



# AgriPay

## Gender Impact Study: Final Consolidated Report

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Report completed by Busara and  
Dalberg on behalf of Mercy Corps  
AgriFin

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# Contents

- Study Objective
- Executive Summary
- About AgriPay
- Study Methodology
- Farmer Engagement Journey
  - Usage Overview
  - Factors that drive and limit awareness and adoption
  - Factors that drive and limit product engagement
- Women Segments and Mental Models
- Engagement Impact
- Recommendations



# Study Objectives

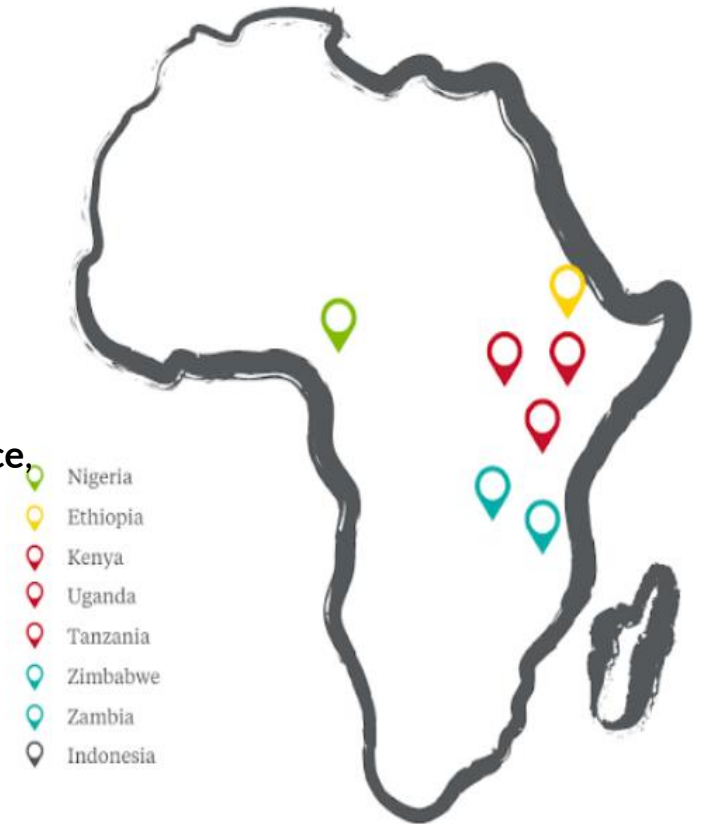
# About Mercy Corps AgriFin

We work with over 9 million farmers and 150 partners across Africa

Mercy Corps' AgriFin Digital Farmer (ADF) Program is funded by the Bill and Melinda Gates Foundation to help organizations design, test and scale digitally-enabled services for Africa's smallholder farmers.

- Objective is to develop services that increase **farmer income, productivity and resilience**, with 50% outreach to women.
- Work with **private & public sector scale partners** such as banks, mobile network operators, agribusinesses, technology innovators and governments.
- We help our partners develop bundles of digitally-enabled services, including **smart farming, financial services, market access and logistics** supporting data-driven partnerships.

The AgriFin Digital Farmer (ADF) program is championing the development and deployment of a range of full-service digital ecosystems to support end-to-end farming activity across East Africa.



# Context

Women account for nearly half of the world's smallholder farmers and greatly contribute to agricultural activity yet are disproportionately affected by systemic challenges in the agricultural sector such as access to markets, credit, inputs, knowledge, and land. Digital solutions have potential to revolutionize the livelihoods of farmers, however, **challenges that constrain meaningful use of digital services by female users limit sustainable impact for women smallholder farmers.**

The agriculture sector in Africa has been facing systemic challenges over the past decades including issues around markets, credit, quality inputs as well as knowledge and networks. These **challenges disproportionately affect female smallholder farmers** who contribute greatly to agricultural labor and productivity.

**Digital solutions have potential to revolutionize the livelihoods of farmers,** however, consistent challenges that constrain meaningful use of digital services by female users limit sustainable impact for female smallholder farmers.

The Bill and Melinda Gates Foundation has engaged AgriFin to understand **the impact of digital services on women smallholder farmers,** and the factors driving and inhibiting their adoption and usage of the services.

This study consisted of 3 phases of research and this report highlights the key learning from each phase.

# Objectives

This assessment was conducted to map the impact of digital product and services on women farmers, and factors driving its adoption and use by farmers, particularly women.

This report presents the results of a gender impact assessment of the AgriPay digital account on farmers, particularly women. The main objectives of the study were centered around understanding knowledge/attitudes towards digital solutions, usage of AgriPay services by gender, factors that drive adoption and use, particularly by women as well as impact on women smallholder farmers' livelihoods and learnings for delivering digital solutions for women.

This report is structured to convey the following insights inline with the objectives outlined above:

- User engagement statistics of a selected sample of men and women users
- Factors influencing adoption and usage of AgriPay from qualitative interviews with farmers and key informants
- Elicitation of mental models that inform women's decision making around uptake and usage of AgriPay
- Overall impact of AgriPay on women's livelihoods
- Recommendations on lessons learned for improving adoption, utilisation, and impact of AgriPay, particularly for women.



# Executive Summary

# Executive Summary

Data analytics of Zanaco's administrative data of a subset of female and male users between 2019 to 2020 focused on the following:

- ❖ User Activity Status
- ❖ User Transaction Types
- ❖ User Transaction Amounts

The initial dataset shared contained 1645 users. After balancing by gender the sample used for analysis contained 1266 users, with 50% female users. A small proportion of the sample were active users (5%) based on 6 months of consecutive usage. Men had a higher frequency of transactions than women as well as higher total transaction amounts from 2019 -2020. Cash send was the most common transaction type for both men and women. However, women had more inflows into their AgriPay account and less outflows. Based on the sample of women assessed women made no withdrawals from 2019-2020 and received 52% more inflows into their accounts than men, indicating women's usage behavior was more around saving than transactional usage.

In addition, the qualitative assessment shows **while account registration on AgriPay is almost equal between women and men, men perform approximately 3x as many transactions as women and transact amounts approximately 6x larger than women.** This is driven by a number of factors, including: (1) women's reduced ability to visit AgriPay's Xpress agents who are mostly in urban areas, given their household responsibilities and (2) the time it would take to travel to town. Limited follow-up support provided after registration and the delayed launch of the save, borrow and learn features of AgriPay were also important factors that influenced women's usage of AgriPay. Further, women sometimes require permission from husbands to register on AgriPay, which can be denied in some instances. COVID-19 has also hindered recruitment and registration efforts, given AgriPay predominantly recruits women through village saving group meetings.

However, we find that when women do use the platform, women farmers appreciate the **safe storage** of their money, **low fees of AgriPay** and **ability to make payments from their homes**, limiting the need to travel.

# Executive Summary- Drivers and Barriers to Adoption

## ***Factors driving adoption of AgriPay by women farmers:***

- **Use of agents** - Zanaco agents have played an important role in creating awareness of AgriPay in informal saving groups with support from farmer associations. Agents travel to the villages to register women in the saving group meetings, saving women transport costs and mitigating their mobility challenges
- **Use of village savings groups** has been an effective approach to drive up awareness as women are more likely to be in savings groups than men. Seeing peers register increases women's trust of the platform and drives women farmers to also sign up for AgriPay.
- **Product features** - AgriPay's value proposition of safe storage of money and low transaction fees is a key driver for awareness and interest
- **Branding and trust** – Zanaco's strong brand plays a key role in encouraging women farmers to register as its familiarity creates trust
- **Mitigating challenges around registration** – AgriPay has proactively taken steps to mitigate challenges that would be expected in meeting registration requirements e.g. agents communicate documentation requirements for registration beforehand and invite SIM card providers to provide SIM Cards during registration, making it easier for women farmers to meet requirements and register.

## ***Barriers to women farmers' adoption of AgriPay:***

- Some women farmers require **permission from spouses** to register on AgriPay, which can limit their ability to register on the platform
- **Non-membership in village saving groups** or cooperatives may limit opportunities to learn about AgriPay for some women farmers
- Women farmers **living in areas that are not visited by agents** are less likely to be aware of and register for AgriPay.
- **COVID-19** has hindered recruitment and registration efforts of AgriPay, resulting in low uptake of AgriPay in 2020 as compared to 2019.

# Executive Summary- Drivers and Barriers to Use

## ***Factors driving active use of AgriPay by women farmers:***

- **The fixed withdrawal fee and zero maintenance fee** of the My Account service results in preference of AgriPay over other mobile money competitors and bank accounts.
- The ability for women farmers to utilize **the payment feature at the convenience of their home** drives up usage.
- Women farmers also value the **ability to track their money** via SMS, balance statements and receipts received on AgriPay compared to village banking.
- **Liquidity constraints of village banking** results in preference of AgriPay instead, for storage of money by women farmers.

## ***Barriers to active use of AgriPay by women farmers:***

- **Limited accessibility of XpressAgents** who are mostly located in urban areas is a key constraint for uptake and use of AgriPay services by women farmers who are mostly located in rural areas
- **Limited follow-up and customer support** provided to users after registration is a challenge for women farmers because they typically require more handholding to use digital services
- **Delayed launch of the borrowing and savings products** results in a preference for village savings
- **Internet and float issues** increases the amount of time it takes to complete a transaction, increasing women's time burden in using AgriPay
- **Limited support provided after registration** limits women farmers' ability to utilize all the features of AgriPay due to digital literacy challenges

# Executive Summary- Impact

Overall, we find that while AgriPay has had positive impact on women farmers' livelihoods - it has improved financial discipline among women - there is mixed impact on women farmers' time and decision-making given the short time AgriPay has been in the market, as indicated below.

## ***Impact on women farmers' livelihoods***

- Women farmers report having higher financial discipline after using AgriPay compared to storing money at home due to the reduction in spontaneous spending.
- Safe storage of money and ability to track expenses on Agripay results in better financial planning and budgeting among women farmers.
- Women have extra spending money due to the low transaction fees and zero maintenance fees of AgriPay.

## ***Impact on women farmers' lifestyles***

- AgriPay has had a mixed effect on women farmers' time, with some women indicating saving time with the direct payments feature while some women have added time constraints due to the inaccessibility of the XpressAgents and lengthy transaction times due to internet connectivity issues and lack of float of the XpressAgents.
- Decision making and household dynamics- Due to the short time of the product in the market and infrequent use of AgriPay, a majority of the women farmers interviewed indicated no substantial changes on their decision-making and household dynamics.

From our qualitative insights we identify **two segments of women users** on AgriPay and the mental models that drive their decision making. The Segments Identified are:

- The Curious Optimist: She uses AgriPay occasionally and typically has higher levels of education and digital savviness. These women have shared mental models that rely more on the evidence for use of digital solutions and some preference prompted by social norms in formulating decisions on usage.
- The Passive Skeptic: She barely or never uses AgriPay after signing up. Most women in these segments have cognitive dimensions that rely more on faith and preferences for non- digitally integrated solutions.

We do not see any “super-user” segment emerging from the sample of women we engaged which suggests strong opportunity and potential to drive increased engagement by women users.

# Executive Summary

Based on findings, we identify three key ways Zanaco can further support women farmers to adopt and use AgriPay, by degree of priority:

## 1. Convert dormant/low users (Passive Skeptics) to more active users

- Accelerate launch of the save, borrow and learn features to meet farmers needs, particularly the save feature, as this was the key value proposition for women farmers to join AgriPay.
- Offer post-registration support to customers, particularly women, to support them to navigate AgriPay and use all of its services.
- Expand the Xpress agent network to increase coverage of rural areas by enrolling more cooperatives, agro-dealers, distributors, farmer groups and village savings group members/leaders as agents to expand rural footprint.

## 2. Increase usage among average users (Curious Optimists)

- Expand the number of vendors that have an AgriPay account, especially schools and agrovets, to enhance uptake and use of third-party payments features to reduce the need for women farmers to make some payments in-person.
- Work with partners to enhance connectivity of Xpress Agents' devices to mitigate the delays in service provision

## 3. Acquire more women users

- Broaden outreach beyond savings group meetings. For instance, use digital channels such as SMS to create awareness and overcome challenges presented by COVID-19
- Expand the target locations for Zanaco agents to cover more regions in Zambia
- Encourage agents to continue informing women farmers beforehand of the registration requirements and facilitating provision of some of the requirements e.g. SIM cards



# Study Methodology

# Study Methodology

➤ To achieve the learning objectives, a mixed approach is applied and executed by Busara and Dalberg over three phases:



**Data Analytics:** Data analysis of a selected sample of administrative data on farmer usage of AgriPay by gender.







**Qualitative Research:** Explores farmer experiences and journeys for each partner product with in-depth interviews with a subset of farmers and stakeholders.



**Behavioral Mapping:** Identifies shared mental model themes (from the farmer interviews) of how farmers perceive the AgriPay value proposition and the behavioral barriers and levers that may be driving decision making around usage.

- Four partners have participated in this study:
  - Arifu
  - AgriPay (by Zanaco)
  - DigiFarm
  - FtMA (Farm to Market Alliance)

# Study Methodology

Research method	Description
	<div data-bbox="231 351 703 562" style="background-color: #009688; color: white; padding: 10px; text-align: center;"> <b>LITERATURE REVIEW</b> </div> <div data-bbox="728 351 2415 562" style="border: 1px solid #009688; padding: 10px;"> <p>We have reviewed <b>key documents</b>, including past AgriFin, Dalberg, BMGF and external research on AgriPay, and best practices in reaching women farmers through digital services: Key <b>reports</b> reviewed include:</p> <ul style="list-style-type: none"> <li>• Mercy Corps ZANACO case study</li> <li>• Mercy Corps Accelerating Access to Finance for Women Smallholder Farmers in Zambia report</li> <li>• PRS 360/Mercy Corps AgriPay consumer research</li> </ul> </div>
	<div data-bbox="231 576 703 788" style="background-color: #d32f2f; color: white; padding: 10px; text-align: center;"> <b>DATA ANALYTICS</b> </div> <div data-bbox="728 576 2415 788" style="border: 1px solid #009688; padding: 10px;"> <p>We conducted <b>quantitative data analysis of a sample of AgriPay user data</b> to identify key themes and questions for deeper probing in interviews</p> <p>The data analysis covered farmer account ownership and some of the interactions of users with AgriPay's services including; Withdrawals, Deposits, Third party payments e.g. airtime</p> </div>
	<div data-bbox="231 802 703 1013" style="background-color: #009688; color: white; padding: 10px; text-align: center;"> <b>KEY INFORMANT INTERVIEWS</b> </div> <div data-bbox="728 802 2415 1013" style="border: 1px solid #009688; padding: 10px;"> <p>We conducted <b>key informant interviews with 4 of AgriPay's key partners</b>. Key partners interviewed include</p> <ul style="list-style-type: none"> <li>• Cotton Association of Zambia</li> <li>• Zambian breweries</li> <li>• Vitalite</li> <li>• Musika</li> </ul> </div>
	<div data-bbox="231 1028 703 1239" style="background-color: #d32f2f; color: white; padding: 10px; text-align: center;"> <b>HCD-INSPIRED FARMER AND AGENT INTERVIEWS</b> </div> <div data-bbox="728 1028 2415 1239" style="border: 1px solid #009688; padding: 10px;"> <p>We conducted <b>13 HCD-inspired interviews - 11 with farmers, and 2 with Xpress Agents</b> who facilitate withdrawals and deposits by farmers:</p> <ul style="list-style-type: none"> <li>• We spoke to 1 male, and 1 female Xpress agent in peri-urban areas</li> <li>• We spoke to 7 female and 4 male farmers in rural and peri-urban areas in Zambia</li> </ul> </div>

Note: We targeted our recruitment to ensure a diversity of women's experiences would be captured, including using selection criteria around age, education level, marital status, and smartphone ownership. The full breakdown of farmers and agents interviewed is available in the annex.



# About AgriPay

# AgriPay Overview

AgriPay is ZANACO's farmers account offering. It presents a holistic customer value proposition including access to financial products and services as well as agronomic information. Currently, only the My account and Xpress Agent feature is functional, with the other features expected to launch in early 2021.

## Key features



### 1. My account

This is a low-cost transactional account that allows farmers to deposit money, withdraw and make payments to third parties; there is no maintenance fee

### 2. Save / layby\*

This is an interest-earning account that will allow farmers to save towards an identified goal (e.g.. inputs, school fees, asset purchase etc.)

### 3. Learn\*

Zanaco will partner with Arifu to provide easy access to educational and informational content to smallholder farmers, via SMS

### 4. Borrow\*

Based on transactional history with the bank and other partners, ZANACO will extend general micro-credit to smallholder farmers in the form of insured loans.

### 5. Xpress Agent

ZANACO is recruiting cooperatives, agrodealers, distributors, and farmer groups as agents to expand rural footprint. Growing the agent network is critical for successful uptake and use of the product

# AgriPay Overview

AgriPay is a farmer banking solution that intends to offer a suite of services; however, only My account and Xpress Agents is currently functional

## KEY FEATURES

1. Payment Transactions (Active)
2. Save (Active)
3. Learn (Pending)
4. Borrow (Pending)
5. Xpress Agent

Since the launch in early 2019, the platform has provided a holistic customer value proposition for smallholder farmers, including account opening, access to markets, access to agronomic information and education on best farming practice. Based on Zanaco's and AgriFin's assessment, despite 54% of the population of Zambia (1.4m households) being full-time smallholder farmers, they are unable to reach their full potential because they lack access to credit and markets. Zanaco through AgriPay aims to address this challenge by providing a full ecosystem for smallholder farmers that gives them access to the following:

Although women make a large proportion of the Zambian agricultural labour force, they remain the most financially excluded group in Zambia (77%, FinScope 2016). AgriPay was designed in collaboration with AFA to be a farmer's product that can serve both men and women.

3560 AgriPay accounts have been opened, 54% of which were opened by women. Most users were introduced to the AgriPay platform through Zanaco's network of 300 agents. Preliminary qualitative insights into the AgriPay platform conducted by Zanaco suggests the saving feature has the strongest value proposition for farmers, with farmers noting they opened an account for safe storage of funds.

Source: Agrifin Gender Impact Assessment Inception Report, 2020. Finscope, 2016.



# Farmer Engagement Journey

# Usage Overview

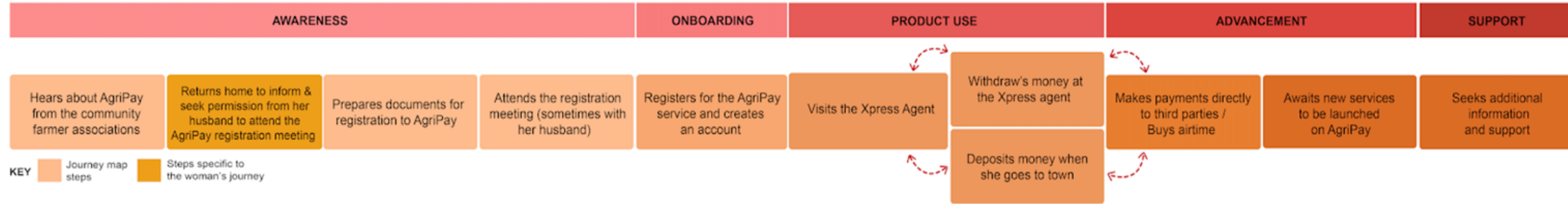
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In this section, we presented the overview of who are using AgriPay and how various services provided by AgriPay have been used.

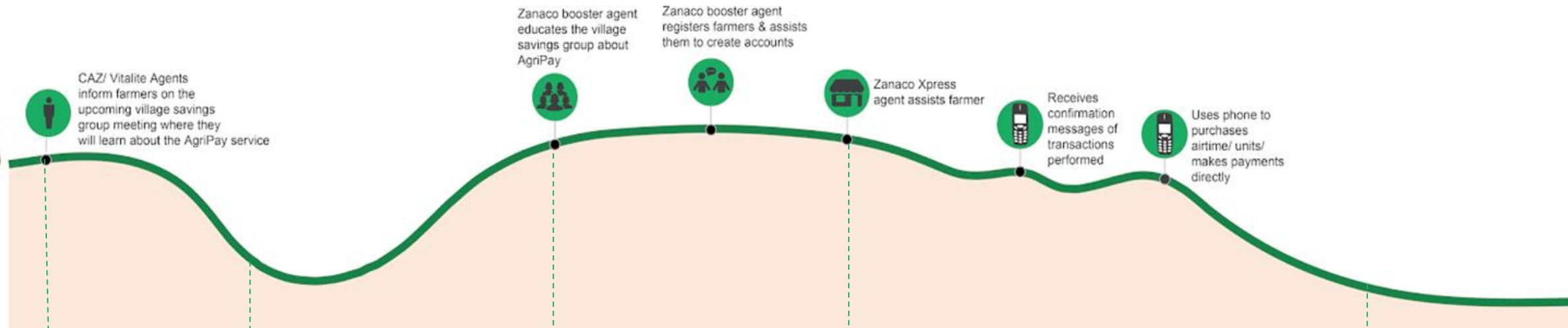
# Engagement Journey of Women

AgriPay  
PRODUCT  
JOURNEY

WOMAN  
FARMER'S  
JOURNEY



## AgriPay LEVEL OF ENGAGEMENT & SERVICE TOUCHPOINTS



WOMAN  
FARMER'S  
QUESTIONS

- What is AgriPay and how can it benefit me as a farmer?
- How easy is it to apply?
- What do I require to register?
- What are my husbands thoughts about the service?
- What services does AgriPay offer?
- How does AgriPay compare to Airtel and MTN?
- What do my peers think about AgriPay?
- How easy is it to use?
- Why is the Xpress agent so far?
- How much transport money will it cost for me to get to the agent?
- How often can I afford to go to the Xpress agent?
- Why is the withdrawal amount capped at 2000 Kwacha?
- How much time will I take at the Xpress agent?
- How do I perform direct payments to third parties?
- What can I purchase using this service?
- When are the new services going to be launched?
- When will the agents return to train us on the new services?
- How will they benefit me?

# AgriPay Sample Demographics and Engagement Statistics



The sample used was provided by Zanaco. The sample data shared consisted of mainly transactional data with little demographic characteristics of users.

**1,266\***  
Total Sample

**23%**  
More female users

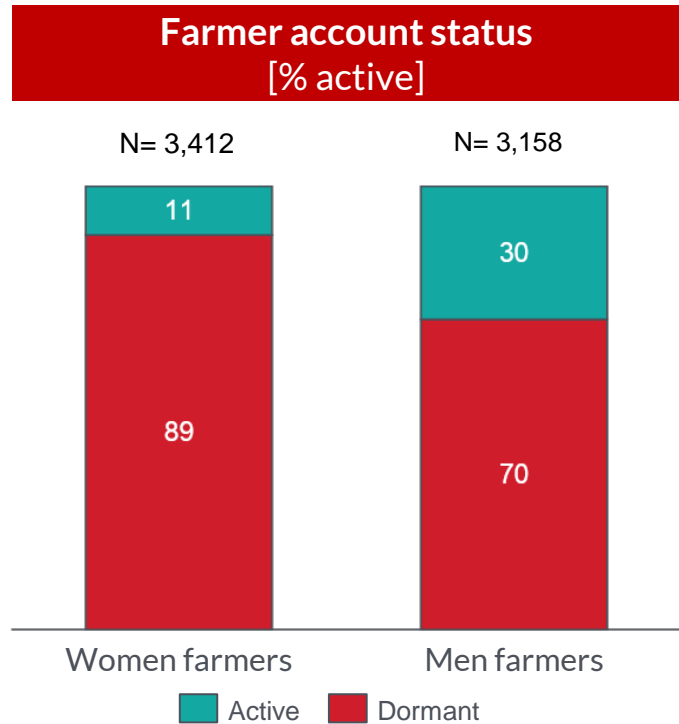
**73%**  
Above 35

**100-200 ZK**  
Average deposit

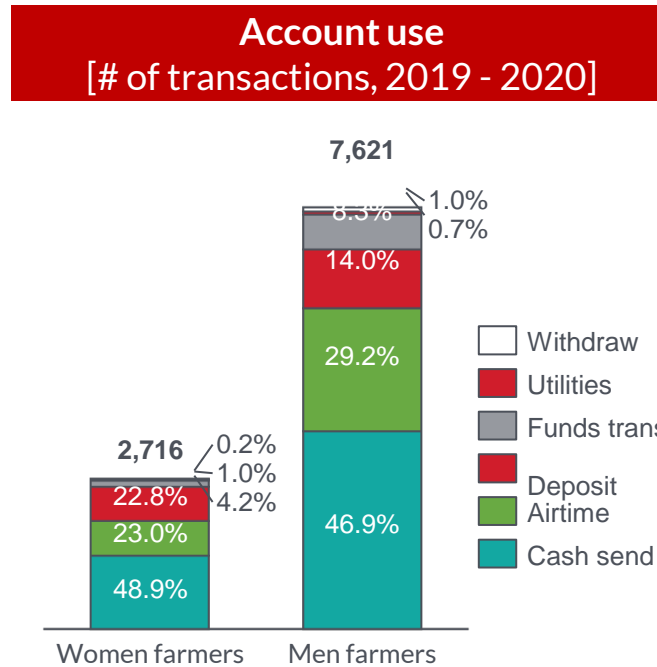
**Cash Send**  
Most Common transaction type

# AgriPay Transaction Types

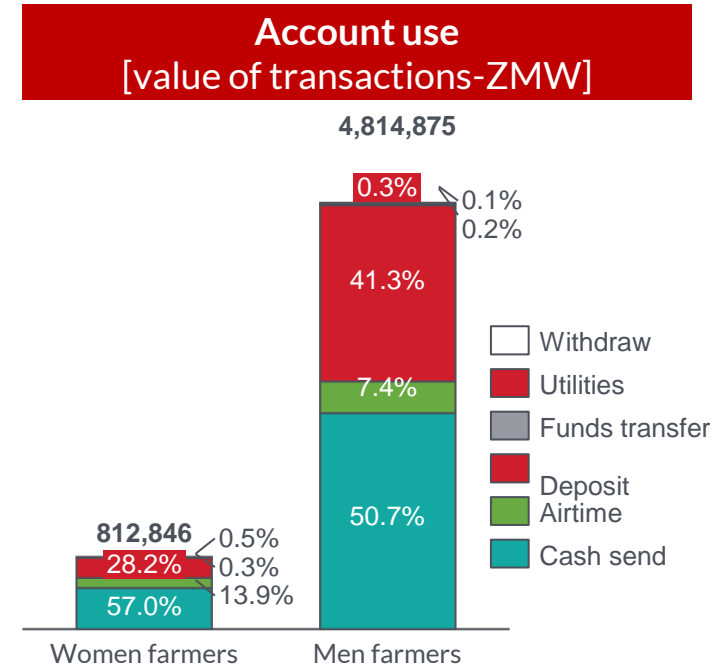
There are slightly more women (52%) registered on AgriPay than men (50%), however, activity level and transaction amounts by women are much lower



- Account registration and ownership for the AgriPay account is almost equal between men and women (52% vs. 48%)
- However, a much larger proportion of registered women are dormant users compared to men (89% vs. 70%)



- In general, men perform approximately 3x as many transactions as women
- The majority of transactions (49% for women, 47% for men) are “cash send”, followed by “airtime top-up” and “deposits”

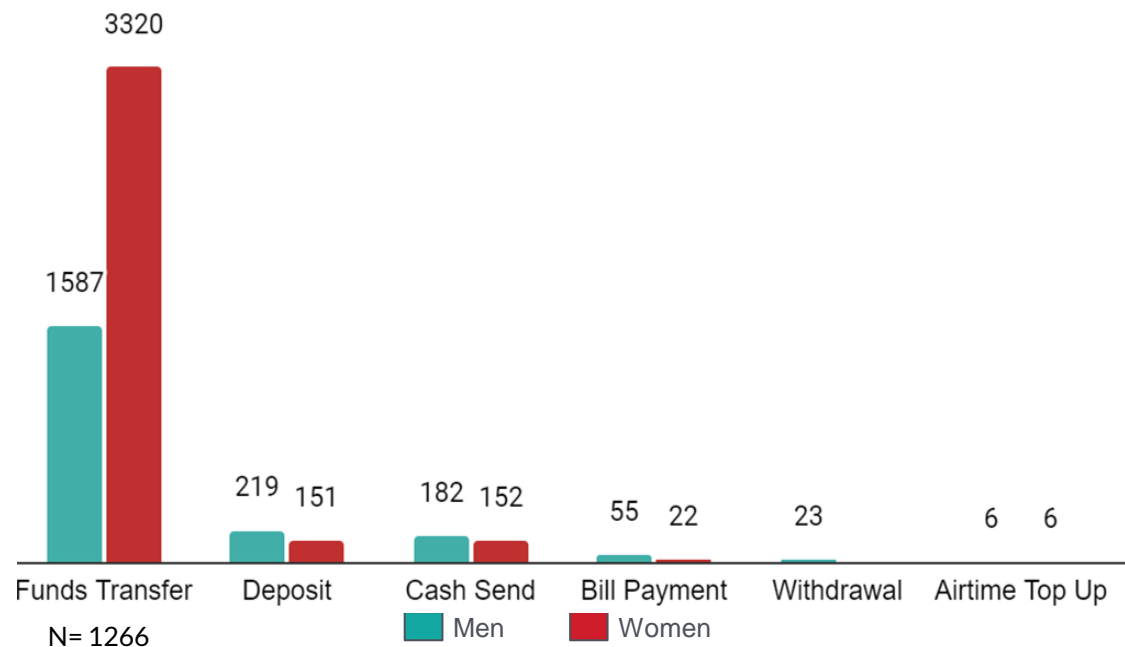


- In ZMW value, men transact approximately 6x more than women
- “Cash send” and “funds transfer” comprise over 80% of all transaction value
- To-date, both men and women use the account similarly, for transfer of funds

# AgriPay Transaction Volumes

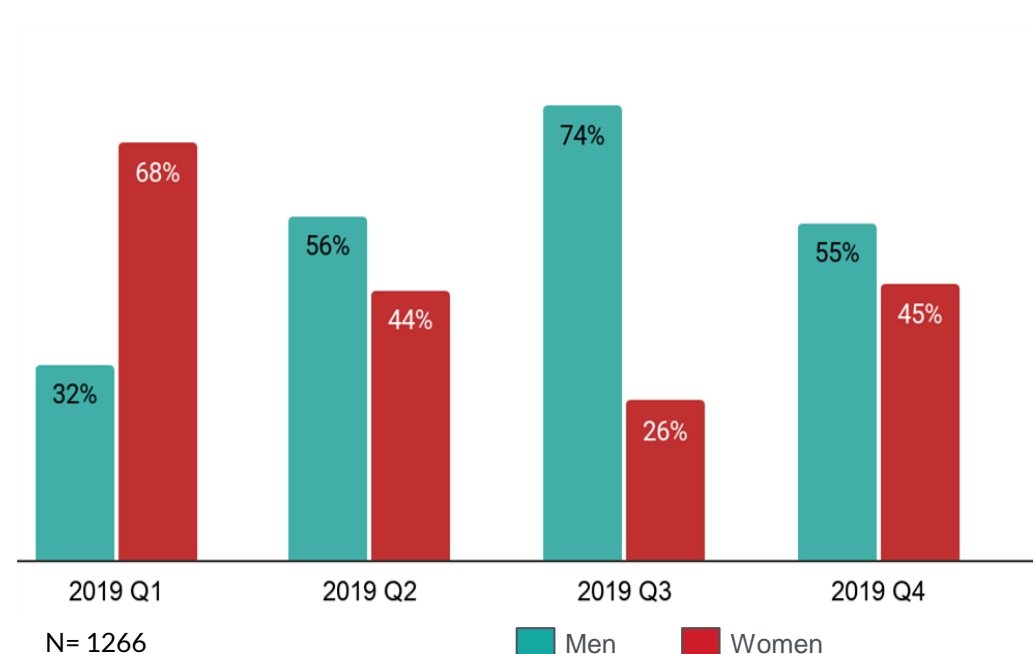
Women received more inflows and made less withdrawals than men, thus using AgriPay as more a saving account than a transactional account

**Average Transaction Amount by Gender**  
[# of transactions, 2019 - 2020]



Although cash send was the most common transaction type funds transfer (inflows into the account) were associated with the highest average transaction amounts. We observed that gender was a significant predictor of AgriPay Usage. Men were more likely to engage in cash send (p-value=0) compared to women..

**Total Quarterly Transaction Amounts Over Time**  
[# of transactions, 2019 - 2020]



Transaction amounts for both men and women have risen significantly since Q1 2019, with transaction amounts growing much faster for men compared with women. Total transactions amounts for women have grown from 7,378 in Q2019 to 163,595 ZK while total transaction amounts for men grew from 3,459 to 200,172 ZK. However the percentage women's transaction amounts relative to men has steadily fallen since Q1 2019.

A person is visible in the background, looking down, with a red overlay covering the entire image. The person is wearing a light-colored shirt and a dark cap. The background shows a field with plants and a bowl in the foreground.

# Factors that Influence Awareness and Adoption

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In this section, we analyzed the data and information from farmer interviews and identified factors that influence awareness and adoption of AgriPay service, particularly among women users.

# Factors that Drive Awareness and Adoption Among Women

## Leveraging Farming or Community Groups

ZANACO agents with support from trusted farmer associations such as the Cotton Association of Zambia (CAZ) and VITALITE have played a critical role in recruiting women to register for AgriPay. CAZ and VITALITE act as a linkage between Zanaco agents and village savings groups. The associations have been effective in recruiting women farmers as they are well known, trusted and have ongoing support programs with farmers, driving trust and credibility of AgriPay among women farmers. For example, CAZ has ongoing programs training women smallholder farmers with weaving skills while VITALITE has existing programs on purchase of inputs and solar panels.

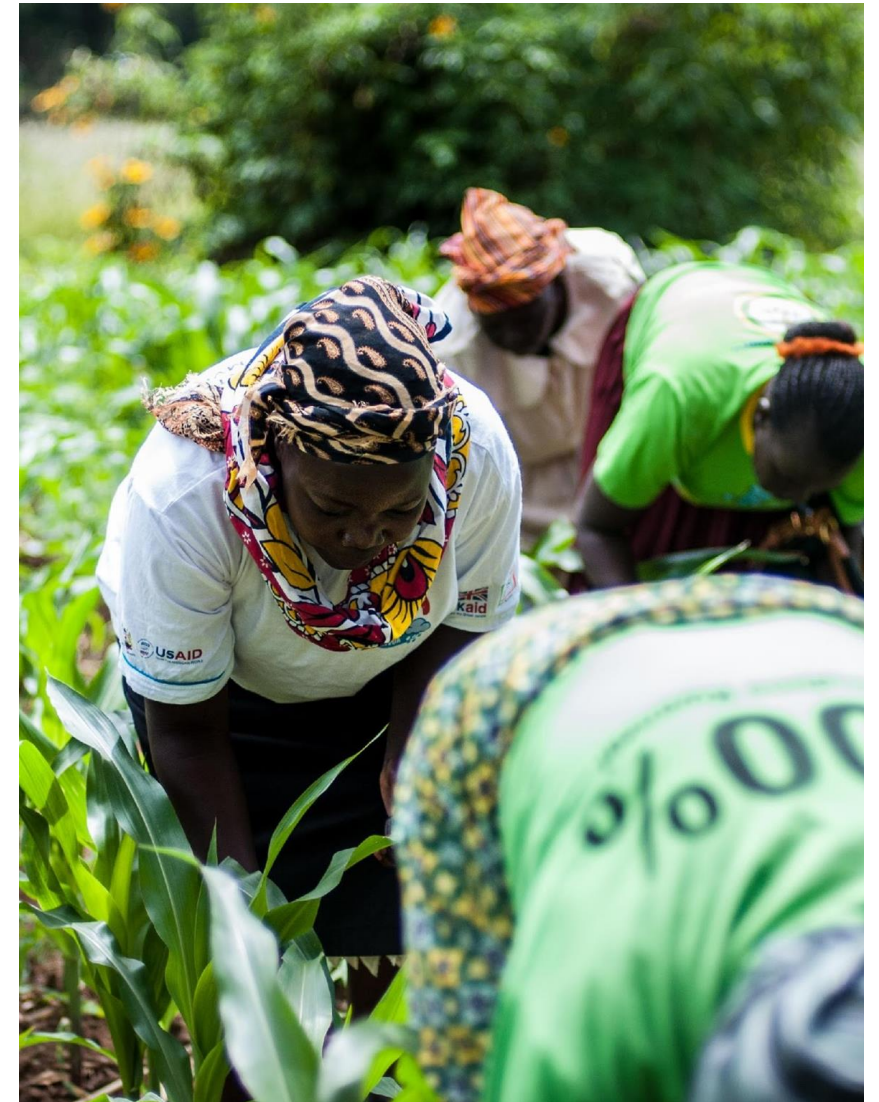
*“CAZ is a good organization. It used to only deal with cotton but now it is doing more crops. It helped me make my decision to register to AgriPay.”*

WOMAN | FARMER | 57 | ZAMBIA

Use of village (informal) savings groups has been an effective and efficient channel to drive up awareness of AgriPay among women farmers as women are more likely to be in savings groups than men. Most women farmers interviewed first learnt about AgriPay through an informal savings group. This is an effective channel of awareness as mass registration can take place in a single forum and furthermore, once registered, women can act as ambassadors among their peers in the group, driving increased uptake.

*“Traditionally, women are more community oriented. Husbands encourage their wives to join groups while men do not have the tradition of coming together.”*

MAN | FARMER | ZAMBIA



# Factors that Drive Awareness and Adoption Among Women

## Desire for Secure savings and Limited Transactional Costs

Women farmers cite AgriPay's value proposition of safe storage of money and low transaction fees as the key reason they joined AgriPay. Women farmers typically store their money in their homes where the money is at risk of theft or destruction by fire making mobile storage an attractive alternative. However, mobile money competitors have higher transaction fees (charging based on the volume of money sent), while AgriPay offers a low and fixed fee, making it a more attractive option.

Zanaco's strong brand has played an important role in creating awareness and persuading women farmers to register. Zanaco bank is well-known and familiar to farmers as it has been in the market for several years and is one of the largest banks in Zambia. The familiarity and longevity in the market creates trust and credibility of AgriPay as a service among women farmers.

*“Most people were opening AgriPay accounts because Zanaco bank itself is reliable and has been in the commercial business for some years”*

MAN | XPRESS AGENT | 30 | ZAMBIA



# Factors that Drive Awareness and Adoption Among Women

## Peer Influence and Ease of Registration

Seeing peers register drives women farmers to also sign up to AgriPay. Women farmers interviewed indicated registering on AgriPay after seeing their group mates register in the farmer groups.

*“I registered to AgriPay because everyone in my savings group registered for it.”*

WOMAN | FARMER | 56 | ZAMBIA

Registration requirements e.g., identification documents and SIM cards have not been a barrier for women users of AgriPay interviewed. This is likely because documentation requirements are communicated beforehand to women farmers. Further, agents invite network providers such as Airtel to meetings to provide SIM Cards, making it easier for farmers to register. This is particularly helpful for women farmers who may be constrained by household responsibilities limiting the time they have to seek the various registration requirements.

In addition, agents travel to the villages to register women in the saving group meetings, saving women transport costs and mitigating mobility challenges for women. Since agents attend village group meetings that are already scheduled, women do not have to make additional arrangements or invest extra resources to partake in onboarding and training meetings.



# Factors that Limit Awareness and Adoption Among Women

## Gendered Roles and Cultural Norms

Married women farmers sometimes require permission from their husbands to attend savings group meetings where most women learn about AgriPay. For women with supportive partners, permission is not a barrier and the process is a discussion that may include encouragement from the husband. In these instances, the husbands might accompany their wives to the meetings and the discussion takes place during the meeting. However, in instances where permission is not granted, women may not get the opportunity to attend the group meeting(s) and learn about AgriPay.

Since registration is primarily done through informal savings groups, women farmers that do not belong to an informal savings group may not get the opportunity to learn about and register for AgriPay. Women farmers not in these groups may therefore perceive the service as an exclusive service for village savings groups and may be less likely to register for AgriPay.

Women farmers living in areas that are not visited by agents are less likely to be aware of and register for AgriPay. Given the emphasis on an agent model to register users, women situated in regions not reached by agents are more likely to miss out on the opportunity to register for AgriPay, reducing uptake in these regions.

COVID-19 has hindered awareness and registration efforts of AgriPay, resulting in low uptake of AgriPay in 2020. Given the physical nature of recruitment into AgriPay, COVID-19 has hindered organizing group meetings where registration and awareness predominantly take place.





# Factors that Influence Product Engagement

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In this section, we analyzed the data and information from farmer interviews and identified factors that influence the usage and level of engagement of AgriPay service, particularly among women users.

# Factors that Drive Usage Among Women



## Accessibility of Xpress Agents

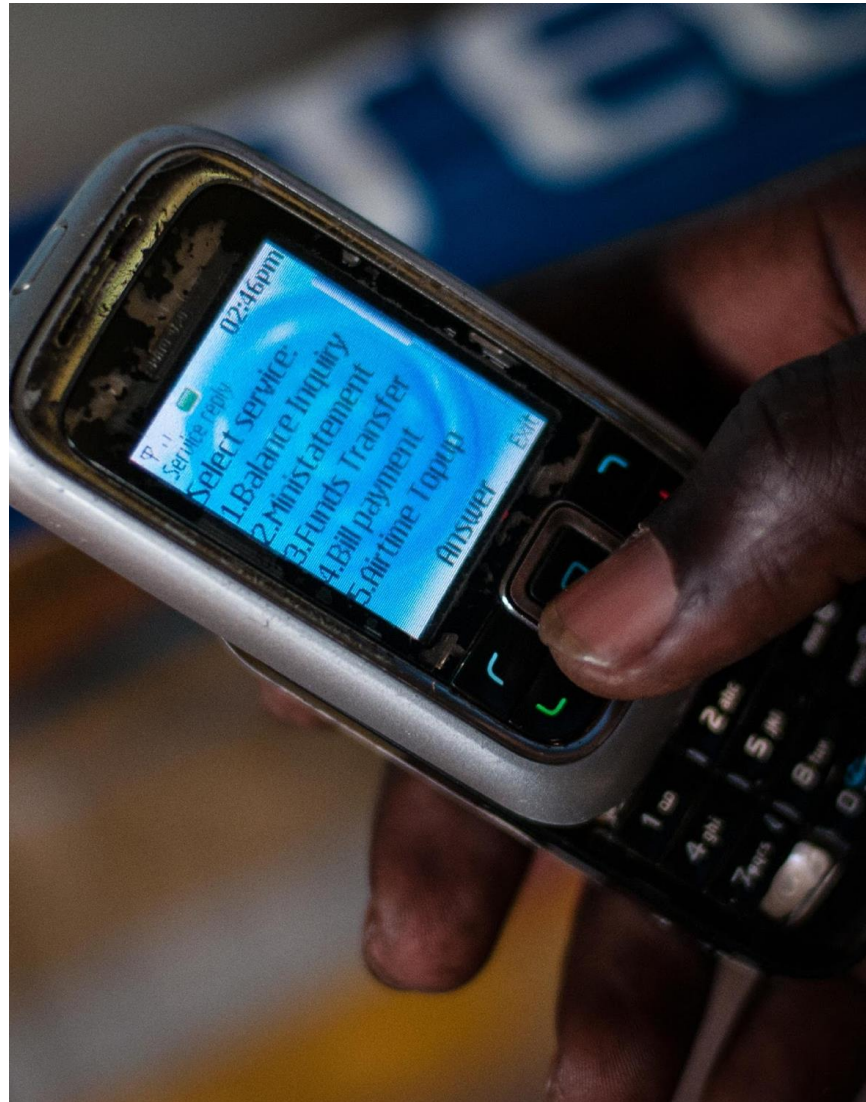
Limited accessibility of XpressAgents is a key constraint for uptake and use of AgriPay services by women farmers as they are mostly located in rural areas. Xpress Agents are found in towns, requiring women farmers in rural areas to bear a time and financial cost to access deposit and withdrawal services. Women reported paying up to 120 Kwacha(\$6) for transport and spending 2 hours in travel time each way to travel to town where most XpressAgents are located. This is particularly challenging for women as they are more likely to face emergencies compared to men but are less mobile due to household responsibilities, which also leave them more time-poor to travel. Additionally, women are less likely to own transport means such as a bicycles compared to men. Women users therefore result to having other mobile money accounts that are more accessible or storing money at home, which drives lower usage of AgriPay.

*“I use 40 kwacha going and 80 Kwacha coming. I would use that money from something else but now I use that for transport. I could deposit it and could use it to purchase my inputs and chemicals for my farm”*

WOMAN | FARMER | 40 | ZAMBIA

There is limited follow-up and customer support provided to users after registration, which is a challenge for women farmers because they typically require more handholding and support to use digital services, given their lower trust of these products and their lower digital literacy levels. Some women farmers interviewed specified the lack of follow-up and support from agents lead them to stop engaging with AgriPay, driving the high rate of inactivity among women users on the platform. 89% of women users on AgriPay are inactive, compared to 70% of men users.

# Factors that Drive Usage Among Women



## Quick and Convenient Transactions (at no cost)

A fixed withdrawal fee and zero maintenance fee of the My Account service results in preference of AgriPay over other mobile money competitors and bank accounts. AgriPay charges a fixed fee of 3 Kwacha compared to its competitors that charge a transaction fee that increases according to the volume of the transaction. AgriPay also has no monthly maintenance fee as compared to bank accounts with monthly service charges resulting in a preference to use AgriPay as a wallet. These are attractive features for women users likely because women have lower incomes than men and are therefore more fee-sensitive than men users.

*"I used to use AirTel money then I realized the charges for AgriPay are cheaper"*

WOMAN | FARMER | 25 | ZAMBIA

The ability to utilize the payment feature at the convenience of their home drives up usage of AgriPay by women users. Women farmers indicate using AgriPay's payment feature to primarily pay school fees, buy airtime and farm inputs. Previously, they made payments for school fees by cash or a visit the bank to complete the transfer. With AgriPay, women can save time, effort and financial cost of making payments physically.

*"I like saving through AgriPay because I can transmit the money while at home even buy airtime for my friends and myself."*

WOMAN | FARMER | 49 | ZAMBIA

# Factors that Drive Usage Among Women



## Better Financial Liquidity and Tracking

Women farmers also value the ability to track their money via SMS, balance statements and receipts received on AgriPay compared to village banking. Women appreciate being able to easily check their balance and keep track of their expenses on the phone, ensuring financial responsibility and planning. This may be more attractive to the active women users of AgriPay as they are highly active financial managers and more likely to plan their expenses. Therefore, the tracking capabilities of AgriPay aids their planning process.

*"I trust AgriPay because even in the evening you can check that the money is there so that you can plan based on how much you have left."*

WOMAN | FARMER | 56 | ZAMBIA

**Liquidity constraints of village banking results in preference of AgriPay for storage of money by women farmers.** With village savings, money is in the hands of other group members –usually those who have taken loans- and one may not access it when needed until the loan is repaid, especially in cash emergencies. AgriPay offers the option of ‘cash send’ to make third party payments, which can be helpful in times of emergencies by removing liquidity challenges.

# Factors that Limit Usage Among Women



## Delayed Product Roll-Out

Delayed launch of the borrowing and savings product results in a preference for village savings over AgriPay. Women farmers can borrow from village savings groups after joining them whereas the borrow feature does not exist yet on AgriPay. Moreover, saving in village banking accrues interests while AgriPay is yet to launch a savings product. Women users reported saving in informal groups can accrue interest rates of up to 20% as members earn a share of the interest charged to borrowers, providing an incentive for women farmers to opt for village banking as a savings tool.

Payments to third parties are not always possible as not all third parties have AgriPay accounts given the nascence of the product, resulting in women farmers needing to make some payments in person e.g. to some schools, which further constrain them timewise.

Internet and float challenges increase the amount of time it takes to complete a transaction, increasing women's time burden. When making withdrawals and deposits, Xpress agents may experience internet connectivity challenges and may not have enough float requiring extra waiting time or an additional trip. This is particularly an issue for women due to responsibilities of childcare and housework which reduces their ability to wait for the transactions or conduct another trip.

*"We (agents) have the issue of internet, sometimes they (customers) may want to withdraw but it delays to reflect in their account. Women may then need to rush for transport or other programs such as taking care of babies."*

# Factors that Limit Advancement Among Women



*Low digital savviness and limited in-person support prevents women from actively exploring and using all of AgriPay's service offerings*

Less savvy women users of AgriPay are less likely to explore all of AgriPay's service offerings on their own and require more handholding and in-person support. All of the women interviewed were aware of the withdraw and deposit feature, but some women had never heard of or used the direct payment feature. They preferred instead to withdraw money from the Xpress agent or use cash stored at home to make in-person payments to a third party. This is likely due to their low digital savviness, driving low self-exploration of the platform, indicating a need for post-registration support to enable them to utilize the full suite of services offered by AgriPay.

*"I have never transferred money directly on AgriPay. You can use it if you want to use it. Most of the time I have cash on hand, so I take it directly to school"*

WOMAN | FARMER | 56 | ZAMBIA

A woman is visible in the background, working in a field. The entire image is overlaid with a semi-transparent red filter. The woman is positioned in the upper right quadrant, looking down. The foreground shows rows of plants in a field, with a small bowl or basket on the ground in the lower left.

# Women Segments and Mental Models

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In this section, we created a framework to understand users' segments and mental models of women users

# Segments of Women and their Mental Models



*Through the analysis of drivers and barriers to adoption/engagement, several segments of women users emerged, and some degree of insight into their psychometric traits was possible.*

*We explored these beliefs and attributes further, to deepen our understanding around drivers/barriers of product use by applying a mental models analytical framework to the emergent segments.*

*Through this framework we were able to distill some of the key beliefs, value propositions and cognitive biases that may be affecting decision-making around adoption/engagement with products.*

# Segmentation Methodology

We used four dimensions to segment and better understand women users on AgriPay

## DIGITAL USAGE PATTERNS

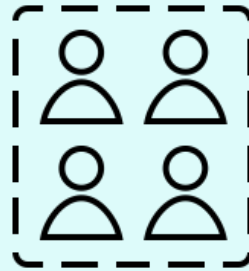
*What are the usage patterns across the customer journey of DigiFarm (awareness, onboarding, product use and advancement)?*

High, average and low usage

## BEHAVIOR

*What is the financial and social behavior of women users that drive their usage patterns?*

How likely are women users to have a bank or mobile wallet account, save, borrow, budget, etc.? Which community activities do women users engage in that affect their usage patterns of DigiFarm?



## DEMOGRAPHICS

*What are the socioeconomic characteristics of women users that drive their usage patterns?*

Age, location, marital status, education, digital literacy, livelihoods and household context

## PSYCHOLOGY\*

*Which are the psychometric traits that could explain women usage patterns on DigiFarm?*

Women's sense of control, self efficacy, openness, trust, optimism, conscientiousness, and dependability

Note\*: The Psychometric traits used are based on The Human Account of Kenya Women Smallholder farmers, created and developed by Dalberg with Rockefeller Philanthropy Advisors and funded by the Bill & Melinda Gates Foundation in 2019. The Human Account (THA) is a three-dimensional research framework aiming to better understand customers in emerging markets based on their contextual, behavioural, and psychological dimensions. While the THA segments were created to understand users' financial health rather than digital engagement, they can provide useful insights into the digital usage trends we observe among digital platform users. See Annex for the THA Kenya women segments.

# Segments of Women



## THE CURIOUS OPTIMIST (Average-user)

This is the segment of women users of AgriPay that is likely to have more active usage, though usage remains at moderate levels. They are moderately digitally savvy, might own a smartphone, and leverage multiple online channels to educate themselves further on new digital tools, services and farming practices. They have multiple mobile money accounts and frequently use mobile money to store money and perform transactions. If married, they participate equally in the financial decision-making in the household and discuss with their partners prior to attending village savings meetings and registering for AgriPay. They actively participate in village savings group, saving and taking loans frequently, and are often the leaders of their groups. People in their community look up to this segment for advice and in some cases financial support. They are entrepreneurial and are therefore more likely to farm commercially and, have higher produce volumes, and frequently hire additional labor to support them during planting and harvesting seasons. They have moderate proactivity in exploring AgriPay. They are more conscious and concerned about the lack of support provided and are eagerly waiting for the new products to be launched.



## THE PASSIVE SKEPTIC (Low-user)

Most live in rural areas and have lower levels of education - mostly primary school. They are not as digitally savvy and constitute the low-use or low-engagement segment of AgriPay clients, barely using AgriPay after registration. They own a feature phone that they use for receiving/making calls and texts, relying on physical sources of information and support such as peers and savings group on agricultural services and when troubleshooting challenges they experience on AgriPay. If married, they are more likely to require permission from their partners prior to attending village savings meetings and registering for AgriPay. They rarely use mobile money platforms for transactions and like to keep their money at home for everyday expenses. They save in village savings groups. They practice farming for subsistence. They are more skeptical about new digital services and less proactive in exploring the platform. After the onboarding training, they are likely to stick to the features that were shown to them during training. To actively engage, understand and advance on AgriPay they require follow up and after sales support from the Zanaco team to start actively engaging with the AgriPay platform. They also need to see proof of success from their peers to engage with AgriPay more.

# The Curious Optimist- Product Use

## AWARENESS

- **Channel for first exposure to AgriPay:** Most heard about AgriPay through their village savings group meetings where farmer associations e.g. Cotton Association of Zambia educate them on AgriPay services. In instances where the woman is married and has a supportive husband, they inform the partner from a consultation perspective (rather than permission-seeking) and their partners may even accompany them to the registration meeting.

## ONBOARDING AND TRAINING

- They need less hand holding during onboarding and training and are most likely to grasp how to use the services faster.

## PRODUCT USE

- **Deposit:** Deposits money monthly at the Xpress agent after they receive income from their produce because they value the security of their money in AgriPay while some receive direct deposits from offtakes.
- **Withdrawal:** They do not make withdrawals as frequently.
- **Payments:** They appreciate the low transaction fees, the notifications which help them to keep track of their balance and spending habits, and prefer to make third party payments through the platform due to the convenience of the service.

## ADVANCEMENT

- They have moderate proactivity in exploring the platform. After the onboarding training, they are likely to explore buying airtime or paying school fees directly but they need additional training to engage and advance to the other services that will become available.
- They are able to store their money on AgriPay given their lower likelihood of spending unnecessarily as compared to storing money at home. As a result, they are more financially disciplined and can save up for big purchases e.g. inputs for their farm.
- They are concerned about the services that were promised to them that they are yet to receive and are looking forward to the additional services that will be on the platform.

## ONGOING SUPPORT

- Relies on trusted agriculture players in the ecosystem in their community e.g. Cotton Association of Zambia (CAZ) for support and information.
- They are more conscious about the support provided and they need follow ups and after sales support from the Zanaco team to continue actively engaging with the AgriPay platform.

# The Passive Skeptic- Product Use

## AWARENESS

- **Channel for first exposure to AgriPay:** Most have heard about AgriPay through their village savings group meetings where farmer associations e.g. Cotton Association of Zambia educate them on the AgriPay service. In instances, the woman is married, in most cases their partners accompany them to the training.

## ONBOARDING AND TRAINING

- During onboarding and training they need additional handholding to understand the service and due to lack of digital literacy, they have trouble grasping the platform services.

## PRODUCT USE

- **Deposit:** They have barely used the service; they deposited money in their account during or shortly after registration and have done that one or two times at the Xpress agent.
- **Withdrawal:** They prefer to make withdrawals at the Xpress agent because they provide them with support on how to use the service.
- **Payments:** They appreciate the low transaction fees but still prefer to withdraw money to make payments in cash or in person to third parties

## ADVANCEMENT

- Unaware and unconcerned of the additional services to be launched.
- Limited proactivity in exploring the platform. After the onboarding training, they are likely to stick to the features that were shown to them during training.
- Need additional training to understand, engage and advance to available services and future services.

## ONGOING SUPPORT

- Barely use AgriPay - they rely on peers and savings group for support and information on agricultural services and when troubleshooting challenges they experience on AgriPay.
- They need follow ups and after sales support from the Zanaco team to start actively engaging with the AgriPay platform. Support for this segment would be more beneficial for this segment to gain more buy in.

# Shared Mental Models of Women: Elicitation Methodology

Mental models are the sum of beliefs and attitudes about a product or service, and they heavily influence the extent to which people engage with a product or service and for what purpose.

Based on the women segments identified, we added a behavioral lens to identify beliefs, aspirations and values systems that are most likely underpinning decision making to use digital solutions and current observed trends in uptake and usage for each segment.

Our approach to eliciting the shared mental models across the women segments involved 3 stages:

- Understanding user beliefs and aspirations and linkages to perceived value of AgriPay.
- The actual perceived value and how this differs from the conceptual value proposition.
- Identifying the cognitive dimensions and biases driving decision making around uptake and usage of AgriPay.



## User Beliefs, Values And Aspirations

Through content analysis based on the Means End Chain Theory elicitation method of qualitative interviews we identified user farming and non farming specific goals. This aids in understanding underlying motivations for usage and advancement in using digital solutions.

## User Perceived Value Proposition

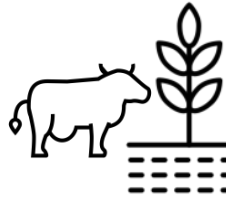
We unpacked the user expectations and perceptions of the product value and how this may link to aspirations. We identify the features that users perceive to be the most valuable through self reported and quantitative data.

## Cognitive Dimensions and Cognitive Biases

We categorise user decision making under 4 broad cognitive dimensions that can be defined by 2 systems of thought. System 1, a subconscious system that uses deep seated beliefs and biases to make quick judgements. System 2: a more deliberate and methodical system that seeks new information or evidence for

# Shared Mental Models of Women: Values and Aspirations

User values, belief systems and aspirations play a significant part in guiding a broad range of decision making and behavior. We elicited some of the underlying beliefs and personal aspirations that shape women's thinking around their farming and uptake of digital solutions such as AgriPay.



## Value Chain Expansion

Women within the curious optimist segment of users (average users) were more likely to have aspirations to diversify within the value chains they currently have, with the aim of increasing profitability to cater for the financial demands of their family. These women sought to diversify within animal farming more than crop. However lower users voiced little to know desire to expand their value chains or diversify within their existing value chains.

*"I want to expand into more animal farming goats, sheep and chicken."*

WOMAN | FARMER | 56 | ZAMBIA



## Investment in Farming Infrastructure

Investment in infrastructure such as irrigation systems for sustainable farming was one of the investment aspirations of women in the average user segments especially among women that owned their own land or had joint ownership. We observed few of such aspirations among lower user segments of women, with the most observable being land ownership.

*"My goal, firstly I want to have water, have a borehole drilled. Then..., there is a machine that meals maize for people, a shelling machine, I am also doing some savings for it."*

WOMAN | FARMER | 45 | ZAMBIA



## Family Aspirations

Providing a better standard of living for their family and ensuring their children are well educated for a better future was the main aspiration shared by all segment of women users. However we found average user segments of women were more intentional about how they could achieve these aspirations (value chain expansion and infrastructure investment) compared to less digitally savvy users.

*"At least in the coming years, my children will be well educated at school because I save money in the account."*

WOMAN | FARMER | 45 | ZAMBIA

# Shared Mental Models of Women: Perceived Value

Perceived value or benefits of a product or service has an impact on user decisions on uptake and thereafter continued use. We distilled how women collectively perceive the value or benefits of AgriPay.



## Trusted and Reliable

When engaging with unknown digital products and services, users particularly women look out for trusted entities that validate the product. AgriPay's affiliation with ZANCO and use of Xpress agents from established farming associations reinforced a sense of trust and respect for uptake.



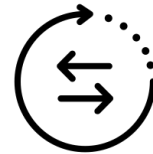
## Savings Value

The concept of saving was the main tool that women of all segments felt could help them achieve their aspirations and goals. Women sought ways to maximise their saving and AgriPay was seen as a solution to aid this. However women in both average and low user segments were concerned about the lack of interest and valued local savings groups higher due to the higher interest. Women who had no money to deposit had nor perceived value for AgriPay.



## Credit Value

The prospect of credit access was of particular value to most men and average user segments of women. A few average user and some lower user segments of women were averse to credit from a formal financial institution like Zanaco and preferred local savings and borrowing groups where they could negotiate terms more fluidly. Moreover, women's value proposition was more anchored on the saving functionality than the credit.



## Transactional Value

The zero transaction costs as well as ease of transfers was highly valuable particularly to the passive skeptic women segments. Although transactional data shows men engage in more transaction activity than women, most low user segments of women noted that AgriPay saved them transport costs in travelling to town to make deposits in other accounts.

*"I can do transactions instead of going to town. Now this time it is rainy season for you to find transport money to go to town is challenging."*

WOMAN | FARMER | 40 | Zambia

**To what extent does farmer mental models of perceived value align with product conceptual models?**

Despite having 5 conceptual model features women's perceived value of AgriPay was tied mostly to the saving and express agent features. Women across all segments desired better onboarding to other available features to aid them maximise their engagement with AgriPay.

# Cognitive Dimensions of Women's Decision Making

## Common Cognitive Dimensions

## Observed Cognitive Biases (System 1)

System 1

**Faith**  
Belief Systems

### Preference

Decision making around usage of AgriPay is usually first inspired through preference built through farming group based interactions and engagement with agents

**Preference**  
personal Desire

### Logic

The practicality of AgriPay for routine transactions like airtime top up and input payments makes the platform a logical option.

**Logic**  
Rational Thinking

### Evidence

Proof of the efficacy of the platform shared among farming group members further reinforces the value of AgriPay to users. However, the limited exposure to other features of AgriPay leaves most users with only 2 value propositions (saving and transactions) despite the 4 other platform features.

**Evidence**  
Proven or Tested

System 2

### Anchoring

Onboarding emphasis on the saving and transactional quality of AgriPay anchor user perceived value and limits product expectations and the value proposition of other features such as credit and the learning component. Although users are aware of the credit feature most feel it is not accessible and look to local rotational savings and borrowing groups as a more familiar and flexible alternative.

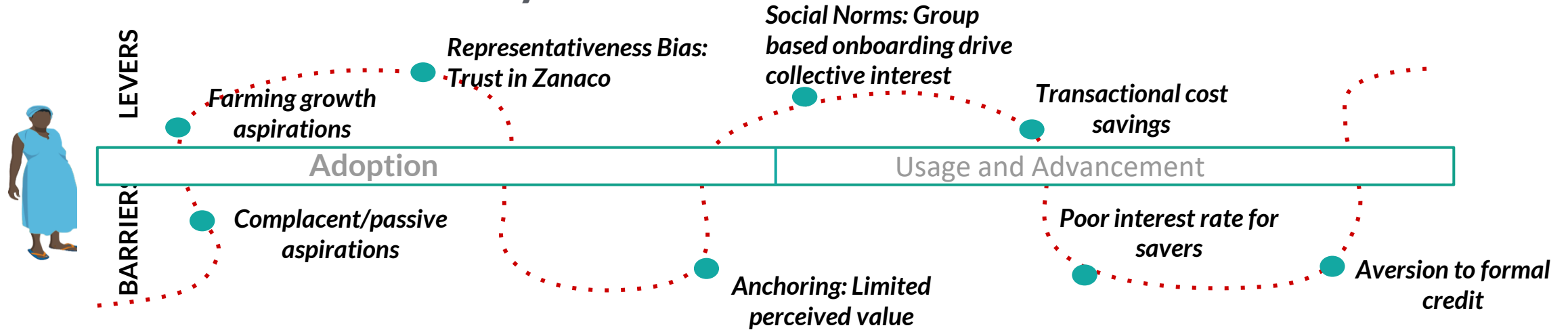
### Representativeness Bias

AgriPay's affiliation with the Zambian National Bank, gives the platform credibility in the eyes of users that creates instinctual trust that drives uptake for deposits and transactions. However some users express aversion to accessing credit from formal institutions.

### Social Norms

Engagement with local farming groups like to the Zambian cotton association play a significant role in influencing decision making not only in farm styles and value chains but also in the uptake of new services and products.

# Mental Model Summary



## The Curious Optimist Mental Model

Women who share this opportunistic mental model are more likely to be average users. They have well defined farming and personal goals and value digital services or products based on how they maximise their capacity to profit and save costs. Their cognitive dimensions are based more on the practical use cases of AgriPay rather than faith in common non digital financial platforms. Although they are open to new digital products, they are also practical and show preference for more traditional solutions such as local rotational savings groups if they help achieve their goals faster and easily.

## The Passive Skeptic Mental Model

This mental model categorises mostly women that do not have clearly defined goals for their farming mostly likely because they see agriculture as a form of subsistence farming. They have aspirations centered on giving their children an education but struggle with maximising their earning ability to achieve this. Their value for AgriPay is heavily influenced by social norms and is limited to saving. They are averse to formal credit and are more likely to have cognitive dimensions based on faith and preference for non- digital solutions despite the practical benefits AgriPay offers.



# 1. Engagement Impact

# Impact of Engagement on Women's Livelihoods

AgriPay has improved financial discipline among women; there is mixed impact on time and decision-making given the short time AgriPay has been in the market

Impact category	Key findings	Quotes
Livelihoods	<ul style="list-style-type: none"> <li>• <b>Women farmers report having higher financial discipline</b> after using AgriPay compared to storing money at home due to the reduction in spontaneous spending. Women farmers indicated being able to better manage their finances.</li> <li>• <b>Safe storage of money and ability to track expenses results in better financial planning and budgeting.</b> Women can now better plan for future expenses and big purchases such as solar panels and television sets.</li> <li>• <b>Women have extra spending money due to the low transaction fees and zero maintenance fees of AgriPay.</b> They can redirect the money to other uses such as household spending, future emergencies or farm inputs.</li> </ul>	<p><i>“Before I opened the AgriPay account, I used to spend unnecessarily. Now with AgriPay, I only access the money I need. I can make better decisions and more productive decisions.”</i></p> <p>WOMAN   FARMER   56   ZAMBIA</p> <p><i>“With AgriPay you can plan for a major program. The money can accumulate, and you can plan for your bigger project when you keep money at home there is no saving that can be done.”</i></p> <p>WOMAN   FARMER   52   ZAMBIA</p>
Lifestyles	<ul style="list-style-type: none"> <li>• <b>AgriPay has had a mixed effect on women farmers' time, with some women indicating saving time with the direct payments feature while some women have added time constraints</b> due to the inaccessibility of the XpressAgents and lengthy transaction times due to internet connectivity issues and lack of float of the XpressAgents.</li> <li>• <b>Decision making and household dynamics-</b> Due to the short time of the product in the market and infrequent use of AgriPay, a majority of the women farmers interviewed indicated no substantial changes on their decision-making and household dynamics.</li> </ul>	<p><i>“I cannot point out that I have received any benefits. The time I have been on it has not been long enough.”</i></p> <p>WOMAN   FARMER   56   ZAMBIA</p>



# Recommendations

# Recommendations

We recommend first focusing efforts on increasing usage among dormant users (Passive Skeptics), then Curious Optimists, and finally recruiting more women users



## Product Offering



- 1 Convert dormant/low users (Passive Skeptics) to more active users**
  - Accelerate launch of the save, borrow and learn features to meet farmers needs, particularly the save feature.
  - Offer post-registration support to customers, particularly women, to support them to navigate AgriPay and use all of its services.
  - Drive orientation on the value of the other features (learn and borrow).
- 2 Increase usage among average users (Curious Optimists)**
  - Accelerate launch of the save, borrow and learn features.
  - Expand the number of vendors that have an AgriPay account, especially schools and agrovets, to enhance uptake and use of third-party payments features to reduce the need for women farmers to make some payments in-person.
- 3 Recruit more women users**
  - Broaden outreach beyond savings group meetings e.g., use of digital channels such as SMS to create awareness and overcome challenges presented by COVID-19.

## Agents



- 1 Convert dormant/low users (Passive Skeptics) to more active users**
  - Expand the Xpress agent network to increase coverage of rural areas by enrolling more cooperatives, agro-dealers, distributors, farmer groups and village savings group members/leaders as agents to expand rural footprint.
- 2 Increase usage among average users (Curious Optimists)**
  - Work with partners to enhance connectivity of Xpress Agents' devices to mitigate the delays in service provision.
  - Avoid anchoring user expectations during onboarding to just the value proposition of the saving feature. Curious optimists are keen on the prospect of advancement through credit and learning.
- 3 Recruit more women users**
  - Expand the target locations for Zanaco agents to cover more regions in Zambia.
  - Encourage agents to continue informing women farmers beforehand of the registration requirements and facilitating provision of some of the requirements e.g. SIM cards.



# Appendix

# We have interviewed 11 farmers and 2 Xpress Agents of various ages, education levels and locations

Farmer + Agent interviews						
	Gender	Age	Education	Marital status	Phone ownership	Location
<b>We have conducted 14 farmer interviews</b>	Female	56	Grade 4	Married	Feature phone	Rural Zambia
	Female	56	Grade 7	Widow	Feature phone	Rural Zambia
	Female	40	Grade 9	Married	Feature phone	Rural Zambia
	Female	49	Grade 8	Married	Feature phone	Rural Zambia
	Female	57	Grade 8	Widow	Smartphone	Rural Zambia
	Female	45	Grade 8	Married	Smartphone	Rural Zambia
	Female	63	Form 3	Widow	Feature phone	Peri-urban Zambia
	Male	46	Grade 8	Married	Smartphone	Rural Zambia
	Male	35	Grade 12	Married	Smartphone	Rural Zambia
	Male	48	Grade 4	Married	Smartphone	Rural Zambia
	Male	52	Grade 8	Married	Smartphone	Peri-urban Zambia
<b>We have conducted 2 Xpress agent interviews</b>	Female	28	College diploma	Married	Smartphone	Peri-urban Zambia
	Male	45	College diploma	Married	Smartphone	Peri-urban Zambia

A feature phone is a mobile phone that incorporates some smartphone features such as the ability to store and play music but lacks the advanced functionality of a smartphone.

# CONTACT

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