in a fire, this policy helped her stay in operation while she built back her shop, procuring her produce from SmartAgro Technologies and paying it back once she had turned it over.

Over the challenge period, SmartAgro Technologies grew its monthly revenue from \$2,000 to \$20,000 and attracted interest from new funders, setting the company up for future scale.



An Aisiki delivery assistant fulfills a retailer's plantain order.

© SMARTAGRO TECHNOLOGIES LIMITED

37 <https://www.eajournals.org/wp-content/uploads/A-Review-of-Smallholder-Farming-In-Nigeria.pdf>

Featured Grantees	Challenge Impact Highlights
<p><b>Freshmarte Global Services Limited (Y)</b> Freshmarte Global Services Limited provides a digital platform (FarmCorps) to help agro-processing and food companies aggregate quality produce from smallholder farmers.</p>	<ul style="list-style-type: none"> <li>Secured forward contracts from Acee Food (for 250 tons per year) and two other offtakers to create ready access to the market and unlock input financing for smallholder farmers</li> <li>Facilitated over \$100,000 in input financing for 150 smallholder farmers</li> <li>Increased maize yield by an average of 300 percent</li> <li>Increased farmer incomes by 400 percent</li> <li>Designed and developed two new digital platforms: (1) Seedr, a data-driven, mobile platform to help extension officers provide targeted advisory services for smallholder farmers, and (2) a Buyers Web Platform, for food companies to issue production contracts to smallholder farmers and get visibility into their supply chains</li> </ul>
<p><b>HerVest (M)</b> HerVest's Project Fund a Female Farmer increases access to financing for smallholder female farmers, offering them the resources to improve agricultural productivity.</p>	<ul style="list-style-type: none"> <li>Financed 900 smallholder female farmers to purchase farm inputs and begin crop production</li> <li>Through finance and training, farmers recorded an average increase in yields of 75 percent</li> <li>Helped farmers sell 1,700 tons of rice to offtakers</li> </ul>
<p><b>Releaf Marketplace Nigeria Limited (M)</b> Releaf Marketplace Nigeria Limited is working to industrialize Nigeria's palm nut value chain by scaling two innovations: (1) its Supplier Automated Logistics Transparency (SALT) software, which allows field officers to directly source palm nuts from smallholder farmers before de-shelling, and (2) Kraken, its low-cost palm nut de-shelling machine.</p>	<ul style="list-style-type: none"> <li>Enrolled 1,484 farmers on SALT, creating palm nut farming clusters</li> <li>Through SALT, 387 farmers requested a loan<sup>38</sup> or notified Releaf of palm nut availability</li> <li>Sourced 8,782 tons of palm nuts from 2,100 smallholder farmers in Cross River via a stable buyer and lower logistics, transport, and de-shelling costs, contributing to higher farmer incomes</li> <li>Deployed Kraken de-shelling machine, doubling production capacity from five tons to ten tons of palm nuts per hour</li> <li>Increased the volume of palm kernel oil produced and sold by 4x</li> <li>Created 57 jobs and increased revenue by 300 percent</li> <li>Raised \$3.3 million in new funding</li> </ul>
<p><b>SmartAgro Technologies Limited (Y)</b> SmartAgro Technologies Limited uses its food logistics platform, Aisiki, to source food products from farmers for sale to restaurants, grocery stores, and neighborhood shops, with next-day free delivery. Through the challenge, SmartAgro acquired a solar-powered cold storage facility to keep fruits and vegetables procured from farmers as fresh as possible until they are sold.</p>	<ul style="list-style-type: none"> <li>Onboarded 611 farmers and 1,097 retailers to the Aisiki platform since November 2021</li> <li>Farmers on Aisiki's platform increased their income by 20 percent</li> <li>Farmers increased the volume of sales by 35 percent</li> <li>13x increase in procurement capacity</li> <li>95 percent reduction in food loss through new solar-powered cold storage facility</li> </ul>

38 Note: Loans were not provided with USAID funding.

Featured Grantees	Challenge Impact Highlights
<p><b>Uzoobo Nigeria (Y)</b> Through the challenge, Uzoobo Nigeria developed a virtual and physical solar-powered food hub that manages the aggregation, packaging, marketing, sales, and distribution of rice and garri from local and regional smallholder farmers.</p>	<ul style="list-style-type: none"> <li>• Developed a virtual food hub and a solar-powered physical food hub in Delta State</li> <li>• Increased the number of customers from 705 to 2,150</li> <li>• Increased market reach from two to five states</li> <li>• Sold 256 tons of rice and garri through the virtual and physical food hub</li> <li>• Signed contracts with two smallholder farmer cooperatives to aggregate 1,728 tons of rice and 288 tons of garri per year</li> <li>• Increased participating farmers' income by 15 percent</li> <li>• Reduced the cost of rice by 30 percent for customers by aggregating from farmers</li> </ul>

## 6. INCREASED SUSTAINABLE PRODUCTION AND ENVIRONMENTAL RESILIENCY (OBJECTIVE 5)

Indicator	Number of Grantees Reporting	Target	Results
<p><b>Grantee-Specific Indicator:</b> Number of smallholder farmers and other end-users using climate-smart challenge innovations in their activities.</p>	11	Not Required	7,589

In Nigeria, climate change exacerbates a host of existing environmental challenges that affect the agricultural sector—deforestation, land degradation, floods, erosion, drought, and desertification. Further, rising temperatures and shifting precipitation patterns directly threaten farmers, many of whom are reliant on rainfed agriculture.<sup>39</sup> The ND-GAIN Index, which ranks countries' relative vulnerability to climate change and readiness to increase resilience, listed Nigeria as 158th out of 182 countries in 2020.<sup>40</sup>

The Intergovernmental Panel on Climate Change reports that those who are already most vulnerable and marginalized, such as women, experience the greatest impacts from climate change. Women farmers have a reduced capacity to adapt to climate change due to their baseline deficits in access to land, credit, agricultural inputs, decision-making structures, technology, and extension services.<sup>41</sup>

Grantees approached environmental sustainability as an integral investment in resilience and self-reliance. Grantees such as Melkim Wallocks, Melwing Nigeria Limited, and Royal Blue Contractors Limited trained farmers in climate-smart agriculture to help them increase yields and build resilience to environmental shocks. These grantees were deliberate in engaging women farmers in their activities.

Others—such as Flourish ColdChain Limited, GACON, Kakasku Blan Integrated Farm and Hatcheries, SmartAgro Technologies, Sosai Renewable Energies Company, Kitovu Technology Company, and Uzoobo Nigeria—deployed solar-

39 [https://climateknowledgeportal.worldbank.org/sites/default/files/2021-07/15918-WB\\_Nigeria%20Country%20Profile-WEB.pdf](https://climateknowledgeportal.worldbank.org/sites/default/files/2021-07/15918-WB_Nigeria%20Country%20Profile-WEB.pdf).

40 <https://gain.nd.edu/our-work/country-index/rankings/>.

41 <https://www.un.org/en/chronicle/article/womenin-shadow-climate-change#:~:text=Worldwide%2C%20women%20have%20less%20access,to%20adapt%20to%20climate%20change.>

powered technologies to mitigate their climate impact while also securing an affordable, reliable energy supply. With high fuel costs and an unreliable power supply in Nigeria, investments in renewable energy were also investments in energy independence and stability.

The following featured grantees made environmental sustainability a core aspect of their models.

## SPOTLIGHT: BRYCOAL NIGERIA LIMITED CONVERTS AGRICULTURAL WASTE INTO CLEAN COOKING FUEL (Y)

Rural communities depend on wood and kerosene for cooking fuel. The result is high emissions; dangerous health effects for women and children from indoor air pollution, an added burden for women and girls, who are largely responsible for firewood collection; and high rates of deforestation. Brycoal Nigeria Limited offers clean, sustainable sources of cooking fuel for rural households, through an innovative model that converts agricultural byproducts—such as palm kernels and coconut shells—into charcoal briquettes. Through the challenge, Brycoal engaged five clusters of smallholder farmers in palm oil and coconut value chains across four states. Brycoal collected and purchased the agricultural waste generated by these farmer clusters, creating a strong and consistent supply of raw materials for its charcoal briquettes, from 3.5 tons per month before the challenge to 60-150 tons per month. With Brycoal Nigeria Limited's waste-for-cash model, participating farmers have increased their earnings by up to 18 percent.



© BRYCOAL NIGERIA LIMITED

Two people collect agricultural waste.

*“Access to challenge funds allowed us to carry out heavy capital-intensive activities like procuring production lines and other pricey equipment,” Brycoal Nigeria Limited noted. “This strengthened us to be able to produce at capacity that we’ve never been able to prior to the grant’s assistance.”*

With new machinery purchased with challenge funds, Brycoal saw a 25x increase in production output, from 200 to 5,000 kilograms of charcoal briquettes per hour. Over the challenge period, the company also increased its customer base from 150 to 500 customers.

### Featured Grantees

#### **Brycoal Nigeria Limited (Y)**

Brycoal Nigeria Limited produces clean, sustainable, and efficient cooking and heating fuel for households and enterprises. It collects and repurposes agricultural waste like palm kernels and coconut shells into charcoal briquettes. This model lets farmers convert waste into cash, boosting farmer incomes; protects trees; decreases carbon emissions; and provides a new fuel source for rural communities.

### Challenge Impact Highlights

- 25x increase in production output, from 200 to 5,000 kilograms per hour
- Consistent supply chain for raw materials now established, from 3.5 to 60-150 tons per month
- 18 percent increase in net earnings for farmers through waste-to-cash model

Featured Grantees	Challenge Impact Highlights
<p><b>Energy Assured Nigeria Limited (M)</b> Energy Assured Nigeria Limited provides smallholder farmers, particularly women farmers, with mobile solar water pumps for irrigation. Energy Assured Nigeria Limited's pumps use solar power to reduce the cost and increase the efficiency of food production for smallholder farmers. The company groups smallholder farmers into clusters and then supplies and installs solar pumps that farmers pay for in monthly installments.</p>	<ul style="list-style-type: none"> <li>• Increased number of mobile solar water pumps from 65 to 117</li> <li>• Expanded to five new local government areas and two neighboring states</li> <li>• Reached a total of 2,410 farmers (1,403 men, 1,007 women) with solar water pump services</li> <li>• Reduced farmers' watering costs by 50 percent, compared to diesel-powered methods</li> <li>• Increased annual revenue from \$73,201 to \$216,150</li> </ul>
<p><b>Kakasku Blan Integrated Farm and Hatcheries (Y)</b> Kakasku Blan is one of the first companies in Nigeria to use animal waste to produce granulated organic fertilizer, which is eco-friendlier and more affordable to local smallholder farmers than inorganic fertilizer. The company raises chickens, uses chicken manure to manufacture organic fertilizer, and sells the fertilizer to smallholder farmers.</p>	<ul style="list-style-type: none"> <li>• Increased organic fertilizer production from one ton in five days to six tons in five days</li> <li>• Increased production of poultry feed from one ton per day to one ton per hour</li> <li>• Increased hatching of day-old chicks from 300 to 10,000 chicks per month</li> <li>• 120 new customers purchasing fertilizers, poultry feed, and day-old chicks</li> <li>• Increased monthly revenue by 438 percent</li> </ul>

## 7. IMPROVED NUTRITION

In Nigeria, an estimated 32 percent of children under five are stunted, with two million suffering from acute malnutrition.<sup>42</sup> In 2022, conflict and insecurity, climate change, and global inflation of post-pandemic food prices led to rising hunger in much of the country, particularly in the north.<sup>43</sup>

Further, gender inequality and food insecurity are deeply connected. Women and girls are more likely to go hungry,<sup>44</sup> with women being more food insecure than men in every region of the world<sup>45</sup> Women's farms are less productive—a gender gap that costs Nigeria more than \$2 billion in GDP<sup>46</sup>—lowering women's purchasing power and food access. However, when women gain increased control over resources and income, they drive positive impacts on household health and nutrition.<sup>47</sup>

Many grantees—such as Kakasku Blan Integrated Farm and Hatcheries, Melwing Nigeria Limited, Orisha Farms Nigeria, Revemi Trade Limited, and others—looked to strengthen local value chains for nutritious staples such as plantains, cassava, poultry, and catfish. Still others contributed to food security in Nigeria by filling key gaps in the agricultural ecosystem or boosting the productivity and purchasing power of farming communities.

The following three featured grantees centered nutrition as a core objective of their models.

42 <https://www.unicef.org/nigeria/nutrition>.

43 <https://www.doctorswithoutborders.org/latest/catastrophic-malnutrition-crisis-northwest-nigeria-demands-international-response>.

44 <https://www.unwomen.org/en/news/in-focus/commission-on-the-status-of-women-2012/facts-and-figures>.

45 <https://blogs.worldbank.org/voices/empower-her-address-food-and-nutrition-security-africa>.

46 <https://openknowledge.worldbank.org/bitstream/handle/10986/37225/P1740380dc16e506c093130997a7fb664f6.pdf?sequence=5&isAllowed=y>.

47 <https://reliefweb.int/report/world/women-and-malnutrition-africa>.

## SPOTLIGHT: MUBAL AGRO SCALES ITS MARKET-LED SOLUTION FOR MALNUTRITION

MUBAL Agro and General Enterprise Nigeria has developed a highly nutritious, local powder food blend with malted sorghum, soya beans, groundnut, tiger nuts, and date palm. It is an affordable and complete food source that only requires hot water to prepare.

Through the challenge, MUBAL looked to ramp up production and expand marketing of its product. It increased its sourcing of raw materials by 26x through guaranteed offtake agreements with six new smallholder farmers. With new equipment—powered by 32 solar panels—MUBAL increased its production capacity from 75 to 5,028 kilograms weekly. MUBAL's new factory is housed within the Technology Incubation Centre, Sokoto (TICSOK), which has also connected the company to ongoing mentorship, technical assistance, and marketing expertise.

Over the challenge period, MUBAL expanded from 100 to 352 direct consumers, including two offtakers. Early evidence of nutritional impact has been promising—in a sample of 100 young children using Mid-Upper Arm Circumference (MUAC) tape, 22 children with severe acute malnutrition and 73 with moderate acute malnutrition showed remarkable improvement within five to ten days of consuming MUBAL's product. Once MUBAL receives NAFDAC approval, it plans to partner with pediatric units to introduce its product to public hospitals, private clinics, and supermarkets in early 2023.



A man processes MUBAL's powder blend.

© MUBAL AGRO AND GENERAL ENTERPRISE NIGERIA

### Featured Grantees

#### **MUBAL Agro and General Enterprise Nigeria (Y)**

MUBAL Agro developed a highly nutritious powder food blend from malted sorghum combined with soybeans, groundnuts, tiger nuts, and date palm. The blend is affordable and makes up between 50 to 70 percent of the World Health Organization's recommended nutrients for children between the ages of one and nine. Through the challenge, MUBAL Agro increased their production capacity and strengthened marketing efforts.

### Challenge Impact Highlights

- In a sample analysis conducted among 100 consumers of MUBAL's product (children ages 1-5) using MUAC tape, 22 with Severe Acute Malnutrition and 73 with Moderate Acute Malnutrition showed significant improvement within five to ten days
- Established off-take agreements with six new farmers
- Purchased a total of 225.5 bags (100 kilograms per bag) of raw materials, for a 26x increase in supply
- Procured and installed milling equipment and a solar power system, increasing production capacity from 75 to 5,028 kilograms weekly.
- Customer base increased from 100 to 352 direct consumers, including two off-takers



Featured Grantees	Challenge Impact Highlights
<p><b>Springboard (M)</b> Springboard supports women and youth to launch cricket farms in Nigeria, while testing and creating a market for cricket-based food products. The objective is to create a year-round supply of affordable, high-protein food for the most vulnerable, while stimulating local entrepreneurship and income generation in rural areas.</p>	<ul style="list-style-type: none"> <li>• Supported farmers to establish 23 new cricket farms to supply a new bakery run by Springboard</li> <li>• Received NAFDAC certification for cricket-fortified bread</li> <li>• Sold more than 25,000 loaves since July 2021</li> <li>• 85 retailers have partnered with Springboard for cricket bread distribution</li> </ul>
<p><b>Wandievville Media (M)</b> Wandievville Media is partnering with Global Alliance for Improved Nutrition (GAIN), the Poultry Association of Nigeria, and the Kaduna State Government to run an advocacy campaign to promote eggs as a nutritious food for children in Kaduna State, where childhood malnutrition is widespread. Through the challenge, Wandievville Media will scale up GAIN's existing "Eggs Make Kids" advocacy campaign to increase consumer demand and consumption of eggs in Nigeria.</p>	<ul style="list-style-type: none"> <li>• In a household survey of 105 families, families serving eggs to children 2-3 days a week increased from 7.6 to 50 percent over the course of the project</li> <li>• 1,520 egg vendors in Kaduna State and 307 egg vendors in Ogun State sold their products with Eggs Make Kids branding materials</li> <li>• Increased the annual sale of eggs by about 48 percent in Kaduna State and about 38 percent in Ogun State</li> <li>• Distributed 2,600 branded table mats and 480 aprons for egg vendors</li> <li>• Created radio jingles aired in four languages on major radio stations</li> <li>• Strengthened supply linkages, with 1,495 egg vendors in Kaduna and Ogun States now supplied eggs by the Poultry Association of Nigeria.</li> </ul>

## SPOTLIGHT: ENGAGING WOMEN IN FOOD SECURITY SOLUTIONS

Across the challenge portfolio, ensuring meaningful involvement, opportunity, and impact for women was a core objective. Before implementation, all 32 grantees created a gender plan to outline how they could practically and substantively involve and benefit women in Nigeria. This meant understanding the varied roles women play in the food system—for example, as producers, processors, and retailers—and anticipating the unique barriers women face.

Twelve of the grantees were women-owned businesses. Several—such as [HerVest](#), Sosai Renewable Energies Company, and [Wandievville Media](#)—had models that centered on women's needs and participation. For example, HerVest's Project Fund a Female Farmer channeled finance to 900 smallholder female farmers to help them purchase farm inputs and increase crop production. Through finance and training, these farmers recorded an average 75 percent increase in yield.

Many other grantees—such as GACON, Hasanta Integrated Farms Enterprises, Melwing Nigeria Limited, [SmartAgro Technologies](#), and Springboard—found significant ways to involve and serve women. At times, this meant getting creative: For example, Royal Blue Contractors Limited became concerned about limited female participation in its training and improved seed demonstration activities in the north, where stricter cultural and religious norms constrain women's involvement. The company moved to strategically deploy female technical field offers to encourage women's participation in the region, and ultimately, almost 50 percent of the project's participants were female.

Of the 204,430 people engaged across the grantee portfolio—as customers, users, partners, and farmer trainees—53,169 (or 26 percent) were women; and of the 629 jobs created by grantees, 242 positions (or 38.47 percent) went to women.

# CHALLENGE IMPACT

## Grantee Business Capacity, Sustainability, and Scale

Grantees' impact on food security can only be sustained if the businesses themselves are stable and well-positioned for growth. Next, the report looks at how challenge support helped grantees strengthen their enterprises, solidifying and scaling their models in a challenging private sector landscape.

Below, the report explores these themes by looking at the challenge's and grantees' performance against relevant objectives and indicators in the challenge results framework. It looks at the challenge's impact on job creation and BOP incomes, how it advanced key aspects of business maturity and scale, and the challenge's acceleration approach.

***“Overall, the challenge has expanded my character, skills, and outlook as a Nigerian entrepreneur. I look forward to taking advantage of more opportunities from USAID and the United States Government.”***

— FARMSPEAK TECHNOLOGY (Y)

***“The challenge has helped boost the capacity of our business to five times what it used to be within a year. We have also been able to expand our market to other states in Nigeria and train more [people] in one year than we have in the last four years. Overall, the impact has been amazing.”***

— HASANTA INTEGRATED FARM AND ENTERPRISES (Y)

***“We are grateful to be part of this challenge, as both our raw materials supply side and processing capacity have been impacted tremendously. More important are the learning points from the project for us as a team. We now have a better foundation to compete favorably, with more potential for growth in the years to come.”***

— MELWING NIGERIA LIMITED (M)



## Increased Incomes for Women and Men at the Base of Pyramid (OBJECTIVE 3)

Indicator	Number of Grantees Reporting	Target	Results
<b>Portfolio Level Indicator:</b> Number of new jobs created in the challenge-funded company.	32	661	629 (387 men, 242 women) <sup>48</sup>
<b>Grantee Level Indicator:</b> Value of annual sales of producers and firms receiving USG assistance. (EG.3.2-26)	32	Not Required	\$16,447,727
<b>Grantee Level Indicator:</b> Number of individuals participating in USG-assisted group-based savings, micro-finance, or lending programs. (EG.4.2-7) <sup>49</sup>	5	Not Required	3,856

USAID/Nigeria's funding for the 32 grantees created employment opportunities and boosted incomes for thousands across a range of agricultural value chains. These opportunities took several key forms:

- **Direct employment.** All 32 grantees hired new staff as they grew their businesses with challenge funds. GACON hired 61 people to work in its ginger processing business in Kaduna, Kano, and Lagos states. Afrimash Company Limited built out a network of 1,100 field agents, paid on commission to recruit and engage farmers on the company's farm inputs e-commerce platform; Farmplify Agriculture Development Limited hired 41 people, including 26 extension agents; and Melkim Wallocks hired 30 staff as they increased their rice milling capacity.
- **Building out opportunities across value chains.** In addition to direct employment, grantees created new opportunities for actors up and down value chains. For example, by launching a whole new farming model in Nigeria—cricket farming—Springboard created income-generating opportunities for 23 cricket farmers, ten bakery staff, and 85 retailers selling Springboard's cricket bread. SmartAgro Technologies engaged 1,097 food vendors on its food logistics platform, Aisiki, increasing their revenues by an average of 15 percent and offering a buy-now-pay-later policy that let these small, often women-owned businesses grow their operations. Melkim Wallocks created 23 indirect employment opportunities for women and men who buy rice bran from Melkim Wallocks to resell to animal feed companies.
- **BOP incomes and cost savings.** Finally, all 32 grantees worked to increase BOP incomes in farming communities—either directly or by unlocking cost savings for farmers. Energy Assured Nigeria Limited saved farmers 50 percent in watering costs through its mobile solar water pumps. HerVest financed 900 smallholder female farmers to purchase farm inputs and begin crop production. Through finance and training, these farmers recorded an average increase of 75 percent in yield, giving them more to sell at harvest time. Tractor on the Go added 584 new customers for its tractor-hailing service, which cuts farmers' harvesting costs by an average of 68 percent.

***“I am grateful to USAID for supporting Flourish Coldchain [Limited] to deploy solar freezers in the market to support me and other rural market women. I now have more happy customers, I make profit immediately, and I have more money to take care of my family and to send my children to school.”***

— ALHAJA ATINUKE, ILORIN KWARA STATE

<sup>48</sup> Two grantees were responsible for roughly 30 percent of the total target for this indicator. These two companies cumulatively planned to establish 200 new jobs, but instead filled 128 new positions. One grantee planned to establish a fully staffed facility in Kafanchan but was unable to accomplish this due to insecurity in the region. The other grantee relied more heavily on short-term contracts to fulfill urgent tasks, thus reducing the financial burden of hiring full-time staff before such roles were needed. These two companies continue to expand their operations and plan to exceed their targets after the grant period.

<sup>49</sup> EG.4.2-7 note: Grantee data reported through the USAID/Nigeria COVID-19 Food Security Challenge: Grantee Exit Survey/Monthly revenue after receiving USAID grant. Prior to their USAID awards, companies collectively earned \$7,271,614 in revenue.

## SPOTLIGHT: GACON PROFESSIONALIZES NIGERIA'S GINGER VALUE CHAIN

With challenge funding, GACON made significant strides in professionalizing Nigeria's ginger value chain and expanding the sale of ginger on the international market. GACON formed and trained 36 ginger farming cooperatives, sourcing its ginger directly for greater traceability and sustainability standards. It procured the equipment needed to increase its production capacity by 50 percent and secured international product certification for its ginger products, allowing it to sell internationally at a premium price.

Through this work, GACON increased its annual revenues by nearly 30 percent and doubled its international buyers. Based on its improvements in production capacity, product quality, and sales revenue, GACON was recognized by the Nigerian Export Promotion Council in November 2022 as a business that has significantly contributed to the growth of non-oil exports in Nigeria.

*“The [challenge] has transformed our company in so short a time and positioned us for rapid growth. It’s one of the greatest things that has happened to our company since it was founded.”*

— GACON

## Increased Challenge Winners' Capacity to Implement and Sustainably Scale Solutions (OBJECTIVE 4)

Indicator	Number of Grantees Reporting	Target	Results
<b>Portfolio Level Indicator:</b> Value of new private sector investment leveraged by the USG to support food security and nutrition. (EG3.1.15) <sup>50</sup>	32	\$2,759,175	\$4,698,785
<b>Grantee Specific Indicator:</b> Number of external partnerships formed by challenge grantees.	32	73	170

## NEW PARTNERSHIPS

No business can thrive and scale in isolation. Partnerships are key. Catalyst drew on USAID's local and regional networks to link grantees to external value chain actors, financing partners, government stakeholders, and FTF activities. At the portfolio level, grantees exceeded their target for external partnerships by 133 percent. The majority of these partnerships were with other private-sector actors. These partnerships helped grantees to:

- **Expand their reach to farmers and end users.** Grantees forged strategic partnerships to expand their access to farmers and customers across new markets. Here, local government partnerships were a major asset. The Ministry of Agriculture connected Energy Assured Nigeria with over 800 smallholder farmers, more than a third of the company's total beneficiaries. Revemi Trade Limited's access to a government database of 6,000 farmers in Delta State helped the company exceed their targets, and Kitovu Technology Company was able to establish six storage warehouses—instead of just one warehouse, as originally planned—because the Niger and Gombe State governments leased the spaces at

<sup>50</sup> EG.3.1.15 note: The Catalyst Project previously collected data on EG.3.1.14 (Value of new funding—USG commitments, private sector investment, or other—leveraged during the period of performance of the grant to support food security). This indicator was archived by USAID in 2022 and replaced with EG.3.1.15 during the fiscal year 2022 reporting period. Catalyst estimated that 50 percent of the original target for EG.3.1.14 was directly associated with private sector investments. This established the new target for EG.3.1.15 (\$2,759,175).

subsidized rates. This allowed Kitovu to reach many more farmers, and the company plans to continue this partnership approach for future expansion.

- **Strengthen their business models and products.** Grantees partnered to fill key gaps in their business models, make their operations more efficient, and strengthen their services for farmers and consumers. Farmplify Agriculture Development Limited is partnering with National Agricultural Extension and Research Liaison Services to provide farmers in Oyo State with extension services. SmartAgro Technologies partnered with a logistics company to better handle large orders from vendors. GACON is partnering with GIZ to undertake additional quality improvement for its ginger products, and Reeddi Technologies partnered with several insurance companies to fully insure the products on its peer-to-peer equipment rental platform, TempOwn.

*“As far as agriculture in Nigeria is concerned, the government is still the most trustworthy source for millions of smallholder farmers. Therefore, in setting up an agent network either in a permissive or non-permissive environment, the main approach is to start with the target state’s Ministry of Agriculture.”*

— AFRIMASH (M)

- **Grow and scale.** Grantees forged new financing and buyer relationships to grow their businesses. Sosai Renewable Energies Company signed memorandums of understanding with six partners—KELMASU, NAFARM, Harvest Price, Jet Farms, Agro Solutions, and Shoprite—to expand sales for its dried products. Freshmarte Global Services Limited partnered with Ace Food to offtake 20 tons of maize per month from smallholder farmers. Kitovu Technology Company forged a supply contract with AFEX Commodities Exchange for the supply of 3,000 tons of maize, soya bean, and sorghum, valued at over \$1 million. Many grantees also partnered with farmers cooperatives to ensure consistent, high-quality supply of raw commodities.

## NEW FINANCE AND GROWTH OPPORTUNITIES

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In total, grantees raised nearly \$4.7 million in additional equity and debt financing from the private sector, exceeding the target by 70 percent. The total of new funding raised from both private and public sources was of similar magnitude to USAID’s original investment, with \$1.80 raised for each dollar awarded to grantees. On average, youth-stage grantees raised \$0.77 per dollar awarded, while mid-stage grantees raised \$2.60, a much higher average due largely to Releaf Marketplace Nigeria Limited’s fundraising performance. Releaf raised \$3.3 million in new funding over the challenge period.

Participation in the challenge also opened doors to other growth opportunities for grantees. Freshmarte Global Services Limited was accepted into the reputable MassChallenge Switzerland, which helps global startups grow their businesses. Energy Assured Nigeria was chosen as one of 20 Nigerian companies for the 2022 USADF-ALL ON Off Grid Energy Challenge, and Kitovu Technology Company was selected to be a 2023 Halcyon Incubator Residential Fellow, a competitive 14-week residential program in Washington, DC, which connects founders to expert business guidance and finance.

## Increased Engagement With Private Sector to Achieve FTF Objectives (OBJECTIVE 6)

Indicator	Number of Grantees Reporting	Target	Results
<b>Portfolio Level Indicator:</b> Number of USG engagements jointly undertaken with the private sector to achieve a United States foreign assistance objective. (PSE 1)	32	32	21 <sup>51</sup>
<b>Portfolio Level Indicator:</b> Number of private sector enterprises that engaged with the USG to support United States foreign assistance objectives. (PSE 2)	32	32	21 <sup>52</sup>
<b>Portfolio Level Indicator:</b> Number of private sector enterprises with improved participation in the local economy as a result of USG assistance. (PSE 3)	32	Not required	24 <sup>53</sup>

Through the challenge, the Catalyst team worked with each grantee to strengthen their business capacity and expand their networks for future growth. This support took three different forms: (1) institutional capacity-building, (2) needs-driven workshops, and (3) collaboration and networking.

### (I) INSTITUTIONAL CAPACITY-BUILDING

Institutional capacity-building is a critical component of acceleration, especially with early-stage enterprises making up more than half of the selected grantees. Thirty-one of 32 of the grantees were new to USAID funding, and many of the youth-led winners had little operational and administrative experience in managing donor-funded development projects.

To build institutional capacity, Catalyst assessed each grantee's ability to manage and implement their USAID grant, and together, they established organizational development requirements—such as developing or strengthening procurement, finance, or human resource policies—based on any identified gaps. The Catalyst team also held onboarding sessions with each grantee to review contracts in detail and collaboratively set appropriate milestones. As grantees worked to establish new organizational policies or competitive procurement packages based on federal procurement regulations, Catalyst provided templates and technical reviews to ease the process.

***“Our monthly sessions with [the Catalyst team] were the most helpful part because they were personalized, and we received feedback that helped us solve the many problems we encountered during the challenge.”***

— FRESHMARTE GLOBAL SERVICES LIMITED (Y)

51 PSE1 Note: The Catalyst Project originally believed this indicator was collecting the same information as PSE 2 (below). This led Catalyst to set 32 as the target, which represented how many companies would receive grant agreements under the challenge. After speaking with the MELSA team, the team adjusted the results to reflect the number of engagements Catalyst had with the grantees, including but not limited to: kickoff webinars, acceleration workshops, and site visits.

52 PSE2 Note: The Catalyst Project originally believed this indicator was collecting the same information as PSE 2 (below). This led Catalyst to set 32 as the target, which represented how many companies would receive grant agreements under the challenge. After speaking with the MELSA team, the team adjusted the results to reflect the number of engagements Catalyst had with the grantees, including but not limited to: kickoff webinars, acceleration workshops, and site visits.

53 PSE3 Note: This indicator did not require a target. It was evaluated through a final grantee survey. In total, 24 companies reported 57 improvements in their internal management processes, access to new markets, government advocacy, and access to finance.

## (2) NEEDS-DRIVEN WORKSHOPS

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Catalyst designed a virtual acceleration workshop series to address major areas of shared need for grantees, build community, and foster peer learning. The four workshop topics—Operational and Management Systems, Marketing and Market Segmentation, Introduction to Cost Analysis, and Financial Readiness—were identified via discussions and surveys with the grantees.

Originally, the Catalyst team planned to hold just one workshop at the start of the grant process, but this four-part series allowed Catalyst to focus on a range of priority topics, while also offering a stronger foundation for peer networking.

For each workshop, the Catalyst team provided tools and resources—such as an Investment Readiness Self-Assessment Tool, a Market Creation Toolbox, a Cost Analysis Tool Template, and a Nigeria Investment Landscape Review—that grantees could use in their businesses going forward.

***“The period of the grant implementation was a period of rapid changes for [our] organization, spurred by the trainings and workshops we were part of.... The acceleration workshops enhanced our goal as it gave us deeper insights about the agricultural sector in Nigeria, who played where, what gaps still exist, and how they could be opportunities for growth. It also allowed us to see and understand other grant beneficiaries and the work they were doing, learn from their challenges, and build on their strengths.”***

— KITOVU TECHNOLOGY COMPANY (Y)

***“Due to the marketing and market segmentation workshop, we refined our marketing message to reflect the losses that farmers were currently experiencing in their farming business, instead of just focusing on what they could gain. It resonated with them and we started experiencing better conversion.”***

— FARMSPEAK TECHNOLOGY (Y)

## (3) COLLABORATION AND NETWORKING

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For most of the 32 grantees, partnerships were key to stability and growth. These partnerships unlocked finance, access to farmers, new supply and distribution channels, and new tools and technologies to improve efficiency and service delivery.

Fostering collaboration was a key aspect of Catalyst’s acceleration services. The challenge team worked to facilitate both peer-to-peer collaborations as well as introductions to external partners. With Catalyst support, grantees built over 170 partnerships, exceeding their target by 133 percent.

***“The challenge aided us to get the right partnerships in the agricultural sectors across our catchment states from the state level to the local government level.”***

— REEDDI TECHNOLOGIES LIMITED (Y)

***“We consider our expansion into Kaduna State, despite the security challenges, as the challenge’s greatest impact on our business. Through the introduction by [the Catalyst team], we were able to network with [Cultivating New Frontiers in Agriculture], and they helped in facilitating the partnership between our company and Labar Grains and Feeds.”***

— FRESHMARTE GLOBAL SERVICES LIMITED (Y)

## SPOTLIGHT: FOSTERING PEER-TO-PEER COLLABORATION

Catalyst linked grantees with aligned business models—or where the services of one might fill a gap for another. For example, the project team connected [D.E.T. Services](#) in southeast Nigeria to Kakasku Blan Integrated Farm and Hatcheries in the northeast to source organic fertilizers in commercial quantities. [FarmSpeak Technology](#) partnered with Afrimash Company Limited to reach farmers through the latter’s agricultural inputs platform. Catalyst also created opportunities for broader peer networking through the acceleration workshops and a cohort-wide WhatsApp group. The opportunity to learn from their cohort was cited by many grantees as a unique and significant source of value.





# CONCLUSIONS AND LESSONS LEARNED

## Open Innovation as a Tool for Crisis Response

In the face of COVID-19 and an unfolding food security crisis, USAID/Nigeria deployed an open innovation challenge to channel funds to local innovators with ground-up, market-led solutions to strengthen Nigeria's food system.

The challenge team worked quickly to identify 32 promising enterprises, each with a different solution to increase the resilience and productivity of the country's agricultural systems. Over the course of designing and managing the challenge—and as each grantee implemented their project—the team learned several key lessons that USAID and others can apply to future open innovation programs designed for fast, locally-led impact in challenging contexts or crisis periods.

- **Stay flexible in the face of difficult conditions on the ground.** Open innovation always requires some tolerance for risk. Through a challenge, funders take a chance on promising but yet-to-be-proven local solutions, with the understanding that some may fail—and that there is value in learning from failure. Working in a crisis context accentuates this dynamic. When applying open innovation for crisis response, anticipate that intersecting complexities—in this case, supply chain issues, COVID-19 lockdowns, inflation, local conflict and insecurity, the war in Ukraine, and skyrocketing grain costs—will affect grantee performance, sometimes in unexpected ways. It is vital to build flexibility, adaptive management, and pivot-point planning into target setting, monitoring protocols, budgets, and implementation.
- **Be deliberate in setting the period of performance.** For this challenge, the grantee period of performance was fast at just 12 months. For 12 grantees, the project ultimately offered no-cost extensions of three months. A number of considerations are relevant to timing:
  - If a program is going to have a short period of performance, then more established businesses (i.e., the mid-stage grantees) that already have key systems, networks, and personnel in place are more likely to thrive.
  - The period of performance needs to align with realities on the ground. The project focused on various agricultural value chains, and some were out of sync with critical harvest windows at the very start of the grant. For example, Kitovu Technology Company stated that the grant timeframe should begin approximately three months ahead of the September/October harvest cycle in order for companies to establish the necessary structures to fully take advantage of the harvest. If the challenge was to be implemented again, the project team would time the grant launch to better align with the relevant harvest seasons in the respective agricultural value chains. This would lead to even larger gains.
  - The short challenge period was a struggle for companies that were waiting on the procurement and delivery of equipment, including large equipment orders from China. When international purchases are necessary, more time should be built into the period of performance to accommodate lengthy delivery and import processes.
- **For early-stage startups, tailor challenge terms to set the stage for success.** The challenge's youth-led, early-stage enterprises achieved their targets on par with their mid-stage peers (see below). Still, where USAID chooses to fund early-stage startups, the challenge team would recommend a longer period of performance and different performance criteria or reduced indicator targets to enable startups to focus on short-term tangible gains and building key systems for growth. Additionally, a follow-up survey one-year after the challenge period would be valuable to chart the progress of each enterprise. This follow-up would allow a fuller picture of how the enterprise grew and matured with seed funding from the challenge, and it would allow USAID to determine whether the challenge funding was truly catalytic.
- **Where possible, take the time to get it right at the start.** There are trade-offs with a fast-moving challenge. While rapid challenges produce results quickly, there is less time to identify and support synergies and collaboration amongst grantee cohorts.
  - To get going fast, the team needed to streamline startup. However, taking more time to support grantees upfront can generate later value. For example, grantees needed hands-on support to set realistic MEL targets. The project

worked with each grantee, but it would have taken more time and resources at the program launch to fully understand and address their individual needs and objectives. It would also be useful to have a diagnostic at the beginning of the challenge to assess each enterprise's needs and organizational capacity to better align acceleration services and delivery.

- At the start of the challenge, grantees' activity plans should be mapped to identify opportunities for collaboration and efficiencies. For example, most grantees looked to make connections with the Ministry of Agriculture or local government authorities, and many grantees engaged in some form of farmer training on good agricultural practices or climate-smart agriculture. With more time, the challenge team would have sought additional opportunities for collaboration on training design and delivery within the cohort.
- **Investments in capital assets and equipment are a good bet.** Eighteen grantees used USAID funding to procure needed equipment<sup>54</sup> or other capital assets for their businesses. The team found that these tangible, concrete investments—such as processing equipment, solar power systems, and factory space—were often transformative, in terms of MSME production capacity, revenues, and scale. Further, these kinds of capital resources can be leveraged for additional funding and contribute to long-term sustainability.
- **Anticipate and track the different impact trajectories for early- vs. mid-stage enterprises.** The Catalyst team would advise that (1) if a program needs to prioritize the quickest wins for impact—to respond quickly and with lower risk in a crisis context—it makes sense to focus on more established, proven businesses; and (2) where USAID directly supports early-stage startups, the path to impact may be longer, and with greater risks of setbacks. However, for this challenge, the results were surprising. This program supported innovators who were at very different stages of maturity: 13 grantees were mid-stage businesses (defined as having an existing customer base of more than 1,000 people), while 19 were youth-led, often early-stage businesses. Sixteen of the 32 grantees had been in operation for less than three years by the time the challenge ended. Given the challenge's fast pace and difficult operating environment, the team expected its youth-led startups to struggle compared to mid-stage grantees. This was not the case. The youth-led startups and mid-stage grantees both achieved over 80 percent of their targets. Similarly, youth-led startups saw greater gains after grant implementation in proportion to their pre-award metrics. Youth-led grantees collectively saw a 180 percent increase in employees, 500 percent increase in monthly revenues, and 255 percent increase in paying customers. In comparison, mid-stage grantees collectively saw a 93 percent increase in employees, 96.5 percent increase in monthly revenues, and 84.75 percent increase in paying customers.<sup>55</sup>



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<sup>54</sup> Equipment is defined as items with a useful life of one year or more and a unit cost of more than \$5,000.

<sup>55</sup> Grantee data reported through the USAID/Nigeria COVID-19 Food Security Challenge: Grantee Exit Survey.

# ANNEX I: Description of 32 Challenge Winners

## Afrimash Company Limited



© AFRIMASH COMPANY LIMITED

**Afrimash Company Limited** provides an online platform that connects small- and medium-sized farmers to a variety of quality inputs from verified suppliers swiftly, conveniently, and safely. As more farmers adopt digital solutions as a result of the COVID-19 pandemic, Afrimash accelerates the listing of farm inputs and better connects farmers to these products. With funding from USAID/Nigeria, Afrimash Company Limited created a trained agent network to connect millions of farmers who lack digital literacy or internet access to quality farm inputs, leading to enhanced agricultural productivity. Field agents are able to reach farmers in their locality and place orders for farm inputs using a standard messaging service mobile application, an Unstructured Supplementary Service Data code, and an interactive voice response call center.

### FUNDING TOTAL

\$149,315

### BUSINESS DETAILS

Mid-Stage

### VALUE CHAINS

Agricultural Input Supply Linkage, Technical Support/Advisory, and Veterinary Support

### STATES IMPLEMENTED

Kaduna, Kebbi, Niger, Delta, Ebonyi, Cross River, Benue, Borno, Gombe, Adamawa, and Yobe States

### MAIN AREA OF IMPACT

Expanded Access to Inputs and Mechanized Farming

### KEY RESULTS

- Provided 131,000+ farmers with easier access to farm inputs, equipment, and technical support
- Approximately 6,600 new active registrants
- Provided 1,100 agents with technological tools and digital literacy and sales operations skills
- Increased customer base from 20,000+ to 152,000 customers
- 30 percent cost savings on farm input purchases for users
- Scaled presence from one state in Nigeria to 11 states in Nigeria

# Ayosifam Integrated Service



© AYOSIFAM INTEGRATED SERVICE

**Ayosifam Integrated Service** is an agricultural services company that conducts food processing and agricultural business in Kwara State. Presently, the company processes cassava into high-quality garri flour and garri derivatives, such as laundry starch and animal feeds. With funding from USAID/Nigeria, Ayosifam Integrated Service trained 110 smallholder cassava farmers, established two demonstration farms, and upgraded their retail platform, AyosifamHub, to create a wider marketplace for cassava farmers. The company also purchased automated equipment to cook, clean, and package high-quality garri.

## FUNDING TOTAL

\$73,850

## BUSINESS DETAILS

Youth-Led and Women-Owned

## VALUE CHAINS

Cassava Value Chain

## STATES IMPLEMENTED

Kwara State

## MAIN AREA OF IMPACT

Increased Market Potential Through Improved Agro-Processing

## SECONDARY AREAS OF IMPACT

Expanded Access to Inputs and Mechanized Farming, Improved Management Practices for Increased On-Farm Productivity, Strengthened Market Linkages, and Improved Nutrition

## KEY RESULTS

- Trained and gave personal protective equipment to 110 smallholder cassava farmers
- Increased revenue from \$2,450 to \$18,000 per year
- Increased production capacity from 100 to 900 kilograms per day
- Formed two cassava cooperatives with 20 members each
- Increased sourcing of fresh cassava by 500 percent
- Increased customer base from 500 to 4,050 customers
- Increased supply of fresh cassava from two tons in six days to two tons per day

# Brycoal Nigeria Limited



© BRYCOAL NIGERIA LIMITED

**Brycoal Nigeria Limited** is an indigenous technology company focused on building efficient agricultural waste management systems and producing clean sources of cooking energy across Africa. Rural communities in Nigeria have an abundance of agricultural waste that is openly burnt or left to rot, polluting the environment, but Brycoal Nigeria Limited seeks to collect and repurpose agricultural byproducts into high-demand charcoal briquettes that can be used as a green fuel alternative. With funding from USAID/Nigeria, Brycoal Nigeria Limited acquired new machinery to produce charcoal briquettes from the agricultural waste generated by five clusters of smallholder farmers working in palm oil and coconut value chains. With Brycoal Nigeria Limited's waste-for-cash model, smallholder farmers have increased their earnings by up to 18 percent within the clusters, allowing them to use the income to acquire farming inputs and improve their standard of living.

## FUNDING TOTAL

\$73,836

## BUSINESS DETAILS

Youth-Led

## VALUE CHAINS

Waste Management

## STATES IMPLEMENTED

Kano, Kogi, Oyo, Ondo, and Lagos States

## MAIN AREA OF IMPACT

Enhanced Environmental Sustainability

## KEY RESULTS

- Trained and clustered over 300 farmers and small- and medium-sized enterprises in the palm oil and coconut value chains
- Increased supply of raw materials for charcoal briquettes from 3.5 to 60-150 tons per month
- Increased earnings by 18 percent for smallholder farmers and small- and medium-sized enterprises
- 25x increase in production output—from 200 kilograms to 5,000 kilograms per hour
- Received \$70,000 worth of machinery from a donor/collaborative stakeholder
- Increased customer base from 150 to 500 customers

## D.E.T. Services



© D.E.T. SERVICES

**D.E.T Services** is an agricultural input supply and soil management company that leverages technology to provide smallholder farmers with cheap, smart, and profitable agricultural services. The company improves farmers' yields and increases productivity through activities such as precision soil fertility maintenance, precision application of agrochemicals, crop health monitoring, and cheap fertilizer sales and distribution through a subscription service. With funding from USAID/Nigeria, D.E.T. Services provided nearly 400 smallholder farmers with affordable organic fertilizers and an innovative application technology that improves the traditional application method. These activities reduced waste and increased the productivity, profitability, and standard of living for base of the period farmers who are responsible for producing the majority of the food in Nigeria. The company also acquired agricultural drones for crop monitoring and applying agricultural inputs, such as customized fertilizer blends, to farmers' fields.

### FUNDING TOTAL

\$74,801

### BUSINESS DETAILS

Youth-Led

### VALUE CHAINS

Agricultural Input Supply and Soil and Crop Management

### STATES IMPLEMENTED

Abia and Ebonyi States

### MAIN AREA OF IMPACT

Expanded Access to Inputs and Mechanized Farming

### KEY RESULTS

- Increased subscribers for fertilizer application service from zero to 393 farmers, with a subscriber waiting list of more than 700 farmers
- Increased capacity from one spray drone covering ten hectares per hour to two spray drones with a combined capacity of 28 hectares per hour
- Added 140 new subscribers in Abia State and 253 in Ebonyi State (393 subscribers total)
- Increased revenue from \$30,000 to over \$100,000 per year
- Added 700 farmers to the subscriber waiting list with 400 hectares waiting to be serviced

# Energy Assured Nigeria Limited



© ENERGY ASSURED NIGERIA LIMITED

**Energy Assured Nigeria Limited** is social enterprise company that is aiming to end energy poverty through sustainable environmental practices, specifically in the farming sector. The farming sector accommodates more than 80 percent of Nigeria's labor force, but many farmers lack an affordable and reliable source of water for their farming. With funding from USAID/Nigeria, Energy Assured Nigeria Limited provided solar-powered water pumps to 2,410 smallholder farmers to help them save costs and increase productivity and profitability. The company groups smallholder farmers into clusters and then supplies and installs solar pumps that farmers pay for in monthly installments. Energy Assured Nigeria Limited also raised awareness about solar pumping to 222,900 smallholder farmers and trained 171 smallholder farmers on the best agronomic practices for maximum yields. Through this grant, Energy Assured Nigeria Limited increased food and agriculture system productivity and enhanced efficient production along the value chains to unlock agricultural production that has been limited by COVID-19's impact on food production, processing, and distribution in Nigeria.

## FUNDING TOTAL

\$149,298

## BUSINESS DETAILS

Mid-Stage

## VALUE CHAINS

Rice, Wheat, and Vegetables

## STATES IMPLEMENTED

Bauchi State

## MAIN AREA OF IMPACT

Enhanced Environmental Sustainability

## SECONDARY AREAS OF IMPACT

Expanded Access to Inputs and Mechanized Farming and Improved Management Practices for Increased On-Farm Productivity

## KEY RESULTS

- Increased the number of mobile solar water pumps from 65 to 117
- Expanded to five new local government areas and two neighboring states
- Provided solar-powered water pumps to 2,410 smallholder farmers
- Reduced farmers' watering costs by 50 percent, compared to diesel-powered methods
- Raised awareness about solar pumping to 222,900 smallholder farmers
- Trained 171 smallholder farmers on the best agronomic practices for maximum yields
- Increased revenue from \$73,201 to \$216,150 per year

# EZFarming



© EZFARMING

**EZFarming** is a marketplace that helps farmers finance their business and sell their produce by connecting them to a network of micro-lenders and produce buyers. Many farmers in Nigeria lack access to credit, land, and irrigation facilities and do not know the best agronomic practices to increase crop yields, which are all problems that have been worsened by the COVID-19 pandemic and climate change. With funding from USAID/Nigeria, EZFarming brought an additional 276 smallholder farmers, 67 buyers and other non-farmer network members, and 50 youths in Osun State into their network to help them scale their farms and increase their production capacity. The company also used funding to support youth engagement in agriculture by assigning youth interns to farmers to gain experience and will provide training on the best agronomic practices to increase crop yield. With the expansion of their existing model, EZFarming will boost food security, increase farmer productivity, and improve standards of living at the base of the pyramid in Nigeria.

## FUNDING TOTAL

\$74,364

## BUSINESS DETAILS

Youth-Led and Women-Led

## VALUE CHAINS

Finance, Crop Production, and Produce Marketing

## STATES IMPLEMENTED

Osun State

## MAIN AREA OF IMPACT

Improved Management Practices for Increased On-Farm Productivity

## SECONDARY AREAS OF IMPACT

Expanded Access to Inputs and Mechanized Farming and Strengthened Market Linkages

## KEY RESULTS

- Increased network size by 443 people, including 50 youths
- 200 trained farmers received an additional two acres of land each to farm rice and maize
- Increased revenue by 33 percent
- Increased yield of farmers by an average of 39 percent—from 2.94 to 4.08 tons per hectare
- Increased incomes for some farmers by about 49 percent



# FarmImpact Limited



© FARMIMPACT LIMITED

**FarmImpact Limited** provides post-harvest credit and storage bags to smallholder farmers to enable them to store, save, and sell their crops later during the dry season when prices are higher. FarmImpact Limited's loans help to reduce post-harvest food loss that threatens food security and allows farmers to store their crops for longer and sell them for higher prices, increasing their resilience against price shocks. With funding from USAID/Nigeria, FarmImpact Limited provided post-harvest loans and Purdue Improved Crop Storage (PICS) bags to 1,000 smallholder farmers in Gombe State, including 190 women. These loans and storage solutions supported the incomes, food security, and agency of FarmImpact Limited's clients.

## FUNDING TOTAL

\$74,995

## BUSINESS DETAILS

Youth-Led

## VALUE CHAINS

Maize

## STATES IMPLEMENTED

Gombe State

## MAIN AREA OF IMPACT

Reduced Post-Harvest Losses Through Improved Storage

## SECONDARY AREAS OF IMPACT

Expanded Access to Inputs and Mechanized Farming

## KEY RESULTS

- Provided loans and PICs bags to 1,000 smallholder farmers, including 190 women
- On track for a 100 percent repayment rate
- 1,000 smallholder farmers were able to sell their crops at up to 35 percent higher prices
- Farmers who received the loan retained about 53 percent more maize than their counterparts
- Increased number of clients from 200 to 1,000 customers per loan cycle
- Received \$50,000 in additional grant capital

# FARM Network Services



© FARM NETWORK SERVICES

**FARM Network Services (FarmNet)** is an agricultural firm involved in the rice value chain from start to finish, including primary production of rice, processing, and sales. While the COVID-19 pandemic disrupted food production in Nigeria, FarmNet's use of mechanized equipment reduces the physical burden on smallholder farmers, increases productivity, and improves the sustainability of rice production. The company provides farmers with access to agro-inputs at affordable rates through a network of Agro Service Centers for equipment hiring, Agro Service Shops for farm inputs, and Agro Service Points for the processing and packaging of rice. With funding from USAID/Nigeria, FarmNet allocated 600 hectares of farmland to participating farmers and both procured and deployed a combine harvester to harvest rice for 600 smallholder farmers. These farmers were trained for four weeks on contract farming and good agricultural practices, and as a result, they increased food and agricultural system productivity and produced rice more efficiently.

## FUNDING TOTAL

\$150,000

## BUSINESS DETAILS

Mid-Stage

## VALUE CHAINS

Rice

## STATES IMPLEMENTED

Nasarawa State

## MAIN AREA OF IMPACT

Expanded Access to Inputs and Mechanized Farming

## SECONDARY AREAS OF IMPACT

Improved Management Practices for Increased On-Farm Productivity, Increased Market Potential Through Improved Agro-Processing, and Increased Sustainable Production and Environmental Sustainability

## KEY RESULTS

- Signed contract farming agreements with 600 smallholder rice farmers
- Reduced harvest and post-harvest losses by 90 percent
- Farmers harvested 1,500 tons of rice for FarmNet's' rice milling operations
- Improved average farm yield by 66.67 percent
- Increased incomes for farmers by 50 percent
- Increased revenue from \$360,000 to \$728,000
- Secured \$120,000 in additional investment from a private fund

# Farmplify Agriculture Development Limited



© FARMPLIFY AGRICULTURE DEVELOPMENT LIMITED

**Farmplify Agriculture Development Limited** is a grain aggregation and storage business that leverages digital technology to connect farmers with multiple end-users in agricultural processing, storage, retail, exporting, restaurants, and catering services. Farmplify's work helps reduce food loss in the agricultural value chain, a problem that was exacerbated by the COVID-19 pandemic. With funding from USAID/Nigeria, Farmplify hired 26 extension agents and trained 1,465 farmers on good agricultural practices, marketing, financial literacy, and digital literacy. The company also established an aggregation center and a digital hub, a chatbot service to handle incoming questions from farmers on its site, and a 4,000 metric ton grain storage facility. This grant sought to increase productivity and enhance efficient production to unlock agricultural production that has been limited by COVID-19's impact on food production, processing, storage, and distribution in Nigeria.

## FUNDING TOTAL

\$114,498

## BUSINESS DETAILS

Mid-Stage

## VALUE CHAINS

Paddy Rice, Groundnuts, Millet, and Beans

## STATES IMPLEMENTED

Kebbi and Benue States

## MAIN AREA OF IMPACT

Reduced Post-Harvest Losses Through Improved Storage

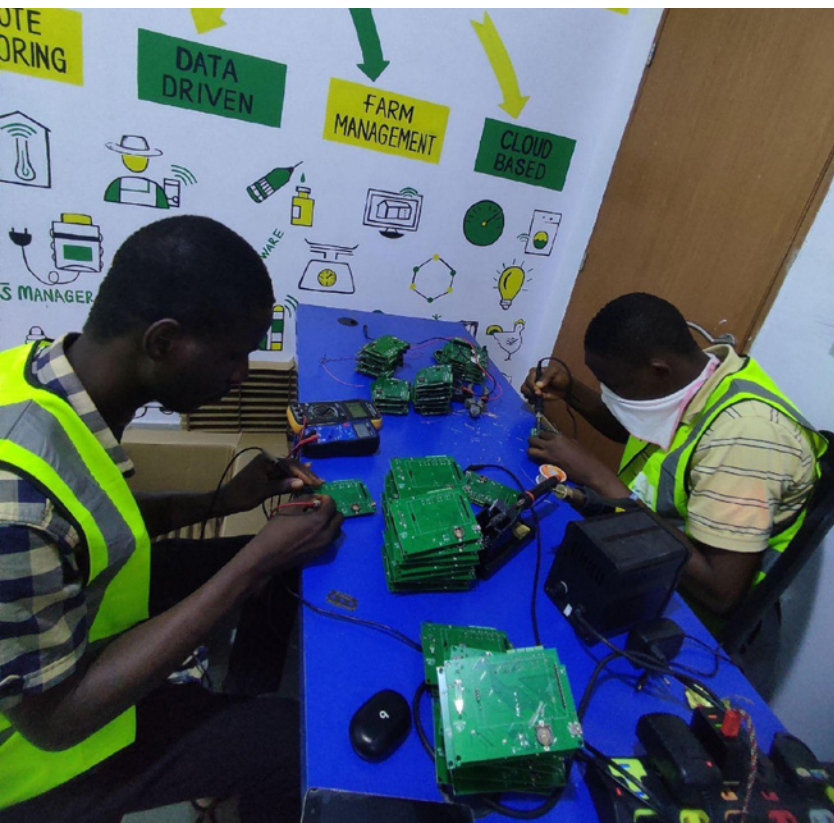
## SECONDARY AREAS OF IMPACT

Reduced Post-Harvest Losses Through Improved Storage and Strengthened Market Linkages

## KEY RESULTS

- Hired 26 extension agents and trained 1,465 farmers on good agricultural practices, marketing, financial literacy, and digital literacy
- Registered 413 commodity buyers and 1,015 new farmers on its digital marketplace
- Increased revenue from \$54,054 to \$81,081 per month
- Increased aggregation capacity from 120 to 360 metric tons
- Increased storage capacity by 4,000 metric tons through new facility
- Increased customer base from 289 to 616 customers
- Improved farmers' incomes by 14 percent
- Expanded market size from three to five states

# FarmSpeak Technology



© FARMSPEAK TECHNOLOGY

**FarmSpeak Technology** is a startup that develops smart innovations to help smallholder poultry farmers reduce poultry mortality rates, regulate the poultry environment, and improve management practices by poultry farmers. One of these innovations is a poultry house monitoring system called Penkeep, which monitors microclimatic parameters of a poultry house and provides real-time alerts with actionable information to farmers. The company also developed FS Manager, a disease diagnosis and electronic farm diary that also serves as accounting software for small-scale poultry farmers. These tools aim to increase productivity and enhance efficient production along the poultry value chain, which has been limited by COVID-19's impact on food production, processing, and distribution in Nigeria. With funding from USAID/Nigeria, FarmSpeak Technology helped smallholder farmers minimize losses in their production and accounting processes, reduce their mortality rates, access prompt management advice, and increase their confidence toward accessing funds to expand their business.

## FUNDING TOTAL

\$73,473

## BUSINESS DETAILS

Youth-Led

## VALUE CHAINS

Poultry

## STATES IMPLEMENTED

Ogun, Lagos, Oyo, and Osun States

## MAIN AREA OF IMPACT

Improved Management Practices for Increased On-Farm Productivity

## SECONDARY AREAS OF IMPACT

Improved Nutrition

## KEY RESULTS

- Increased revenue from almost none to \$5,000
- 20x growth in the number of penkeeps—from 20 to 400 units
- Increased number of subscribers to FS Manager from 200 to 3,500 subscribers
- Reached 1,000 farmers through monthly virtual training sessions on poultry farming best practices and community outreach activities
- Reduced inventory theft for farmers in Erikorodo by up to 20 percent
- Reduced mortality rate for farmer's poultry in Simawa Settlement from 20 to 15 percent

# Flourish ColdChain Limited



© FLOURISH COLDCHAIN LIMITED

**Flourish ColdChain Limited** is a youth-led business that provides efficient and affordable refrigeration systems to off-grid communities to help extend the freshness of vegetables, fruits, and meat from two days without refrigeration to about ten days. Nigeria has one of the largest energy access gaps in the world, causing food spoilage due to lack of cold storage and resulting in massive post-harvest losses for smallholder farmers, effects that have been compounded by the COVID-19 pandemic. With funding from USAID/Nigeria, Flourish Coldchain Limited deployed 12 solar fridges in four different markets in the fourth quarter of 2021 and another 12 solar fridges in four different markets in 2022.

## FUNDING TOTAL

\$85,984

## BUSINESS DETAILS

Youth-Led

## VALUE CHAINS

ColdChain Storage Systems

## STATES IMPLEMENTED

Abuja, Bayelsa, Benue, Delta, Imo, Lagos, and Nasarawa States

## MAIN AREA OF IMPACT

Reduced Post-Harvest Losses Through Improved Storage

## SECONDARY AREAS OF IMPACT

Increased Sustainable Production and Environmental Sustainability

## KEY RESULTS

- Deployed 24 solar fridges in eight markets
- Increased customers for solar fridges from 250 to 5,918 farmers and rural market women
- Customers saw a 35 percent increase in revenue as a result of reduced losses and corresponding sales
- Secured \$500,000 in additional investment

# Freshmarte Global Services Limited (Farmcorps)



© FARMCORPS

**Freshmarte Global Services Limited** is an agritech company that created a digital platform to help agro-processing and food companies aggregate quality produce from smallholder farmers in Nigeria. When the COVID-19 pandemic disrupted the global movement of goods, it forced many agro-processing and food companies in Nigeria to shift toward local sourcing of farm produce. However, the lack of transparency in the agricultural supply chain and low quality of goods caused many local farmers' materials to be rejected by food companies. Freshmarte's digital platform FarmCorps is used to manage clusters of farms and monitor crop production levels, creating transparency in the agricultural supply chain and ensuring better quality of goods for local farmers. With funding from USAID/Nigeria, Freshmarte has trained over 500 farmers in sustainable food production, leading to quality maize production, and has increased maize yield and incomes for 150 smallholder farmers. The company also designed and developed two new digital platforms: (1) Seedr, a data-driven, mobile platform to help extension officers provide targeted advisory services for smallholder farmers, and (2) a Buyers Web Platform, for food companies to issue production contracts to smallholder farmers and get visibility into their supply chains.

## FUNDING TOTAL

\$62,590

## BUSINESS DETAILS

Youth-Led and Women-Led

## VALUE CHAINS

Maize

## STATES IMPLEMENTED

Kaduna, Ogun, and Oyo States

## MAIN AREA OF IMPACT

Strengthened Market Linkages

## SECONDARY AREAS OF IMPACT

Expanded Access to Inputs and Mechanized Farming, Improved Management Practices for Increased On-Farm Productivity, and Increased Sustainable Production and Environmental Sustainability

## KEY RESULTS

- Secured forward contracts from Aace Food (for 250 tons per year) and two other offtakers to create ready access to the market and unlock input financing for smallholder farmers
- Facilitated over \$100,000 in input financing for 150 smallholder farmers
- Trained over 500 farmers in sustainable food production
- Increased maize yield for 150 farmers from 1.5 to five tons (an average of 300 percent)
- Increased incomes by over 400 percent for 150 farmers
- Increased revenue by over 150 percent annually

# Gum Arabic Company Nigeria Limited



© GUM ARABIC COMPANY NIGERIA LIMITED

**Gum Arabic Company Nigeria (GACON) Limited** is an agribusiness company that procures raw ginger and other agricultural commodities from rural farmers, processes them, and exports them to the United States and other parts of the world. Nigeria is the third-largest producer of ginger, but it is often sold at low prices due to old-fashioned processing techniques, poor handling, and the absence of washing before slicing. As a result of increased food safety requirements due to COVID-19, Nigerian ginger is sometimes rejected in the international market. With funding from USAID/Nigeria, GACON purchased equipment to enhance ginger production, including six motorized tricycles to transport the ginger from farms to its processing facility, mechanical washers to wash the ginger, and open-air stainless steel solar dryers to dry the ginger. These machines eliminate the critical points through which contaminants access the ginger and increased productivity and incomes for ginger farmers.

## FUNDING TOTAL

\$147,316

## BUSINESS DETAILS

Mid-Stage and Women-Led

## VALUE CHAINS

Ginger

## STATES IMPLEMENTED

Kano and Kaduna States

## MAIN AREA OF IMPACT

Increased Market Potential Through Improved Agro-Processing

## KEY RESULTS

- Formed 36 ginger cooperatives with a total of 360 farmers
- Increased the volume of ginger sold by 50 percent
- Increased revenue by 29.8 percent—from \$1,018,662 to \$1,322,355 over a half-year period
- Increased production capacity by 50 percent—from 800 to 1,200 tons per year
- Doubled the number of international buyers from three to six
- Trained 360 farmers in good agricultural practices to improve ginger quality and yields
- Trained farmers went on to train an additional 2,520 ginger farmers (935 men, 1,585 women)
- Purchased 560 tons of fresh ginger from farmers, with plans to buy an additional 1,668 tons by January 2023

# Hasanta Integrated Farm Enterprises



© HASANTA INTEGRATED FARM ENTERPRISES

**Hasanta Integrated Farm Enterprises** is an Abuja-based aquaculture company that produces catfish fingerlings and oven dried catfish, as well as trains of women and youth on general fish farm management. The company's innovation uses heated water to improve the catfish hatching process, enabling Hasanta to increase catfish production and improve the value and shelf life of fish products, thereby countering some of the negative effects of COVID-19 on food security in Nigeria. With funding from USAID/Nigeria, Hasanta upgraded from gas fire to more sustainable solar-powered heat bulbs in the catfish and poultry hatcheries in order to improve hatchability. The company also used challenge funding to train 850 local fish farmers across eight states on the fish farming value chain, climate-smart technologies, modern fish farming techniques, and holistic management of natural resources and ecosystems.

## FUNDING TOTAL

\$47,681

## BUSINESS DETAILS

Youth-Led and Women-Led Business

## VALUE CHAINS

Aquaculture (Catfish Farming) and Poultry

## STATES IMPLEMENTED

Abia, Abuja, Ekiti, Enugu, Kogi, Nasarawa, Niger, and Ondo States

## MAIN AREA OF IMPACT

Improved Management Practices for Increased On-Farm Productivity

## SECONDARY AREAS OF IMPACT

Increased Market Potential Through Improved Agro-Processing, Increased Sustainable Production and Environmental Sustainability, and Improved Nutrition

## KEY RESULTS

- Trained 850 fish farmers on the fish farming value chain, climate-smart technologies, modern fish farming techniques, and holistic management of natural resources and ecosystems
- Reduced breeding time from every two months to every three weeks
- Procured and installed 65 hatchery ponds and 45 nursery ponds
- Increased catfish hatchery processing capacity by 500 percent—from 200 to 1,000 kilograms of oven-dried catfish per month
- Increased hatchability for catfish farmers by 70 percent
- Increased revenue from an average of \$1,726 to \$7,160 per month



# HerVest



© HERVEST

**HerVest** is a female-focused digital platform that enables women to participate in key financial services such as savings, investment, and credit, particularly for marginalized smallholder female farmers in Nigeria, many of whom were negatively impacted by the COVID-19 pandemic's effects on food production, processing, and distribution. With funding from USAID/Nigeria, HerVest increased access to financing for 900 female smallholder female farmers through Project Fund a Female Farmer, equipping them with the resources to improve agricultural productivity, increase yields, and access savings.

## FUNDING TOTAL

\$149,980

## BUSINESS DETAILS

Mid-Stage and Women-Led Business

## VALUE CHAINS

Maize, Rice, and Sorghum

## STATES IMPLEMENTED

Benue, Kaduna, Kwara, Niger, and Oyo States

## MAIN AREA OF IMPACT

Strengthened Market Linkages

## SECONDARY AREAS OF IMPACT

Improved Management Practices for Increased On-Farm Productivity and Strengthened Market Linkages

## KEY RESULTS

- Increased access to financing for 900 female smallholder farmers
- Farmers recorded an average increase in yields of 75 percent
- Gained over 16,000 additional users to the platform, including farmers and retail investors
- Increased incomes by an average of \$400 due to increased yield and sales
- Increased revenue from \$2,500 to \$7,500 per month
- Helped farmers sell 1,700 tons of rice to offtakers

# Kakasku Blan Integrated Farm and Hatcheries



© KAKASKU BLAN

**Kakasku Blan Integrated Farm and Hatcheries** is a poultry and organic fertilizer production company based in Yobe State that raises chickens, uses chicken manure to manufacture organic fertilizer, and sells the fertilizer to smallholder farmers. Kaskaku Blan is one of the first Nigerian companies to use animal waste for the production of organic fertilizer, which is eco-friendly and more affordable to local smallholder farmers than inorganic fertilizer. With funding from USAID/Nigeria, Kakasku Blan mechanized its organic fertilizer, animal feed, and poultry hatchery to help increase food production and incomes for farmers struggling due to the COVID-19 pandemic's effects on food security in Nigeria. The company also used funding to train farmers to improve their production capacity and created new, sustainable jobs.

## FUNDING TOTAL

\$44,300

## BUSINESS DETAILS

Youth-Led Business

## VALUE CHAINS

Livestock and Organic Fertilizer Production

## STATES IMPLEMENTED

Yobe State

## MAIN AREA OF IMPACT

Enhanced Environmental Sustainability

## SECONDARY AREAS OF IMPACT

Expanded Access to Inputs and Mechanized Farming, Improved Management Practices for Increased On-Farm Productivity, and Improved Nutrition

## KEY RESULTS

- Increased production capacity of organic fertilizer from one to six tons in five days
- Increased poultry feed capacity of organic fertilizer from one ton per day to one ton per hour
- Increased production capacity of day old chicks from 300 to 10,000 chicks per month
- Increased yield for farmers from five to ten bags of millet per hectare
- Doubled income from crops for farmers due to training and fertilizer
- Increased revenue by 438 percent per month
- 120 new customers are purchasing fertilizers, poultry feed, and day-old chicks

# Kitovu Technology Company



© KITOVU TECHNOLOGY COMPANY

**Kitovu Technology Company** is a Nigerian agritech startup that builds climate smart farm and post-harvest infrastructure for agriculture. The company's infrastructure helps address food security in Nigeria by helping smallholder farmers optimize their productivity and incomes while reducing food loss. With funding from USAID/Nigeria, Kitovu developed StorageX, a web platform that applies data science and remote sensing to provide smallholder farmers with precise inputs, personalized soil and crop health insights, storage, and market linkages, as well as leased six warehouses for the StorageX service. Through the service, the company aimed to provide smallholder farmers with access to post-paid storage services and post-harvest loans that incentivize them to store their farm produce and promote innovative, local food-based models. The company also provided farmers with hermetically sealed Purdue Improved Crop Storage (PICS) bags to store their dried grains.

## FUNDING TOTAL

\$74,881

## BUSINESS DETAILS

Youth-Led and Women-Led Business

## VALUE CHAINS

Maize, Soya Bean, Rice, and Sorghum

## STATES IMPLEMENTED

Gombe and Niger States

## MAIN AREA OF IMPACT

Reduced Post-Harvest Losses Through Improved Storage

## SECONDARY AREAS OF IMPACT

Strengthened Market Linkages and Increased Sustainable Production and Environmental Sustainability

## KEY RESULTS

- Developed and launched the StorageX platform and electronic warehouse system
- Enrolled 306 farmers on the platform
- Established and operationalized six warehouses that can store a combined total of 1,200 tons of agricultural products
- Secured supply contract from AFEX Commodities Exchange for the supply of 3,000 tons of maize, soya bean, and sorghum, valued at over \$1 million
- Impacted 173 farmers' incomes through an average market price appreciation of 23 percent
- Increased ease of sale of produce, with 100 percent of participating farmers' produce sold
- Generated over \$100,000 in revenue during the project period

# Melkim Wallocks



© MELKIM WALLOCKS

**Melkim Wallocks** is a rice processing company based in Kaduna State that previously used a single milling rice process. While the single milling rice process takes less time than a double milling process, it is less efficient because it produces mixed rice bran and a higher percentage of broken milled rice, which negatively impacts the productivity and profitability of the mill. With funding from USAID/Nigeria, Melkim Wallocks purchased equipment to implement a double milling process to increase production, improve the quality of outputs, and reduce the amount of broken rice. The company also built the capacity of 345 smallholder rice farmers to use climate-smart agricultural practices and increase productivity.

## FUNDING TOTAL

\$71,665

## BUSINESS DETAILS

Youth-Led

## VALUE CHAINS

Rice

## STATES IMPLEMENTED

Kaduna State

## MAIN AREA OF IMPACT

Increased Market Potential Through Improved Agro-Processing

## SECONDARY AREAS OF IMPACT

Improved Management Practices for Increased On-Farm Productivity and Increased Sustainable Production and Environmental Sustainability

## KEY RESULTS

- Increased production capacity by 400 percent
- Increased customer base by 185 percent
- Increased monthly revenue by 300 percent
- Increased sourcing from ten to 95 tons of rice paddy per month from two rice farming cooperatives
- 345 farmers trained on climate-smart agricultural practices and how to increase productivity

# Melwing Nigeria Limited



© MELWING NIGERIA LIMITED

**Melwing Nigeria Limited** is a startup that processes plantains into plantain flour, plantain chips, and "Melwing food," a staple food product made from plantains and soybeans. While the COVID-19 pandemic threatened food security in Nigeria and made it more difficult for people to access affordable food products, Melwing empowered smallholder plantain farmers to increase productivity and provided steady market access, financial support, and technical support through trainings by community liaison officers (CLOs). With funding from USAID/Nigeria, Melwing trained 300 plantain farmers and provided stipends to enable them set up structures to increase productivity. The company also set up 12 plantain collection points, purchased equipment to increase its processing capacity, and recruited 12 CLOs across Bayelsa, Delta, Cross Rivers, Edo, and Rivers States.

## FUNDING TOTAL

\$106,680

## BUSINESS DETAILS

Mid-Stage and Women-Led Business

## VALUE CHAINS

Plantains

## STATES IMPLEMENTED

Bayelsa, Cross Rivers, Delta, Edo, and Rivers States

## MAIN AREA OF IMPACT

Improved Management Practices for Increased On-Farm Productivity

## SECONDARY AREAS OF IMPACT

Expanded Access to Inputs and Mechanized Farming, Increased Market Potential Through Improved Agro-Processing, Strengthened Market Linkages, Increased Sustainable Production and Environmental Sustainability, and Improved Nutrition

## KEY RESULTS

- Engaged and trained more than 300 new plantain farmers in farming best practices
- 275 percent increase in production capacity—from 800 kilograms to three tons per month
- Reduced processing time for 40 kilograms of plantains from eight to two hours
- Increased revenue for farmers from an average of \$50 to \$180 per month
- Increased volume of sales from an average of 65 to 230 kilograms per farmer
- Expanded from 25 to 40 distributors and gained 1,500 new end users

# MUBAL Agro and General Enterprise Nigeria



© MUBAL AGRO AND GENERAL ENTERPRISE NIGERIA

**MUBAL Agro and General Enterprise Nigeria** is a Sokoto-based agro-allied company that developed a highly nutritious powder food blend from malted sorghum combined with soybeans, groundnuts, tiger nuts, and date palm. As Nigeria has struggled with a food security crisis exacerbated by the COVID-19 pandemic, MUBAL's powder food blend is affordable and contains 50 to 70 percent of the World Health Organization's recommended nutrients for children between the ages of one and nine. With funding from USAID/Nigeria, MUBAL procured equipment to improve the quality and increase production of the product to meet consumer demand, including a soybean dehulling machine, a groundnut shelling machine, a flour milling machine, a packing and sealing machine, an oven drier, and five groundnut red skin peelers. To power this equipment, the company also procured and installed a solar source of electricity supply.

## FUNDING TOTAL

\$63,323

## BUSINESS DETAILS

Youth-Led and Women-Led Business

## VALUE CHAINS

Sorghum

## STATES IMPLEMENTED

Sokoto State

## MAIN AREA OF IMPACT

Improved Nutrition

## SECONDARY AREAS OF IMPACT

Increased Sustainable Production and Environmental Sustainability

## KEY RESULTS

- In a sample analysis conducted among 100 consumers of MUBAL's product (children ages 1-5), 22 with Severe Acute Malnutrition and 73 with Moderate Acute Malnutrition showed significant improvement within five to ten days
- Increased production capacity from 75 to 5,028 kilograms per week on average
- Increased supply of raw materials from 900 to 24,000 kilograms—a 26x increase
- Increased revenue from \$4,845 to \$46,477 per year
- Guaranteed offtake of 21 percent of sorghum, 46 percent of soybeans, 41 percent of groundnut, and 39 percent of tiger nuts from the annual produce of six smallholder farmers

# Nnachet Farms



© NNACHET FARMS

**Nnachet Farms** is an agricultural enterprise startup that works in catfish processing, drying, and packaging for the production of oven-dried catfish, catfish suya, and catfish oil. While the COVID-19 pandemic and associated lockdowns slowed down the agricultural sector and food industry and threatened food security in Nigeria, Nnachet Farms helps address the crisis by producing fish and fish products at a large scale. With funding from USAID/Nigeria, Nnachet Farms developed and promoted an innovative food model through local production, processing, and distribution of catfish. The company also purchased equipment to increase the production, packaging, storage, and distribution of its catfish products.

## FUNDING TOTAL

\$55,024

## BUSINESS DETAILS

Youth-Led Business

## VALUE CHAINS

Catfish

## STATES IMPLEMENTED

Enugu State

## MAIN AREA OF IMPACT

Increased Market Potential Through Improved Agro-Processing

## SECONDARY AREAS OF IMPACT

Improved Nutrition

## KEY RESULTS

- Increased total catfish processing from 6,500 to 24,000 kilograms per year
- Increased catfish drying capacity from 4,800 to 14,200 kilograms per year
- Increased production capacity of oven-dried catfish from 1,200 to 3,550 kilograms per year
- Increased production capacity of catfish suya from 80 to 196 kilograms per year
- Increased production capacity of catfish oil from 48 to 120 liters per year
- Increased customer base from 362 to 979 customers, with 17 distributors
- Secured a contract to supply 72 kilograms of oven-dried catfish to two hotels and 24 kilograms of oven-dried catfish to a restaurant each month

# Orisha Farms Nigeria



© ORISHA FARMS NIGERIA

**Orisha Farms Nigeria** is a youth-driven farm organization in Lagos that is committed to increasing aquaculture production in Nigeria and reducing foreign dependency in the sector. Orisha Farms practices cage culture aquaculture, a technology system for fish farming that involves farming fish on existing bodies of water using a system of specialized cage frames and nets. This system of farming increases productivity and profitability for farmers that were negatively affected by the COVID-19 pandemic by allowing more fish to be farmed than by using earthen ponds, artificial ponds, and other methods. With funding from USAID/Nigeria, Orisha Farms procured cages and trained smallholder farmers on cage culture technology, ensuring that more farmers had the knowledge necessary to venture into cage culture aquaculture to increase their fish production capacity. The company also procured two drying kilns and a blast freezer to increase the value of fish.

## FUNDING TOTAL

\$60,590

## BUSINESS DETAILS

Youth-Led Business

## VALUE CHAINS

Aquaculture

## STATES IMPLEMENTED

Lagos State

## MAIN AREA OF IMPACT

Improved Management Practices for Increased On-Farm Productivity

## SECONDARY AREAS OF IMPACT

Increased Sustainable Production and Environmental Sustainability and Improved Nutrition

## KEY RESULTS

- Increased fish production capacity by 125 percent—from 12 to 28 tons per year
- Increased the volume of fish sales by 250 percent
- Sold fish to 30 households at a lower price than was available at the local market
- Employed 22 people from the local community, including youths
- Trained 116 youths and women on cage culture and aquaculture
- 70 percent of participating farmers adopted improved aquaculture management practices



# Reeddi Technologies Limited



© REEDDI TECHNOLOGIES LIMITED

**Reeddi Technologies Limited** is a youth-led company in Nigeria that created TempOwn, a cloud-based, secure digital marketplace where farmers and agricultural professionals can access essential agricultural tools, equipment, and machinery. TempOwn allows companies, farmers, and individuals to list their equipment on TempOwn for rental, eliminating the upfront costs of buying that hinder productivity and scalability for farmers and agricultural professionals, particularly during the COVID-19 pandemic. With funding from USAID/Nigeria, Reeddi Technologies Limited finalized TempOwn and reached out to farmers to adopt the platform.

## FUNDING TOTAL

\$74,948

## BUSINESS DETAILS

Youth-Led Business

## VALUE CHAINS

Agritech

## STATES IMPLEMENTED

Lagos, Ogun, Osun, and Oyo States

## MAIN AREA OF IMPACT

Expanded Access to Inputs and Mechanized Farming

## KEY RESULTS

- Completed the TempOwn platform
- Increased the number of users on the platform from 20 to 169 active users
- Over 85 users rented farming equipment through the platform
- Processed \$3,200 worth of rental transactions on TempOwn since its launch in October 2021
- Reduced energy costs for farmers by 30 percent through rented solar-powered equipment
- 43 equipment vendors on the platform gained increased visibility for their products

# Relief Marketplace Nigeria Limited



© RELEAF MARKETPLACE NIGERIA LIMITED

**Relief Marketplace Nigeria Limited** is a mid-stage company that is industrializing Nigeria's palm nut value chain with two innovations, Supplier Automated Logistics Transparency (SALT) and Kraken. SALT is a software that allows trained field officers to directly source palm nuts from smallholder farmers before de-shelling, and Kraken is a proprietary, low-cost palm nut de-shelling machine that allows palm nuts to be de-shelled before they are sold to manufacturers and food factories. While the COVID-19 pandemic had an unprecedented impact on rural small-scale producers in Nigeria, Relief's innovations help establish direct supply relationships with farmers, increase production, and limit price hikes. With funding from USAID/Nigeria, Relief expanded the use of SALT and Kraken to 1,484 farmers in Cross River State to increase efficiency, reduce waste, and improve livelihoods.

## FUNDING TOTAL

\$149,191

## BUSINESS DETAILS

Mid-Stage Business

## VALUE CHAINS

Oil Palm

## STATES IMPLEMENTED

Cross River State

## MAIN AREA OF IMPACT

Strengthened Market Linkages

## SECONDARY AREAS OF IMPACT

Increased Market Potential Through Improved Agro-Processing

## KEY RESULTS

- Expanded use of SALT and Kraken to 1,484 farmers in Cross River State
- Doubled production capacity from five to ten tons of palm nuts cracked per hour
- Through SALT, 387 farmers requested a loan or notified Relief of palm nut availability
- Sourced 8,782 tons of palm nuts from 2,100 smallholder farmers in Cross River via a stable buyer and lower logistics, transport, and de-shelling costs
- Increased company revenue by 300 percent
- Raised \$3.3 million in new funding

# Revemi Trade Limited



© REVEMI TRADE LIMITED

**Revemi Trade Limited**, youth-led company founded in 2020, aims to support smallholder farmers producing palm oil, cassava, beans, plantains, and yams in Delta State by better connecting them to domestic and international markets. The COVID-19 pandemic strained food production and obstructed distribution networks, but Revemi Trade worked to establish an inclusive and resilient supply chain and improve the ability of women and men at the base of the pyramid to use good agronomic practices to produce high-quality cassava that can be sold to Revemi Trade and other vendors. With funding from USAID/Nigeria, Revemi Trade provided 2,500 smallholder cassava farmers with climate and environmental early warning alerts, training on good agronomic practices, and access to market activities and information through its tech-enabled Eki Farmers Support Program.

## FUNDING TOTAL

\$83,635

## BUSINESS DETAILS

Youth-Led Business

## VALUE CHAINS

Cassava

## STATES IMPLEMENTED

Delta State

## MAIN AREA OF IMPACT

Improved Management Practices for Increased On-Farm Productivity

## SECONDARY AREAS OF IMPACT

Reduced Post-Harvest Losses Through Improved Storage, Strengthened Market Linkages, and Improved Nutrition

## KEY RESULTS

- Provided 2,500 smallholder cassava farmers with access to the Eki Farmers Support Program
- Sent out early warning alerts about impending droughts to 500 farmers, enabling them to adjust planting times and save land preparation costs of up to \$765 per hectare
- Doubled production of packaged garri
- Sold 700 metric tons of fresh cassava tubers to four large-scale processors
- Made an agreement with four smallholder farmer communities to supply 200 metric tons of cassava tubers per year
- Made an agreement with two farming cooperatives to supply 200-500 tons of cassava per year
- Revemi's revenue increased from \$5,400 to \$92,857 per year

# Royal Blue Contractors Limited



© ROYAL BLUE CONTRACTORS LIMITED

**Royal Blue Contractors Limited** is one of the leading input distribution companies in the agricultural value chain in Nigeria. The company is involved in trading and selling fertilizers, seeds, and agrochemicals. The COVID-19 pandemic made it more difficult for rural farmers to access seeds due to lockdowns that shut down transportation and urban to rural migration that stressed the job markets in urban areas and placed more strain on rural farmers to produce food, but this company's innovative approach scales up seed supplies for these farmers. With funding from USAID/Nigeria, Royal Blue Contractors and East-West Seed established a motorcycle squad as part of the "Seeds on Wheels" approach to accelerate the pace of seed delivery. The company also established 75 demonstration farmers to showcase the benefits of new types of seeds and link farmers to agro-dealers distributing the seeds in their communities.

## FUNDING TOTAL

\$55,836

## BUSINESS DETAILS

Mid-Stage Business

## VALUE CHAINS

Vegetables

## STATES IMPLEMENTED

Kaduna State

## MAIN AREA OF IMPACT

Improved Management Practices for Increased On-Farm Productivity

## SECONDARY AREAS OF IMPACT

Improved Management Practices for Increased On-Farm Productivity and Increased Sustainable Production and Environmental Sustainability

## KEY RESULTS

- Trained 6,433 farmers on good agronomic practices, with 1,640 adopting the practices
- Established 75 demonstration farms to showcase seed benefits to 225 smallholder farmers
- Field promoters and agro-dealers sold \$20,256 worth of vegetable seeds
- Improved tomato yields for farmers from 1.2 to 12 tons per acre—a 900 percent increase
- Increased revenue by \$4,666 to a total of \$20,256 over the course of the project
- Increased incomes for farmers from \$125 to \$1,247 from January to September 2022

# SmartAgro Technologies Limited (Aisiki)



© SMARTAGRO TECHNOLOGIES LIMITED

**SmartAgro Technologies Limited** is a tech-enabled food supply chain startup that sources food products from farmers and brands and sells them to restaurants, grocery stores, and neighborhood shops. The company's food logistics program, *Aisiki*, ensures that vendors can access high-quality fruits, vegetables, staples, and proteins with next-day free delivery, while farmers can harvest based on secured demand and acquire higher earnings with low post-harvest losses. Inefficient food distribution, food waste, and lost revenue for farmers are all existing problems in Nigeria that were worsened by the COVID-19 pandemic, but *Aisiki* optimizes the supply chain between farmers and vendors, and the company's suite of mobile apps efficiently facilitate post-harvest processing and sales. With funding from USAID/Nigeria, SmartAgro Technologies acquired a solar-powered cold storage facility in Benin City to keep fruits and vegetables procured from farmers as fresh as possible until they are sold. The company also used challenge funds to further develop the *Aisiki* technologies and expand its customer base.

## FUNDING TOTAL

\$74,953

## BUSINESS DETAILS

Youth-Led Business

## VALUE CHAINS

Food Distribution

## STATES IMPLEMENTED

Edo State

## MAIN AREA OF IMPACT

Strengthened Market Linkages

## SECONDARY AREAS OF IMPACT

Reduced Post-Harvest Losses Through Improved Storage

## KEY RESULTS

- Onboarded 1,097 retailers and 611 farmers to the *Aisiki* platform
- Increased monthly company revenue by 10x—from \$2,000 to \$20,000
- Increased revenue for farmers by 20 percent and for retailers by 15 percent
- Increased volume of sales for farmers by 35 percent and for retailers by 20 percent
- Increased procurement capacity of produce by 13x

# Sosai Renewable Energies Company



© SOSAI RENEWABLE ENERGIES COMPANY

**Sosai Renewable Energies Company** uses market-based strategies to help lift rural communities in northern Nigeria out of poverty by providing access to clean energy and water. While the COVID-19 pandemic caused food shortages and increased prices, Sosai Renewable Energies used women-led solar drying hubs to reduce post-harvest losses for farmers, ensure that food is available year-round in its natural form, and provide women with food and sustainable incomes. With funding from USAID/Nigeria, Sosai Renewable Energies purchased higher quality equipment to increase the production capacity of the solar drying hubs and trained 697 women smallholder farmers on better agricultural practices. The company also strengthened marketing efforts to increase demand for the dehydrated products that come out of the solar drying hubs.

## FUNDING TOTAL

\$149,992

## BUSINESS DETAILS

Mid-Stage and Women-Led Business

## VALUE CHAINS

Tomatoes, Pepper, Onions, Ginger, and Fruit

## STATES IMPLEMENTED

Adamawa, Gombe, and Kaduna States

## MAIN AREA OF IMPACT

Increased Market Potential Through Improved Agro-Processing

## SECONDARY AREAS OF IMPACT

Improved Management Practices for Increased On-Farm Productivity, Reduced Post-Harvest Losses Through Improved Storage, and Increased Sustainable Production and Environmental Sustainability

## KEY RESULTS

- Trained 1,564 farmers on good agricultural practices and climate-smart agriculture
- Introduced three new products—dried onion, stew mix paste, and stew mix powder
- Increased total production from 840 to 39,000 kilograms per month
- Increased average revenue for 74 farmers by 95 percent—from \$63 to \$1,366
- Increased customer base by 76 percent—from 38 to 200 customers
- Expanded market from three to 32 states in Nigeria, with end-users in three additional countries (the United States, United Kingdom, and Turkey)

# Springboard



© SPRINGBOARD

**Springboard** is a network of cocoa, plantain, and rice smallholder farmers in Nigeria that empowers rural farmers, women, and youth in agribusiness. Along with partner New Generation Nutrition, Springboard created the Edible Insect Farming Initiative to help women and youth start cricket farming. In Nigeria, where food security challenges have been exacerbated by the COVID-19 pandemic, the widespread presence of edible insects provides an alternative to meat, dairy, and fish products and can reduce the environmental footprint. With funding from USAID/Nigeria, Springboard and New Generation Nutrition set up a demo cricket farm to serve as a training hub for 42 farmers, 23 of whom have gone to set up their own cricket farms. This has resulted in a year-round supply of affordable, high-protein food for vulnerable groups while stimulating local entrepreneurship and income generation in rural areas.

## FUNDING TOTAL

\$146,389

## BUSINESS DETAILS

Mid-Stage Business

## VALUE CHAINS

Edible Insects

## STATES IMPLEMENTED

Ondo State

## MAIN AREA OF IMPACT

Improved Nutrition

## SECONDARY AREAS OF IMPACT

Increased Sustainable Production and Environmental Sustainability

## KEY RESULTS

- Supported farmers to establish 23 cricket farms across seven communities
- Created jobs for 95 people in the community, including ten bakery staff and 85 retailers of cricket-fortified bread
- Doubled customer base through the sale of cricket-fortified bread
- Partnered with 85 retailers for cricket bread distribution
- Sold more than 25,000 loaves of cricket bread since July 2021

# Tractor on the Go



© TRACTOR ON THE GO

**Tractor on the Go** provides farmers across Nigeria with easy, timely, and affordable access to tractors. The company is helping address food insecurity in Nigeria by increasing farm productivity and the incomes of smallholder farmers through the application of mechanized techniques and expanding the number of tractor and farm equipment operators in rural communities. With funding from USAID/Nigeria, Tractor on the Go established two tractor centers, did capacity-building and training in agriculture mechanization and tractor operations, improved services for equipment lenders, and expanded its customer service outreach.

## FUNDING TOTAL

\$74,030

## BUSINESS DETAILS

Mid-Stage Business

## VALUE CHAINS

Agrotech

## STATES IMPLEMENTED

Ebonyi, Lagos, Niger, Plateau, and Taraba States

## MAIN AREA OF IMPACT

Expanded Access to Inputs and Mechanized Farming

## KEY RESULTS

- Established two tractor centers that serve 584 customers total in Ebonyi and Lagos States
- Reduced the amount of time to harvest by 80 percent
- Reduced harvesting costs for farmers by an average of 68 percent
- Increased revenue from tractor rentals by \$24,000
- Partnered with the Badagry State Ministry of Agriculture for mechanization services on 2,500 hectares of land, which will directly impact at least 1,000 farmers



# Uzoebo Nigeria



© UZOEBO NIGERIA

**Uzoebo Nigeria** is a digital hub for raw and processed agricultural products that fights food insecurity in Nigeria by promoting food availability and reducing food wastage using a hybrid business model. With funding from USAID/Nigeria, Uzoebo Nigeria developed a virtual and physical solar-powered food hub in Delta State that manages the aggregation, packaging, marketing, sales, and distribution of rice and garri that has been aggregated from local and regional smallholder farmers. The hub allows Uzoebo to develop and promote innovative and local food-based models, including the local production, processing, and marketing of foods. Uzoebo Nigeria also used grant funds to train smallholder farmers, create new jobs, and expand its customer base.

## FUNDING TOTAL

\$49,922

## BUSINESS DETAILS

Youth-Led and Women-Led Business

## VALUE CHAINS

Rice and Garri

## STATES IMPLEMENTED

Delta State

## MAIN AREA OF IMPACT

Strengthened Market Linkages

## SECONDARY AREAS OF IMPACT

Increased Sustainable Production and Environmental Sustainability

## KEY RESULTS

- Developed a virtual food hub and a solar-powered physical food hub
- Increased number of customers from 705 to 2,150
- Increased market reach from two to five states
- Sold 256 tons of rice and garri through the virtual and physical food hub
- Reduced the cost of rice by 30 percent as a result of direct aggregation from farmers
- Increased incomes for farmers by 15 percent and business customers by ten percent
- Signed contracts with two smallholder farmer cooperatives to aggregate 1,728 tons of rice and 288 tons of garri per year

# Wandievville Media



© WANDIEVILLE MEDIA

**Wandievville Media** is a media advocacy and communications company focused on African development projects such as agriculture, nutrition, women's development, and community development. During the COVID-19 pandemic, weak market linkages between retailers and egg aggregators contributed to the food security crisis in Nigeria. With funding from USAID/Nigeria, Wandievville Media engaged in socially responsible marketing to increase demand for safe, nutritious foods, spread awareness of the nutritional value and consumption of eggs, and address the market linkages between retailers and egg aggregators. The company promoted the Eggs Make Kids advocacy campaign through stakeholder engagements, branded materials, radio jingles, hospital sensitization activities, the branding of seven primary health care centers in Kaduna State, and market activation of 12 markets in Ogun State. These innovative commercial marketing techniques influenced consumer behavior by increasing the demand and consumption of eggs by children under the age of five.

## FUNDING TOTAL

\$149,975

## BUSINESS DETAILS

Mid-Stage and Women-Led Business

## VALUE CHAINS

Poultry

## STATES IMPLEMENTED

Kaduna and Ogun States

## MAIN AREA OF IMPACT

Improved Nutrition

## KEY RESULTS

- In a household survey of 105 families, families serving eggs to children 2-3 days a week increased from 7.6 to 50 percent over the course of the project
- 1,520 egg vendors in Kaduna State and 307 egg vendors in Ogun State sold their products with Eggs Make Kids branding materials
- Increased the sale of eggs by about 48 percent per year in Kaduna State and by about 38 percent per year in Ogun State
- Distributed 2,600 branded table mats and 480 aprons for egg vendors
- Created radio jingles aired in four languages on major radio stations
- Linked 1072 egg vendors in Kaduna State and 423 egg vendors in Ogun State to suppliers
- Created 24 jobs in Kaduna State and 22 jobs in Ogun State

## ANNEX II: Challenge Results Framework

<b>FTF Goal</b>	Sustainably reduce global hunger, malnutrition, and poverty					
<b>FTF Objectives</b>	Objective 1: Inclusive and sustainable agriculture-led economic growth					
<b>FTF Intermediate Result</b>	<b>Intermediate Result 1:</b> Strengthened inclusive agriculture systems that are productive and profitable		<b>Intermediate Result 3:</b> Increased employment and entrepreneurship		<b>Intermediate Result 4:</b> Increased sustainable productivity, particularly through climate-smart approaches	Currently no Intermediate Result in USAID/Nigeria FTF Results Framework
<b>FSC Goal</b>	Source, support, and accelerate private sector companies to sustainably increase food and agriculture productivity that has been limited by the impacts of COVID-19 in Nigeria					
<b>FTF Objectives</b>	<b>Objective 1:</b> Increase food production, processing, and distribution	<b>Objective 2:</b> Develop and promote innovative and local food-based models	<b>Objective 3:</b> Increase income for women and men at the BOP	<b>Objective 4:</b> Increase challenge winners' capacity to implement and sustainably scale solutions	<b>Objective 5:</b> Increase sustainable productivity and environmental resiliency through climate-smart approaches	<b>Objective 6:</b> Increase engagement with private sector to achieve FTF objectives
<b>FSC Indicators</b>	<b>Portfolio Indicator:</b> Number of technologies, practices, and approaches under various phases of research, development, and uptake as a result of USG assistance. (EG.3.2-7)	<b>Portfolio Indicator:</b> Number of individuals participating in USG food security programs. (EG.3-2)	<b>Portfolio Indicator:</b> Number of new jobs created in Challenged funded company (Custom)	<b>Portfolio Indicator:</b> Number of external partnerships formed by challenge grantees (Custom)	<b>Grantee-Specific Indicator:</b> Number of smallholder farmers and other end-users using climate-smart challenge innovations in their activities (Custom)	<b>Portfolio Indicator:</b> Number of USG engagements jointly undertaken with the private sector to achieve a US foreign assistance objective (PSE 1)

FSC Indicators	<p><b>Grantee-Specific Indicator:</b> Yield of targeted agricultural commodities among program participants with USG assistance. (EG.3-10,11,12)</p>	<p><b>Grantee-Specific Indicator:</b> Number of innovative and local-food based models facilitated by USG assistance (Custom)</p>	<p><b>Grantee-Specific Indicator:</b> Value of annual sales of producers and firms receiving USG assistance (EG.3.2-26 )</p>	<p><b>Portfolio Indicator:</b> Value of new funding (USG commitments, private sector investment, or other) leveraged during the period of performance of the grant to support food security. (EG.3.1-14, Custom)</p>		<p><b>Portfolio Indicator:</b> Number of private sector enterprises that engaged with the USG to support United States foreign assistance objectives (PSE 2)</p>
	<p><b>Grantee-Specific Indicator:</b> Number of individuals in the agriculture system who have applied improved management practices or technologies with USG assistance. (EG.3.2-24)</p>		<p><b>Grantee-Specific Indicator:</b> Number of individuals participating in USG-assisted group-based savings, micro-finance or lending programs. (EG.4.2-7)</p>	<p><b>Grantee-Specific Indicator:</b> Number of instances of technical assistance provided by the challenge (Custom)</p>		<p><b>Portfolio Indicator:</b> Number of private sector enterprises with improved participation in the local economy as a result of USG assistance (PSE 3)</p>
	<p><b>Grantee-Specific Indicator:</b> Number of hectares under improved management practices or technologies with USG assistance. (EG.3.2-25)</p>			<p><b>Grantee-Specific Indicator:</b> Grant volume in USD provided to each Challenge grantee (Custom)</p>		
	<p><b>Grantee-Specific Indicator:</b> Number of grantees who reported expanding their geographical reach during the lifetime of the grant. (Custom)</p>			<p><b>Grantee-Specific Indicator:</b> Share of innovators that have increased knowledge on specifics of their market due to learnings from or facilitated by the challenge. (Custom)</p>		

# ANNEX III: Media Coverage

## Challenge-Wide

**USAID/FTF Agrilinks Blog:** Nigeria Companies are Using innovative Approaches to Reduce Food Loss and Boost Smallholder Farmers' Incomes, December 30, 2022

**USAID Nigeria:** Holiday card, using photo credited to USAID Catalyst/COVID-19 FSC grantee, Royal Blue Contractors, December 29, 2022

**USAID/Nigeria internal newsletter:** Week in Review, April 18-22, 2022

Nigeria: USAID announce 32 winners of \$4 million USAID/Nigeria COVID-19 Food Security Challenge (Panapress)

US announces 32 winners of USAID/Nigeria COVID-19 food security challenge to be awarded \$4 million in funding, 12 are women-led businesses (Today News Africa)

Winners in \$4m COVID-19 Food Security Challenge Have Been Announced (InfoGuide Nigeria)

## Grantee Media

**Afrimash Company Limited:** Article on Investors King: Nigerian Agritech company Afrimash Launches Code to improve Farmers Access to Farm Inputs, Sept 27, 2022

**Afrimash Company Limited:** Article on Vanguard: Food security: Startup boosts access to farm inputs with USSD code launch, Oct 5, 2022

**Afrimash Company Limited:** Article on This Day: Nigeria's Agritech Company Expands Access to Farm Inputs, Oct 2022

**Afrimash Company Limited:** Article on TechEconomy: Top AgriTech Startups to Watch in 2023, Jan 10, 2023

**Afrimash Company Limited:** Article on Investors King: ThriveAgric Unveils Marketplace for Small Scale Farmers, Sept 24, 2022

**Ayosifam Integrated Service:** Article on Blueprint: AYOSIFAM/USAID fortify Kwara cassava farmers against pesticide contamination, June 26, 2022

**Ayosifam Integrated Service:** 100 smallholders Cassava farmers get PPE in five LGAs in Kwara (The Sun)

**Energy Assured Nigeria Limited:** Article on Blueprint Nigeria: Revisiting USAID's COVID-19 Food Security Challenge Intervention, May 30, 2022

**EZFarming:** EZFarming, USAID Launch Empowerment Programme For Unemployed Youths In Osun (Leadership News)

**EZFarming:** USAID, Nigerian firm retool Osun youths (Guardian Nigeria)

**EZFarming:** EZFarming, USAID Launch Empowerment Programs for Smallholder Farmers (The Daily News)

**EZFarming:** EZFarming's Farm Estate Model gets Funding Boost (Business Day)

**Farmspeak Technology:** Article on Business Day: 5 Nigerian start-up entrepreneurs get €120,000 as part of Orange Corners Innovation Fund, Mar 9, 2022

- GACON:** Article on [The Niche](#): Gum Arabic Company Nigeria wins NEPC award for non-oil export, Nov 27, 2022
- HerVest:** Article on [Business Day](#): Solape Akinpelu – Co-Founder/CEO at HerVest, Oct 21, 2022
- HerVest:** Article on [This Day](#): FBNQuest Empowers Women Through Partnership with HerVest, June 2022
- HerVest:** Article on [Bella Naija](#): LifeBank, Bookings Africa, HerVest & 20 Other Nigerian Startups Selected for the 2022 Google Black Founders Fund, Sept 7, 2022
- HerVest:** Article on [Business Day \(paywall\)](#): Kwara partnersHerVest to bridge finance gap for 1000 women farmers, Apr 7, 2022
- HerVest:** Article on [Punch](#): Kwara govt partners HerVest to finance 1,000 women, Apr 7, 2022
- HerVest:** Article on [HF Markets](#): Hervest is taking women’s financial habits beyond routine banking – Solape Akinpelu, CEO, Jan 15, 2022
- HerVest:** Article on [TechEconomy](#): Solape Akinpelu of HerVest Releases ‘Stripped’ to Drive Sustainable Wealth Creation, Dec 6, 2022
- HerVest:** Article on [Legit](#): Solape Akinpelu, Tomi Solanke, others on Legit.ng List of Most Outstanding Business Personalities in Fintech, Jan 3, 2023
- HerVest:** Article on [This Day](#): HerVest CEO Gives Insights on Leveraging the Nigerian Digital, Innovation Ecosystem, Nov, 2022
- HerVest:** Article on [Legit](#): “We Need More African Women to Participate in Financial Services” – Solape Akinpelu, CEO of HerVest, Nov 8, 2022
- HerVest:** Article on [Pulse](#): HerVest gets USAID funding boost, trains 2,680 women farmers on farming best practices and financial literacy, Apr 23, 2022
- HerVest:** Article on [Techpoint Africa](#): What is the potential for a women-focused fintech in Africa?, Oct 31, 2022
- Kakasku Blan Integrated Farm:** Article on [Sun News Online](#): Man discovers coins worth N10m buried in Yobe farm 70 years ago
- Kitovu Technology Company:** Article on [Techcabal](#): Kitovu is increasing Nigeria’s Agriculture Sector’s Profitability and Growth, Dec 2, 2022
- Kitovu Technology Company:** Article on [Techcabal](#): KITOVU – Farm and Post Harvest Infrastructure for the next generation, Aug 22, 2022
- Melwing:** [USAID, Melwing Trains Over 180 Plantain Farmers In Bayelsa And Rivers States](#) (Daily Media)
- Reeddi Technologies Limited:** Article on [Bloomberg](#): Powering Nigeria One Electric Capsule at a Time, Jan 9, 2023
- Reeddi Technologies Limited:** Article on [EnviroNews](#): African climate activists, innovators urged to submit nominations for \$1.2m Earthshot Prize, Jan 12, 2023
- Reeddi Technologies Limited:** Article on [Renewable Energy Magazine](#): EDP funds nine projects that promote access to energy in four African countries, Nov 16, 2022
- Reeddi Technologies Limited:** Article on [Startup Toronto](#): How Reeddi went from dorm room dream to Time magazine’s best inventions list, Feb 4, 2022
- Reeddi Technologies Limited:** Article on [World Economic Forum](#): Africa’s businesses are its secret weapon against climate change, Nov 4, 2022

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