



SMALL RUMINANTS VALUE CHAIN (GOAT)

CAID Experiences and Achievements

Livestock farming is one of the components of Christian Aid's livelihood intervention in Northeast Nigeria targeting households, especially women, who have lost their source of livelihood due to insurgency, CAID's support focuses on productive livestock systems to improve food security and nutrition, thereby improving consumption of animal sources of protein, providing income generation opportunities, and fostering mutual relationships among targeted households and communities. Goat farming has proven to be one of the most sustainable livestock interventions for both vulnerable and non-vulnerable persons globally and this is due to its highly prolific nature, relatively short gestation period, disease tolerance, ease of management, low cholesterol level in meat, high demand, and available markets in both rural and urban settings.

So far in Malakyariri community of Mafa LGA Borno State, Christian aid has supported 193 Households (HHs) with 1 buck or billy and 3 does (4 goat) per Household, making it about 772 Goats. Participants were also supported with maize seed, fodder unit, and trained on fodder production to supplement limited availability of fresh green fodder, shortage rain fall, prevent disease spread caused by extensive farming system etc., for breeding and reproduction.



Furthermore, participants were supported with Village Savings and Loans (VSLA) kits, trained on VSLA models, and coached on how to run the association independent of the organization. This served as a means of providing access to financial services and making access to capital available through loans to diversify their source of income to minimize pressure on the live assets. CAID collaborated with government ministries to have the VSLAs registered with the Cooperate Affairs Commission (CAC) and were linked up with Micro-Finance banks to enable access to financial benefits like loans and grants that will help them to grow their businesses.

Actors along the livestock value chain were identified and linked to participants; these include the pasture sellers, drug sellers and goat dealers. Linking participants with animal dealers helped provide access to animal feed, buyers of goats, and information regarding goat venture.

The project also selected and trained 3 Community Animal Health Workers (Para Veterinarians) on basic veterinary services and provided them with basic ambulatory kits and drugs necessary to render basic veterinary services in return for stipend to carter for their basic household needs, replace finished drugs, and maintain ambulatory kits.

The following are some of the results of Christian Aid in terms of income on goat production:

- Participants were able to breed their livestock and have recorded over 1,499 additions from birth to their flock from the distribution period November 2021 to December 2023 and still counting. Participants also have a livestock (Goat) balance of about 1,215 Goats.
- Participants were able to sell about 667 adult goats at a total sum of 19,343,000 naira which has been used to cater for varying needs including diversifying their sources of income to be sustainable and to attain financial freedom.
- The CAHW (Para Veterinary concept) helped to reduce disease spread and mortality rate as participants have access to veterinary services. The Para Veterinarians get stipends in return for the services they render to participants.
- The trainings on routine management practices, diversification, value addition and processing have impacted the lives of participants by transforming their attitude, knowledge and practice thereby improving their production, and reducing morbidity and mortality.





HYDROPONICS INITIATIVE – A STRATEGIC SHIFT IN LIVESTOCK FARMING

Background

Livelihood interventions have been a constant component of humanitarian response to the protracted crisis in Northeast of Nigeria; a crisis that has subjected millions to displacement and prolonged disruptions of livelihood and trade. A resultant effect is food insecurity which leaves the survival of millions to food assistance programs by humanitarian partners.

This laid the foundation for Christian Aid Nigeria's sustainable livelihood interventions in Borno state, Nigeria, which started in 2018. The interventions encompass Food Assistance, Skill Acquisition,

Conditional Cash Transfer, Business Set-Up, and Market Access to strengthen the resilience of the most vulnerable conflict-affected persons. The Income Generating Activities on the project included Aquaculture (fish rearing, fish feed production and fish processing), Crop production (dry and wet season farming), Livestock Production, Food Processing, Tailoring, Cap Making, Bricklaying, production of Briquette and Energy-Efficient Stoves.

However, the need to deepen innovation arose with the unprecedented food inflation caused by the Covid-19 pandemic and the 2022 record-level flooding in Nigeria. This is



compounded by Desertification exacerbated by the interacting effects of war and climate extremes, a challenge that troubles Northern Nigeria long before the crisis. Without a proactive stance, these factors can gradually overturn the gains of the interventions and further subject participants into the vicious cycle of helplessness.

This formed the basis for the introduction and testing of the Hydroponic technique in Livestock production for efficient and effective animal husbandry. The overall objective of this initiative was to increase the economic capacity of households while reducing environmental degradation and the impact of climate change using environmentally friendly techniques.

Hydroponics Fodder Production

Hydroponics fodder production for livestock farming is a tested and trusted innovation that entails the adoption of a home gardening method to generate healthy food (plants) for livestock without the use of soil; most suitable in non-fertile and arid lands, limited spaces, and where access to land is restricted.

In livestock rearing, green fodder which serves as feed for the animals is essential. However, limited access to land and water hampers the production of quality green fodder as well as the required quantity resulting in stunted growth and poor productivity in livestock. The Hydroponic technique, on the other hand, allows the growing of green fodder with little quantity of water, without soil, and in the comfort of the home.

The Process

It involves the use of whole and healthy grains such as maize (suitable in hot climatic conditions), wheat and oats (suitable in cold climatic conditions). These seeds are soaked with 5-7 litres of warm water containing 50-100gram of salt for 12 hours. Once the stipulated period of soaking is over, the salty water is drained, and the seeds are rinsed with clean water after which they are transferred into a gunny sack where the seeds will sprout within 24 hours in hot climates. The sprouted seeds are then transferred from the gunny sacks, spread in perforated trays, and kept on a rack in a cool shady place away from direct sunlight and rain fall. This simple water technique is possible because the sprouts are the end-product unlike the production of leafy vegetables and fruits which require additional nutrients to grow.

Benefits

Nutritionally, hydroponics fodder is high in carbohydrates, minerals, and vitamins when compared with traditional fodder, and does not require chemicals or pesticides to grow as the fodder is free from weeds and insects.

Unlike traditional fodder which often requires up to two months to grow, hydroponics fodder can be grown within a week and can be produced regularly throughout the year irrespective of season. The decreased interval between harvest and consumption also increases the nutritional value of the fodder.

The production process requires less workforce and saves the project participants the stress, security risks, and cost of transportation to farmlands to harvest traditional fodders as



hydroponic fodders are grown near the livestock shade for ease of feeding. The ability to grow in-house allows farmers to control temperatures and lighting schedules to improve plant production. Financially, this method of livestock farming improves business yield for project participants as the farmers do not have to spend so much of their income on animal feeds or transportation to farmlands to harvest fodder. The quality of fodder production also boosts animal health and their ability to reproduce thereby helping the business expand as expected.

In addition to other market efforts and to ensure consistent access to markets, project participants were supported to broker working relationships with local meat sellers who offtake from them and sell the animals as meat in the market. In addition, the para-veterinary concept was introduced to support the rearing of healthy animals. This involved the training and engagement of community residents as para-veterinarians.

Reach

So far, One Hundred and Ninety-Three (193) households have benefitted from the Hydroponics component of Livestock Farming in Malakyariri, Borno State. These households were provided with the animals (Goat and Sheep) and the hydroponic kit comprising seeds and wooden stand, after which they were trained on best practices on livestock farming using the hydroponics approach. These participants are thriving and experiencing business expansion so much that participants on other components of the livelihood intervention are also venturing into livestock farming because of the cost-efficiency of the business.

These households specifically reported improvement in the quality of living as a direct result of their engagement in livestock production. These included business expansion and diversification by 55 Households, 21 Households could actively support their children's education unlike before, affordability of medical bills, rent, shelter repairs, and above all, provision of food for their families from proceeds of livestock production.

The project is currently testing the aquaponics technique of Livestock farming for fish farmers on the project as well. It is believed that these sustainable innovations will go a long way in entrenching project participants in these businesses; a strategy channeled towards sustaining the impact of livelihood interventions beyond immediate food assistance among vulnerable populations.



HYDROPONICS INITIATIVE – A SUSTAINABLE SHIFT IN LIVESTOCK FARMING

“For all the years that I have received these goats, till now (in 2023) there was never a time when I had no animals here. It is now the business for me.” Fatima Usman, Livestock Farmer, Malakyariri Community, Borno State.

Fatima Usman holding her growing fodder



The statement above is an expression of a happy 52-year-old widow, mother of three (3), crisis-survivor, and livestock farmer who adopted the Hydroponic Technique for animal rearing. How did we get here? You may ask!

Livelihood interventions have been a constant component of humanitarian response to the protracted crisis in Northeast Nigeria; a crisis that has subjected millions to displacement and prolonged disruptions of livelihood and trade. A resultant effect is food insecurity which leaves the survival of millions to food assistance programs by humanitarian partners.

Sixty-year-old Fatima Mustapha, mother of nine (9) and a refugee in Malakyariri community of Borno state said:

“When the security challenge was becoming worse, before our village was razed, we sneaked out and left for Maiduguri to seek for safety. But still, we could not escape even with our shoes, we came to Malakyariri empty handed with nothing.”

Echoing same sentiment, Habiba Haruna, 33-year-old mother of three (3), also a refugee in Malakyariri said: *“We fled with nothing, so It was a difficult moment for me and my family.”*

Stories like this laid the foundation for Christian Aid Nigeria’s sustainable livelihood interventions in Borno state, Nigeria, which started in 2018. The interventions encompass Food Assistance, Skill Acquisition, Conditional Cash Transfer, Business Set-Up, and Market Access to strengthen the resilience of the most vulnerable conflict-affected persons. The Income Generating Activities on the project include Aquaculture (fish rearing, fish feed production and fish processing), Crop production (dry and wet season farming), Livestock Production, Food Processing, Tailoring, Cap Making, Bricklaying, production of Briquette and Energy-Efficient Stoves.

“We received food items for 11-months,” said Habiba Haruna, whose household participated in the Food Assistance intervention for Internally

Displaced Persons in Malakyariri community, Borno State.

However, the need to deepen innovation arose with the unprecedented food inflation caused by the Covid-19 pandemic and the 2022 record-level flooding in Nigeria. This is compounded by

Desertification exacerbated by the interacting effects of war and climate extremes, a challenge that troubles Northern Nigeria long before the crisis.

This formed the basis for the introduction and testing of the Hydroponic technique in Livestock production for efficient and effective animal husbandry. The overall objective of this initiative was to increase the economic capacity of households while reducing environmental degradation and the impact of climate change using environmentally friendly techniques.



A Hydroponics Fodder Production Rack in a Participant's House

The households of Fatima Usman, Fatima Mustapha, and Habiba Haruna were part of the 193 Households selected, trained, and set-up to launch the Hydroponic Technique of livestock farming in Malakyariri Community.

Malakyariri Community of Borno state turned out to be a perfect location to kick-off the pilot phase of this concept, as the Hydroponic technique provided a sustainable solution to the plight of livestock farmers who have limited access to land for farming and grazing of livestock due to

prolonged violent conflicts and natural disasters such as drought common in the area.

“These households were provided with the animals (2 Goats and 2 Sheep per HH) and the hydroponic kit comprising seeds and wooden stand, after which they were trained on best practices on livestock farming using the hydroponics approach.” Danladi Mamza, Senior Programme Coordinator – Livelihood, Christian Aid.

The Hydroponic technique allows the growing of green fodder with little quantity of water, without soil, and in the comfort of the home. Simply put, it is the adoption of a home gardening method to generate healthy food (plants) for livestock without the use of soil; most suitable in non-fertile and arid lands, limited spaces, and where access to land is restricted.

Expressing the timeliness of the intervention, Fatima Usman, said, *“It came at a time when I needed it the most.”*

The production process requires less workforce and saves the project participants the stress, security risks, and cost of transportation to farmlands to harvest traditional foddors as hydroponic foddors are grown near the livestock shade for ease of feeding.

“It is easy to grow, and it is enough for them. I was taught by Christian Aid how to grow my fodder, and it has helped a lot in feeding my goats and sheep.” ... Zahra Mohammed, a livestock farmer who grew her livestock farm from four (4) animals to a fold of (13) animals consisting of sheep and goats within a very short period using the Hydroponic technique.



Zarah’s Hydroponics Production Rack

In times past, limited access to land and water hampered the production of quality green fodder as well as the required quantity resulting in stunted growth and poor productivity in livestock. However, the introduction of the Hydroponic technique changed the narrative as project participants experienced expansion in their livestock business and ventured into other businesses, as a way of diversifying income, using the proceeds from the farm.

Using the savings from her goat business, Fatima Mustapha, the mother of nine (9) mentioned earlier, expanded to poultry where she rears birds and sells in her community; she invested in charcoal business selling cooking-charcoal to women in her community and moved on to producing local snack (puff-puff) which she sells in the community. All these, she does concurrently while also rearing her livestock.

She said, *“with these businesses now, I feel like I have recovered my entrepreneurial self, and I am living my dreams. I support my family and my children’s education with the business.”* Extending her appreciation, she said, *“I sincerely thank Christian Aid for making me accomplish my dreams.”*

In the case of Habiba Haruna, the 33-year-old mother of three (3), she incorporated ram rearing



Fatima Mustapha cheerfully preparing local snacks for sale

into her livestock business and ventured into the production and sales of local Zobo drink, making her one of the most patronized Zobo drink producer in her community as people troop into her house all-day to purchase cold Zobo drink. With the two businesses, Habiba was able to re-enroll her children into a private school where she believes they will receive quality education.



Fatima Mustapha with her healthy animals



Habiba Haruna feeding her animals with the green fodder

“I paid for an expensive private school for my children from this business just so they get quality education. I believe if their primary school foundation is good, it will be easier and better for them and their future.” Habiba said.



Habiba Haruna shows off her newly purchased

Expressing her appreciation, she said: *“I can’t thank Christian Aid enough because of how much they have changed my life. I am happy to financially support my family. Right now, I handle a lot of things.”*

Fatima Usman, the 52-year-old widow and mother of three (3), quoted at the beginning of this article has made livestock production her major source of income. Periodically, when sales are really on the high side, she expands and buys rams which have more financial benefits than the goats.

She said, *“...at a point I gathered about 12 goats. It made me so happy that I feel I now have a business that me and my family could rely on.”*

The business has also helped her cater for her family needs as a widow and support her children’s education.

“Even this child of mine...” Fatima said, pointing at one of her sons, *“...he was enrolled in school from the money I earned from selling the goats.”*

Fatima is also expanding into the production of local snacks which will serve as another source of income for her and her family.



Fatima Usman sits by her freshly prepared and ready for sales local snacks.

Like the examples mentioned above, livestock farmers using the Hydroponics technique are thriving and experiencing business expansion so much that participants on other components of the livelihood intervention are also venturing into livestock farming because of the cost-efficiency of the business.

This first phase of this initiative was funded by the World Food Programme (WFP). The success recorded motivated Christian Aid to fund and implement a 6-month scale up through her local partner, Chabash Development and Health Initiative (CDHI).

IMPROVING LIVESTOCK FARMING THROUGH LOCALIZED ANIMAL HEALTHCARE

In most rural communities, getting medical treatment for animals is usually a big challenge and it negatively impacts on farm expansion and profit making. The hassle of commuting the animals, the cost of logistics and the high treatment fee impede access to care. The moment an animal starts to act or look sickly, the owner would quickly try to sell it off at any amount offered or slaughter it for consumption. Most farmers run at a loss because they are unable to grow their animal farms beyond the small scale.

Harnessing the Strength Within

To support animal farmers in Malakyariri Community with better animal healthcare, Christian Aid, with funding from World Food Programme (WFP) introduced the concept of Para-Veterinarians, Para

Vets for short. Para Vets are everyday community people who have been trained to provide first aid to animals. They are community animal health workers who live within the community and offer basic veterinary services adapted to small livestock keepers.

Impact

Key benefits of having CA trained para vets in the community include:

1. **Bridging the gap in accessing care:** Trained para vets deliver door-to-door services within the community making it convenient for the farmers.
2. **Reducing the logistic hassle:** The usual practice is to take the sick animal on a tricycle (popularly called Keke Napep), which costs a lot of money for transportation especially if they must do multiple trips over a period of days for follow up visits and check-up. With the door-to-door services rendered by the para vets, the logistics challenges are eliminated, and the hassle is averted.
3. **Subsidised cost of animal care:** The cost of treatment delivered by the para vets is at a subsidised price compared to what would normally be paid at a more established veterinary outpost and clinic.
4. **Increased income for households:** Now that there are fewer deaths and sick animals, farmers are no longer forced to sell off or slaughter sick animals, and female animals are allowed to grow and reach maturity where they can reproduce, while males grow to market size before being sold. The animals grow healthy and can be sold for as high as 80,000 Naira for one, putting more money in their pockets. All these contribute to business growth and expansion for the farmers.



A trained Para Vet about to administer drugs to a sick animal

A Service Provider

Before the service was introduced, the only place to seek medical care for livestock was at the veterinary hospital in Borno State's capital town, Maiduguri.

For 31-year-old grocery shop owner Idris Mohammed Ali, the case for training to become a para vet was clear cut.



Idris with his medical kit

“Many people in Malakyariri are livestock owners and I want to help them take care of their animals because the state veterinary clinic is far from here and a bit expensive,” Idris said.

“My father used to own livestock, so I am familiar with common diseases that affect them, and I also know about livestock management,” he added.

As Idris explained, during the course of his work, he typically treats sheep and goats for a range of common illnesses and ailments that affect livestock.

“I give the animals injections and general first aid treatment. I treat them for tick infections, coughing, swollen stomach, worms, fleas, and difficulty in walking.”

Being able to access the care offered by the para vet service has meant that farmers are no longer faced with being forced to sell off or put down sick animals.

Female animals are more likely to reach maturity helping farmers grow their herds and males are able to grow to market size before being sold, thereby putting more money into the farmers' pockets.

“The service is helping the livestock in Malakyariri to grow well, the owners are able to sell them at a good price because they are healthy. It has also reduced sudden deaths of livestock in the community,” ... Idris

The para vets are also paid stipends from the farmers after providing treatment, which helps them to support their families.

“This is now another source of income for me. I use the money to replace the drugs I use and I also use it to buy food for my family,” ... Idris



Idris treating a sick animal

“I love to help people. I now have a lot of friends in the community, they are happy whenever they see me because their animals are doing well,” Idris concludes.

The para vets offer a door-to-door service, seven days a week to farmers in Malakyariri. The cost of using the para vet service is almost half the cost of treatment at established veterinary clinics like the state hospital, and the farmers no longer have to pay for daily transportation fees, helping them save even more.

Long run

The adoption of Para Vets is one of the strategies to strengthen household income and community resilience. Currently, Christian Aid provides all medical supplies for the veterinary services in the community. It is expected that by the end of the project, the Para Vets will be solely responsible for restocking of medicine using some of the money received as payment for the services. This is a sustainability strategy for this concept of community medicine for livestock.

Christian Aid and her partners will continue to adopt innovative approaches to ensure individuals and households secure the necessities of life in the most dignified ways and are able to recover quickly from difficulties and negative effects of the insurgency in and around their locations.



Christian Aid staff showing the Para Vets how to examine animals

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