

Consultant: Pioneer Consult and Partners *:Working to strengthen communities.*

Middle Term Review Report, July 2021.

Funding: US\$ 34,800

Type of funding: Seed Capital for Idea Incubation.

Enterprise name: Micro Aquaponics Systems Distribution.

Project status: Pilot.

Funder: STANBIC BANK(U) SME Incubator.

Project implementor: SAMPLE Uganda Aquaculture Association.

Project partner: Water Governance Institute.

Project period: 24 months (June 2020- July 2022).

Target: 124 Aquaponics Farmers.

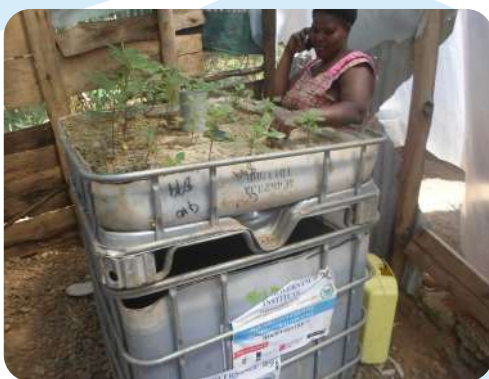
Project Director: Michael Kintu.

Midterm Evaluator: Pioneer Consult and Partners.



Project Midterm Report Recipient: STANBIC Bank (U) LTD.

Micro Aquaponics Systems Commercial Distribution Pilot in Uganda



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Business Model

SAMPLE Uganda Aquaculture Association, working in collaboration with the Ugandan Water Governance Institute, and supported by STANBIC Bank Uganda SME Business Incubator-is about to complete a pilot in two urban villages where village level- cooperative credit entrepreneurs (SACCOs) were selected for managing the commercial distribution of Aquaponics systems, and marking-up for the services they provided, which has allowed them to generate an income under a Lease-To-Own Model.

Pilot Design and Outcomes

Designed as a pilot, SAMPLE Uganda packaged and distributed 30-one-meter cubic Aquaponics complete systems at unit price of US\$360-inclusive of the fish tank, water pump, bio filter and fingerlings. Following capacity building, the local greenhouse covers and horticulture seeds were locally provided by targeted farmers. 20 Aquaponics systems units were installed each stocked with 200 cat fish fingerlings and 10 units each stocked with 200 male sex Tilapia Fish fingerlings. At 6-months of harvest time, Catfish farmers harvested 100% of the fish stocked, with each fish weighing 1.2-1.5 kilograms, while Tilapia farmers harvested 95% of the fish stocked with an average weight of 0.8-1 kilograms. The Catfish gate price ranged from Uganda shillings 10,000-12,000/= (US\$2.7- US\$3.2). The individual farmer average Catfish earnings (net of home consumption) ranged between Uganda shillings 2-2.4 million (US\$540-648). The Tilapia fish gate price ranged from Uganda shillings 8,000-10,000/= (US\$2.1-US\$2.7). The individual farmer average Tilapia earnings (net of home consumption) ranged between Uganda Shillings 1.6-2 millions (US\$432-US\$540). Average farm sales of horticulture products harvested (net of home consumption) averaged Uganda shillings 240,000 (US\$65). Average farm variable costs of the horticulture seeds, fish feeds, and electricity to power the water pump ranged from Uganda Shillings 240,000/= (US\$65). Add horticulture sales minus variable costs (US\$65), on average the Catfish Aquaponics Farmers made a net profit of between US\$472-US\$580, before servicing the costs of acquiring the aquaponics systems(US\$30/month). On the other hand, on average the Tilapia Aquaponics Farmers made a net profit of US\$364-US\$472 with addition of horticulture sales and deductions of the variable costs(US\$65), before servicing the costs of acquiring the Aquaponics systems(US\$30/month).

Pilot Acceptability

Before the Covid-19 crisis, cost recovery through SACCOs collection agents, where farmers make their payment instalments, was over 99%. A late fee was imposed and SACCO collection agents who visited farmers directly within one day of a late payment. There were few defaults for the simple reason that farmers did not want their Aquaponics systems re-possessed-or resold to other interested farmers. This proves that the average farmers in Uganda appreciates need for Aquaponics systems. All supported farmers (68% female) contributed to savings in their groups. These often worked by collecting a small weekly sum from all members and awarding the total collected to one member of the group (randomly selected) each month for the group approved procurement. The process is established to continues until all members have received the monthly payout once.

Lessons Learnt

Variables costs were recovered via Horticulture sales. Use of solar pumps and hand pumps should be explored, where access and cost of electricity is a challenge. Because of its carnivorous feeding nature –including feeding on food left overs, Catfish looks to be more suitable for the aquaponics systems than Tilapia in terms of yields and feed cost reductions. Higher fish tank capacities and expanded grow-beds could increase farmer yields and revenues-dependending on the available space. Aquaponics systems installation within in homes and flexible work hours did not interfere with other forms of livelihood creation and daily tasks. Contract farming and collective marketing should be considered avoid to exploitation of Aquaponics farmers by dealers and middle men

Lessons Learnt

Following the Aquaponics farm harvests, it is recommended that if 30 SACCO members could each contribute US\$30, then three members of the group would be able to buy the Aquaponics. Micro financing and micro-lending are well-established concepts in Uganda. Organizations providing this service might also provide excellent marketing and promotion channels for the Aquaponics systems

