

Improving Farmer Engagement

Research with Farmerline in Ghana



Image credit: Envato Elements

FARMERLINE OVERVIEW

Farmerline is an end-to-end provider of services for smallholder farmers in Ghana. Some services are offered directly to farmers, such as automated weather updates and agronomy advice sent to their mobile phones through IVR chatbots. Others are delivered through extension agents, who provide access to inputs, training on best practices, and connections to markets. There are two types of agents who deliver services to farmers on behalf of Farmerline:

Zonal Officers work exclusively for Farmerline, each assigned to a specific region that serves thousands of farmers.

Community-Based Advisors (CBAs) are village-level entrepreneurs who assist zonal officers in their duties. They work across several zones and regions and may be employed by various digital service providers simultaneously. As a result, they represent multiple companies, not just Farmerline.

Busara's Research: Encouraging Uptake of Farmerline's Services



Farmerline wanted farmers to adopt and use their services, specifically the ones delivered directly to farmers via IVR chatbots. We conducted research with CBAs and farmers to identify the barriers to adopting Farmerline's digital advisory and designed and tested solutions to overcome these barriers.

The DIG-it-AL Project

With support from the Bill and Melinda Gates Foundation, Busara is researching ways to increase smallholder farmers' adoption and use of digital agricultural services. Our research uses human-centered design to identify and address "behavioral" barriers to digital service use, such as cognitive biases, preferences, and beliefs.

Methodology

Phase 1: Diagnostic Phase

We conducted key informant interviews with five zonal officers and in-depth interviews with 40 farmers and CBAs. These interviews aimed to diagnose and map the enablers and barriers to adopting and using Farmerline's IVR services along the farmer's journey: awareness, access, use, and continued use.

40 farmers and CBA's

Phase 2: Co-Design Phase

With a clear understanding of the barriers, we conducted two co-design workshops with farmers to develop solutions collaboratively. We then transformed the ideas into prototypes.

2 co-design workshops

Phase 3: Testing Phase

We conducted a randomized controlled trial with over 600 farmers in the Tamale district of northern Ghana to test the effectiveness of the designed solutions in overcoming the identified barriers. We sorted the farmers into groups and asked each group to listen to a different recording designed to mimic Farmerline's IVR services. They then completed a survey to gather data on many different variables, including:

- Recall: Remembering various pieces of information from the recording
- Trust: Level of trust in the information presented in the recording
- Potential Uptake and Use: Whether the participant could see themselves using Farmerline's services in the future
- Recommendation: Whether the participant would recommend Farmerline's services to others

600 farmers in the Tamale district

KEY INSIGHTS

Insights From Our Diagnostic

>> **Difficulty in Differentiating Farmerline Services**

Many digital providers operate in a given region through CBAs. At any time, a CBA is likely employed by multiple digital providers. When the same CBA interacts with farmers while representing more than one provider, farmers struggle to distinguish the services that are uniquely offered by Farmerline from the rest of the providers. Additionally, since Farmerline's services are not always branded with its name, farmers find it difficult to differentiate between various service providers.

>> **Mistrust**

Farmers frequently confuse service providers. As a result, farmers believe that Farmerline should be delivering services that, in reality, Farmerline does not offer at all. This expectation breeds a lack of trust and dissatisfaction in Farmerline due to a perception of unmet expectations.

>> **Greater Access Barriers for Women**

Women farmers face more barriers to adopting and using Farmerline due to lower literacy levels and limited smartphone access.

Our Co-Designed Ideas

To address the challenges of mistrust and inability to differentiate various offerings, we prototyped four versions of an audio script mimicking Farmerline's automated IVR weather updates:

1. A standard story script describing the weather update
2. A story script delivered by a fellow farmer that explains and recommends the services offered by Farmerline
3. A story script outlining the benefits of using Farmerline's services
4. A story script outlining the benefits of using Farmerline's services, in addition to a distinctive jingle

Example

A story script delivered by a fellow farmer that explains and recommends the services offered by Farmerline.

Hello, my name is Kwame, and I am a farmer in the northern region. Welcome to Farmerline's weather information services. This morning, there would be scattered clouds and there would be heavy rain.

Let me share more information about Farmerline's services that I use. Farmerline provides education on best farming practices, weather forecast, and access to farm inputs and crop buyers.

I would like to recommend Farmerline's services to you as a fellow farmer. You can find Farmerline's agents around your village wearing a black vest. Our agents are happy to answer any questions you may have about our services.

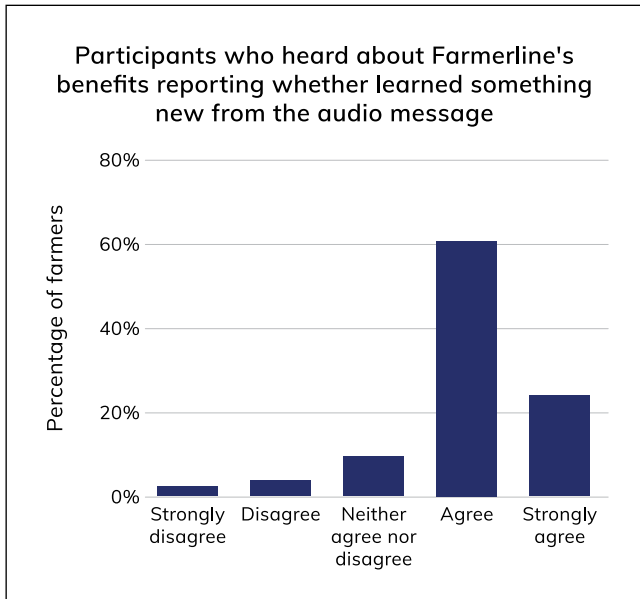
Also, you can call the toll-free number 399 to speak to a customer service agent. Thank you.

Results From Testing Our Solutions

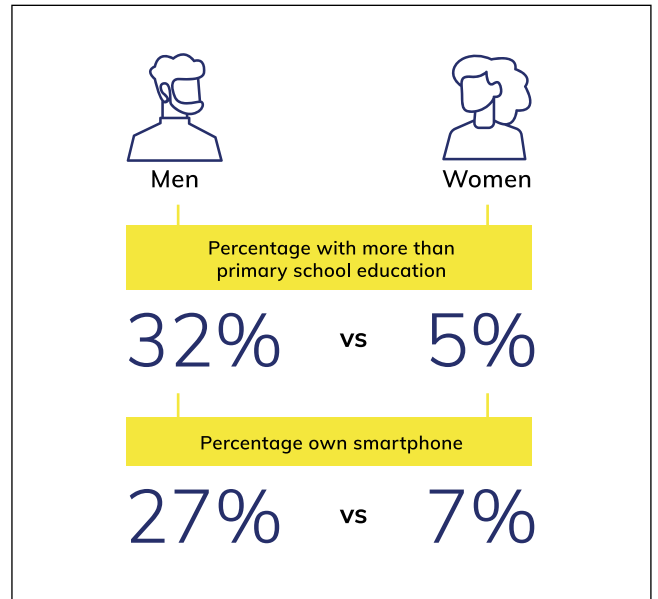
1 In our survey, we asked participants about their typical sources of information. Those who identified fellow farmers as their primary source tended to trust the information in the story script more when a fellow farmer presented it.

2 The women in our sample were more likely to possess characteristics that could lead to adoption and use. They had higher levels of recall and trust and were more likely to say they would recommend Farmerline's services to other farmers.

3 One trend that emerged is that highlighting Farmerline's benefits could improve the adoption and use of the IVR advisory. We found positive relationships between participants who listened to the recording that highlighted Farmerline's benefits and recall, trust, and potential uptake and use.



4 The women in our sample were less likely to have a primary school education and own a smartphone compared to men, verifying the findings from the diagnostic phase.



RECOMMENDATIONS AND AREAS FOR FURTHER EXPLORATION TO INCREASE FARMERS' ADOPTION AND USE OF IVR ADVISORY

1. Highlight the Value Proposition

With so many providers in the digital agricultural market, it is essential to make the product or service stand out. When farmers are unable to distinguish between various products, this can lead to confusion, unmet expectations, and a lack of trust. Providers should, therefore, explore ways to make their value proposition stand out, mitigating some of these potential barriers to adoption and use.

2. Leverage Fellow Farmers to Build Trust

Some farmers already trust information from their peers, often more than other sources. Providers could tap into this trust by leveraging peer farmers to promote their offerings and provide services through IVR to strengthen brand credibility.

3. Leverage Female Farmers to Promote Services and Disseminate Information

Despite structural and societal barriers, such as lower formal education levels and limited smartphone access, our research suggests that women have the potential to adopt and use Farmerline's services and recommend them to others. Given these insights, providers should find ways to harness this potential and incentivize women to promote their services. Examples include training women for leadership roles and appointing them as peer champions.



For more information on this project and Busara's work in leveraging behavioral science to increase the uptake of digital agricultural services, contact Morgan Kabeer at morgan.kabeer@busara.global

