SIMON OMONY CASE STUDY

ECONOMIC BENEFIT AND SOCIAL INCLUSION

Mr. Omony (Seated); Group members (Standing)

Executive Summary

The purpose of this case study is to have a clear understanding of the farming journey for one farmer in Uganda with diverse mobility needs before and after having the PAY-N-PUMP system, and additional impacts of the Pay-N-Pump technology.

PAY-N-PUMP is a solar water pump and irrigation solution that uses smart technology to offer pay-as-you-go water services to small-scale farmers. Farmers use mobile money to make easy payments to activate their pumping system whenever they need it. PAY-N-PUMP is the comprehensive solution to help small-scale farmers in Uganda get the most productivity from their land.

The intention of this case study is to gather information to improve our system, service delivery, and to gain a better understanding of how we have impacted people with disabilities in the

community. This case study took place in Lamwo District on Simon Omony's farm. The results of this case study show a significant difference in land productivity from before after using the PAY-N-PUMP system. The case study looks at one growing season with PAY-N-PUMP use. Furthermore, the case study suggests that a technology like PAY-N-PUMP has additional benefits and impacts for users with disabilities, over and above the benefits observed by able-bodied users.

Problem Definition

Farmers report that for a long time, water for irrigation has been a challenge to most small-scale farmers dealing in short season crops. It is important to note that most farmers do not have access to a designated well for farming activities.

Simon Omony is 37 years old. Simon is a person with dwarfism. On his farm he grows 2 acres of cabbage, tomatoes and eggplants. He has been farming for 3 years on the same piece of land. Before the PAY-N-PUMP system, he was using manual irrigation.

According to Simon, irrigation is a necessary practice especially during dry seasons. The most common form of irrigation is manual watering using traditional methods like water bottles, watering cans, and digging water trenches. To irrigate his land, Simon needed to employ someone to carry water from the well and use a watering can to irrigate. This method was hectic and expensive, and the laborer would spend about 1 hour just fetching water from the well since it was a community water source. Watering his 2 acres of land sufficiently would require at least 3.5 hours using a watering can. He paid 3000 UGX just for watering and 300 UGX per 20 liters of water fetched. He would use at least 100 liters of water per day to irrigate the entire garden.

This conventional method of irrigation causes additional hardship to Simon as he does not have the same mobility as other farmers in the area. Simon himself is not able to carry heavy loads, that is why he was required to hire someone else to do it for him. On his farm he was only able to plant, weed and harvest. Additionally, when he did try to carry water, it caused him severe back pain which is why he decided to pay someone to do the labor.

Conventional irrigation therefore severely limits Simon's ability to manage his farm optimally and profitably, making it extremely hard to take care of his family and other necessities. It also takes up much more of his time, and causes him pain/discomfort which significantly affected his quality of life and personal productivity and enjoyment.

In addition, Simon pointed out that if he wanted to carry out traditional irrigation practices on his farm to the same standard and speed as his neighbors, he would have to employ others to do this for him, and pay close to 280,000 UGX to properly water his garden a month. This is over twice as much as the monthly payment for the PAY-N-PUMP system.

Proposed Solution

PAY-N-PUMP is a solar water pump and irrigation solution that uses smart technology to offer pay-as-you-go water services to small-scale farmers. PAY-N-PUMP solutions are delivered and installed at no cost to the farmer. Farmers use mobile money to make easy payments to activate their pumping system whenever they need it. The PAY-N-PUMP solution also comes with the support of agronomists who provide advice to farmers regarding agriculture best practices to help increase crop yields. PAY-N-PUMP also provides full maintenance to ensure the pumping systems are always working.

Simon's garden (Foreground); Simon and colleagues (Background)

Solar water pumps are an ideal solution for irrigation for farmers because after the initial cost, pumps usually pay for themselves over a 2 years period. Since solar powered water pumps do not require a battery, which is normally the weakest part of a solar system, the PAY-N-PUMP system is durable and can last 5 years or longer without additional cost, thus helping farmers save money.

The system has a pushcart that makes it simple to move around, enabling anyone to use it.

Simon is subscribing to the water-as-a-service mode of payment and belongs to the Lubu Cik En Teko Saving and Loan Association. The group's main crops are watermelons, cabbages, tomatoes, and onions. Some of the farmers rear animals.

Group members meeting

Prior to the installation of the PAY-N-PUMP system, Mr. Omony accessed water from a hand-dug pond within a swamp. He irrigated using water bottles. He harvested twice a year and earned between 1,000,000-2,000,000 UGX per harvest.

Since installation, there has been one main growing season during which Simon made 3 payments to run the pump. When he subscribes, he uses the monthly package.

To date, Simon has harvested his watermelons once with a reported increase in yield of 100%. After using PAY-N-PUMP, the income from the harvest shot up to about 4,000,000 UGX . There

are a total of 4 women, 6 children, and 3 men in Simon's family, benefitting from the system. The money from harvesting goes towards catering for tuition for children, paying medical bills, paying farm laborers and buying farm inputs.

Simon reports particular benefits from using the PAY-N-PUMP system because he is able to manage the irrigation without paying someone to fetch water. He is able to irrigate his crops in half the time it took him before, saving 4 hours of time per day. This demonstrates that the PAY-N-PUMP approach can be especially beneficial to users with disabilities, like Simon, because in addition to the commercial benefits, his mobility issues make manual irrigation especially difficult/time-consuming/painful/expensive to accomplish.

Conclusion:

The PAY-N-PUMP system has had a significant improvement on the harvest yields and income for Simon Omony, as it does for able-bodied farmers as well. However, the system has had additional benefits for Simon, who because of his mobility special needs was experiencing lower yields than his non-disabled neighbors, because manual irrigation was more expensive, slower, painful, less viable. Thus for Simon Omony, the PAY-N-PUMP system was not only a way to improve farm yields and income, but also a transformative technology to level the playing field between him and able-bodied neighbors. It also improved his quality of life. This suggests that other people with disabilities could also benefit and derive additional livelihood and quality-of-life impacts from the use of the PAY-N-PUMP system.