



Integrated Report

Agile Impact Study

Report completed by Busara on behalf
of Mercy Corps AgriFin

April 2021



Busara



MERCY
CORPS

AGRIFIN

About Mercy Corps AgriFin

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

Mercy Corps' AgriFin Accelerate Program (AFA) was created with the goal of supporting the expansion of digital financial services to one million farmers in Sub-Saharan Africa (SSA).

- Objective 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.



AFA and its partners provides increased access to digital services that help address some of farmers' pressing challenges. Over the years it has become important to assess the importance of increased access to digital services.

Busara and Mercy Corps AgriFin work together to conduct a series of impact assessments of the adoption, usage and outcomes of digital services provided by AgriFin and its partners.

About Agile Impact Study

Impact evaluation based on in-house data provided by partner organizations



This **Agile Impact Study** aims to unpack the impact of AFA's support to a variety of partners. More specifically, it seeks to uncover:

- Farmers' experience and perception of the products and services
- Impacts of partners' products and services on farmers' farming practice, farming outcome, and resilience to shocks
- Factors that drive **adoption** and **usage**

Through this study, AFA also aspires to:

- Increase the use of operational data among partners to generate insights
- Identify what can be done to generate richer insights in the long run



Seven partner organizations participated in this study and provided their user data for Busara to conduct the analysis. These partners have been dedicated to offer various digital solutions for smallholder farmers to improve their livelihood:

- through facilitating mechanization and providing various value chain services
- through providing relevant information
- through providing insurance to build resilience

■ Seven partners onboarded with this study:

- ACRE
- eProd
- Hello Tractor
- Ignitia
- TruTrade
- SunCulture
- aWhere

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Executive Summary

Executive summary

As a result of support by AgriFin to its growing partners aimed at expanding access to digital financial services for smallholder farmers in Sub-Saharan Africa (SSA), there have been some fundamental changes observed among smallholder farmers with respect to their adoption and behavior. From this Agile Impact Study, we have observed the following impacts of AFA and its partners:

Gender Inclusion

- **Increased women representation is seen in both agents and direct users or beneficiaries**
 - Outstanding in-person skills have allowed women agents to play an increasingly critical role in reaching out to potential users within the community and beyond to promote the value of digital or technology-based products. In some cases, the women agents have contributed to the major sales growth for some partners.
 - Largely urged by the motivation to gain economic independence, women farmers have demonstrated enthusiasm in adopting new ways of handling farming. Over the past few years, there has been a growing trend of women farmers onboarded and retained on the digital services extended out to them.
 - Continuous effort to expose women to up-to-date information and technologies will help sustain the impact.

Digital Transformation

- **Sufficient onboarding and user-centric design are keys to adoption and user retention**
 - Digital farming has become a common concept for more and more smallholder farmers through various products and services provided by AFA's partners. From planning and planting to selling products and risk mitigation, smallholder farmers have been embracing digital solutions throughout the entire farming cycle.
 - Sufficient onboarding has proved to be essential for encouraging adoption, especially when it involves in-person demonstration or contacts for further consultation (e.g. agents).
 - Products that speak to farmers' most urgent needs and the simplicity of the interaction process are more likely to attract farmers. Some partners have therefore tailored product design to meet the needs of different farmer segments.

Executive summary

Adoption of Technology for Improving Efficiency

- **Technology-based mechanisation is increasingly used during the planting phase of the farming cycle**
 - Smallholder farmers have benefited enormously from technologies that have significantly reduced the time on manual farm work including land preparation and fetching water.
 - The growing mobile penetration in SSA has enabled smallholder farmers to easily access or order such services via phone.

Awareness of Risk Mitigation

- **There have been an increase in awareness of multiple mechanisms to cope with risks and external shocks**
 - Weather insurance has been adopted by more smallholder farmers as a way to mitigate potential losses. It becomes more preferable/attractive when bundled with loan products.
 - Loans, including mobile loans, are widely adopted as a coping mechanism for emergencies, urgent farm needs and external shocks. Since harvest income and savings are the top reported sources for repayment, it is vital to sustain the virtuous circle of improving farm outcomes through the digital solutions provided for smallholder farmers.
 - Faced with uncertainty or unpredictability, farmers have also adopted new habits of seeking information and advice from trustful sources via SMS.

Financial Inclusion

- **Smallholder farmers have increasing access to loans and credit for purchasing farming related products**
 - Access to loans (including mobile loans) has been made much easier for small farmers by various actors on the ground.
 - Smallholder farmers who meet certain financial criteria further enjoy the benefit of using credit or (pay-as-you-go) payment schemes to invest on their farms by purchasing inputs or technology-based machines.



The Ecosystem and Theories of Change

Three pathways of how impact happens

We identified three types of impact pathways of how the partners influence smallholder farmers:

Through **facilitating mechanisation** and **offering value chain services**

- Technology-based machines to improve farm efficiency
- Various value chain services including customized training, loans, supply chain integration and market linkage

Through **SMS-based agronomic advisory services**

- Types of information and advice through SMS varies by partner
- Costs of SMS varies by specific program, which can be different under the same partner

Through **building resilience via risk-mitigation products**

- Crop and weather insurance are the core products
- In some cases, the product is bundled with loan

The ecosystem where AFA partners make changes

Technology-based machines to improve farm efficiency

Supply chain integration (e.g. reliable routes to market and fair prices)



SMS-based agronomic advisory to inform decision-making around farm activities

Customized training, loans, market linkage

Various insurance products covering the entire planting cycle

In-depth analysis conducted with some gaps to fill

Administrative data provided by partners has allowed Busara to draw rich insights and answer most of the research questions, yet to achieve the rest of the learning objectives requires certain data that partners currently do not have.



Administrative Data Allows to Uncover

- Basic demographics in most of the cases (e.g. gender, region)
- Economic profiles in some cases
- Onboarding experience
- Product ownership and usage
- Benefits, direct outcomes or perceived changes from using the product(s)



Additional Data to Further the Analysis

- Relevant demographics
- Farm economy
- More of product usage and engagement
- More of changes in farm production and income, capacity, attitude and behavior around digital services



Overall Statistics

Summary of Key Statistics

7

AFA partners

6

Countries in SSA

37%

**Female users, given
samples from 5
partners where gender
data is available**

32,561

Users in samples

20+

**Crop value chains
benefited**



AGRIFIN

The background is a grayscale photograph of a savanna landscape. In the foreground, there is tall grass and a leopard lying down. In the background, there are trees and a cloudy sky. A large red rectangle is overlaid on the right side of the image, and a grid of small white squares is in the top left corner.

Trends Observed in Onboarding Processes

The optimal forms and requirements for onboarding process vary by the type of impact pathways



Human contact is highly preferred and valued in the process of onboarding smallholder farmers to new techniques and services, either in the form of in-person training or contacts for following up.

- For partners that facilitate **mechanization** and provide **various value chain services** to smallholder farmers, the optimal onboarding process requires **in-person training** and **demonstration** of how to use the products and how it will affect farm activities and efficiency.
- For partners that provide **SMS-based agronomic advisory**, the optimal process includes clear **instructions on what to expect on phone** and **how to interact** with it. It also requires a clear way for users to **follow up** for clarification of SMS.
- For partners that **build resilience via insurance**, the optimal onboarding process varies by product design or target user segments. Generally, a **consistent or easy-to-access agency** on the ground is a key.

In-person onboarding lowers the cognitive threshold, yet costs more time and resources to reach out

- **In-person training and demonstration** largely brings down the **cognitive threshold** of new digital solutions and applied technologies for smallholder farmers and lifts a crucial barrier to adoption.
- This way of onboarding will also help the partners reach out to potential users **through word-of-mouth marketing**.
 - For instance, it happens commonly that farmers observe how their neighbors and community members have improved work efficacy by renting a tractor, they lean into the service before agents reach out to them.
- A **limitation** of in-person training and demonstration is that it requires more time and resources (e.g. human capital) to reach out to the same number of people. Thus, it might not be the most efficient way if a partner wants to rapidly reach out to a large number of farmers with minimum costs.



In-person demonstration of how to operate or how the services will work is key for customers to buy in at the first place.

Accessibility of agency and follow-up service is a key to successful onboarding with SMS advisory and insurance

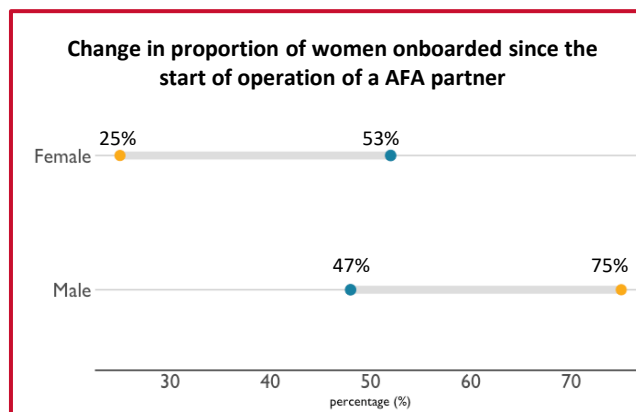


As simple and understandable as possible, the SMS may still be a challenge for farmers to take full advantage of when there is a lack of way to communicate (e.g. for questions or further guidance on action). This is a need observed among users of agronomic SMS.

- In the case of providing **SMS-based agronomic advisory**, smallholder farmers can be well onboarded without one-on-one or in-person demonstration, as long as the **instructions of what to expect and how to use it coming via phone are clear and simple enough**.
 - Potential limitations may come from using non-local languages and low literacy levels. It calls for a clear way for users to **follow up** for clarification or questions.
- In the case of onboarding farmers with insurance, it usually takes time (e.g. a few seasons) for farmers to see how it works. **Consistent and easy-to-access agents on the ground** will help farmers go through the process to accommodate to the idea of risk control and mitigation.

Gradual improvement in gender inclusivity is observed across different value-chain focused services

- There is a gradual increase over the past few years in the number of female farmers onboarded by several value-chain service providers.
- For instance, we observe the increase of women representation in one of AFA partners. The percentage of female users has increased from 25% to 53% from 2017 to 2020.
- Particularly in Kenya, 53% of its users are female farmers across diverse value chains including soya beans, avocado, and green grams.
- In the case of another AFA partner, approximately 70% of the users are female farmers under chilli value chain.



start of operation of a AFA partner (2017)



2020

53%

of farmers onboarded in 2020
are women

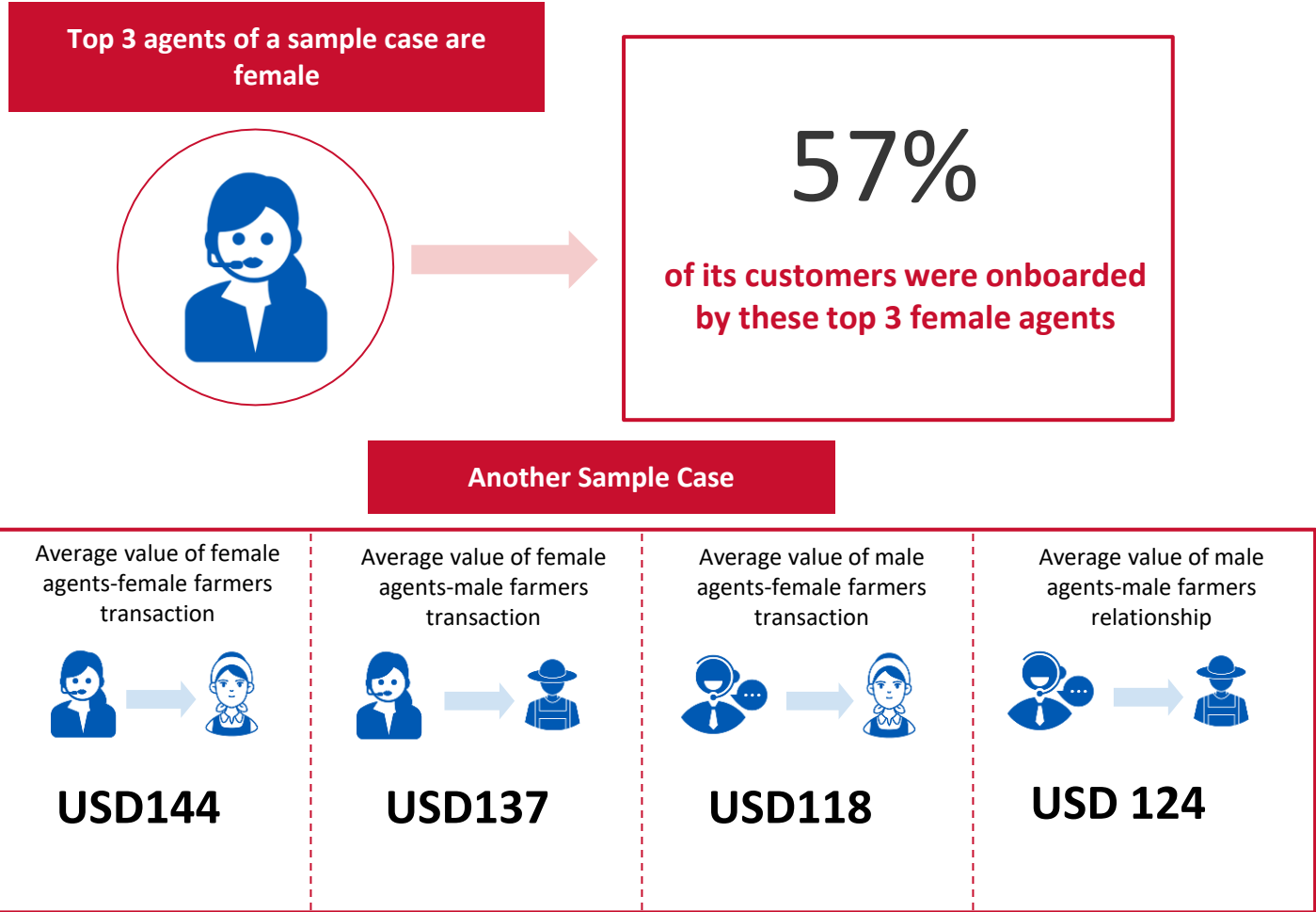
6%

more women than men were
onboarded in 2020, the first year
when representation of women
surpassed men's

70%

onboarded farmers with
another AFA partner till date
are women

Benefitting from their strong people skills, women agents are becoming more instrumental to farmers' onboarding



- While most partners heavily use male agents to source for their potential users, we have observed women's leading role in agency onboarding and brand promotion, which is particularly true for partners that facilitate mechanisation or provide various value chain services.
- Here, we showcase how women agents in two sample cases have been playing a critical role in sourcing potential users and promoting partners' products and services.
- An assumption of the increasing power and effectiveness of women agents is that women in countries like Kenya are equipped with strong people skills given their roles and responsibilities in the community.



Trends Observed in Product Engagement and Usage

Factors that drive adoption and usage vary by the type of impact pathways

- Note that the insights on **influential factors of adoption and usage** are **limited to a few AFA partners**, given available data provided by partners.
- For partners that facilitate mechanization, **regional specific factors** appear to influence the number of products a user gets. Although the maximum number of products a user can own is partially decided by his or her record of credit and repayment, there have been some **significant trends** observed that users in **certain regions** are more likely to acquire more types and pieces of products than in other regions.
- For partners who provide various value chain services, **attendance of in-person training** is found to affect the user engagement and production.



For instance, it is found that farmers from some coastal regions are more likely to purchase more varieties out of the top popular products to improve the efficiency of irrigation.

Gender and value chain-related factors are found to affect user engagement in some cases



Gender discrepancy in behaviors and activity related to SMS engagement can be partially explained by the gaps within gender and household dynamics, influenced by historical and socio-economic factors. Additional data on literacy, household dynamics and social norms will help further validate this assumption.

- For a particular partner that provides value chain services, **value chain discrepancies** are observed in **how active users engage with the services**. It is found that under certain value chains, male users are far more active than female users, and in other value chains, the opposite is true.
- In the case of SMS-based agronomic advisory service, **gender** plays a role in **the way users behave around SMS**. It is found that more male users tend to read the messages themselves while more female users tend to have their children read the messages for them. In terms of changing farming behavior due to the SMS, **female farmers in Nigeria** are found to be much more active than male farmers.

Although still short of male usage rate, female users engagement is catching up in value-chain focused services

13%

increase in female farmers usage
from 2019 to 2020 for partners that
provide value chain services

53%

attendance in value chain specific
trainings by female farmers

50%

of registered female farmers have
successfully sold their products
through platforms provided by
partners

- The usage of multiple value chain services among female farmers has seen an average increase of 13% in recent 2 years (i.e. 2019 and 2020) compared to previous years (i.e. 2017 and 2018).
- Female farmers have formed the majority of those who attended value chain-specific trainings over the past few years. The attendance is found to be positively correlated with the volume of production.
- Since registration, half of the female farmers have successfully sold their farm products at fair prices through various platforms by AFA partners.

Localizing and contextualizing the delivery of agronomic SMS will help encourage direct user engagement

- Majority of users of **agronomic SMS** consider the messages relevant and useful for their farming decision-making and activities.
- Between 65-70% of farmers read the SMS messages. Literacy level and languages or words used in the SMS affect engagement behaviors.
- Adapting messages to local languages and simplifying the wording is key to achieving desired impact by making the users' lives easier thus increasing direct usage.
 - In Nigeria, reading the weather forecast SMS was significantly correlated with improved farmers' productivity. The key step here is to make users to actually read the SMS.

65%

surveyed users in sample case A understand English

70%

users in sample case B read weather forecast messages themselves

52%

users of sample case A state that messages have helped them select better types of fertilizer

86%

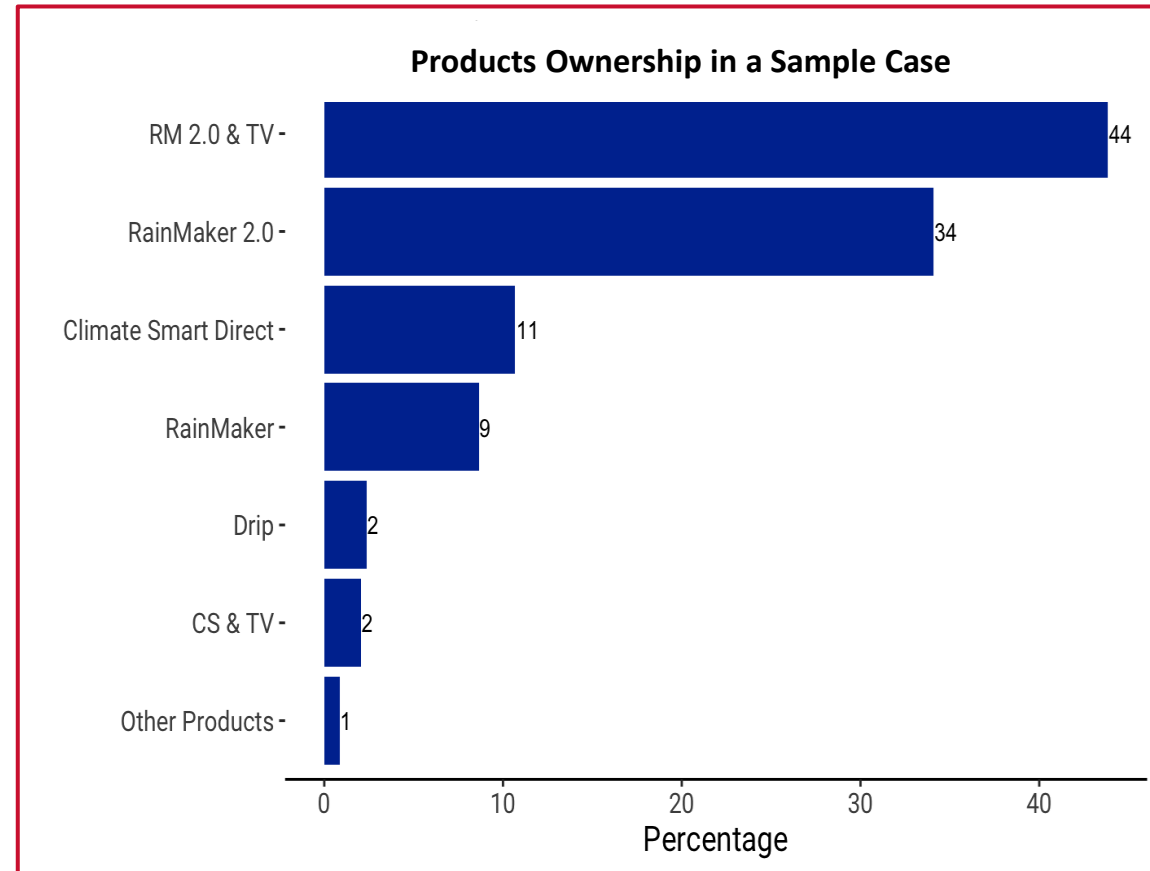
users of sample case B indicate that instant weather SMS has helped them adjust timing of applying fertilizer

Usage and preference of bundled products and services

In this section, we share some early-stage case studies that may be useful in getting partners to think about product structuring, particularly in periods of high uncertainty. One case is selected from each type of impact pathway.

Farm product sales are observed to be higher when bundled with another household good

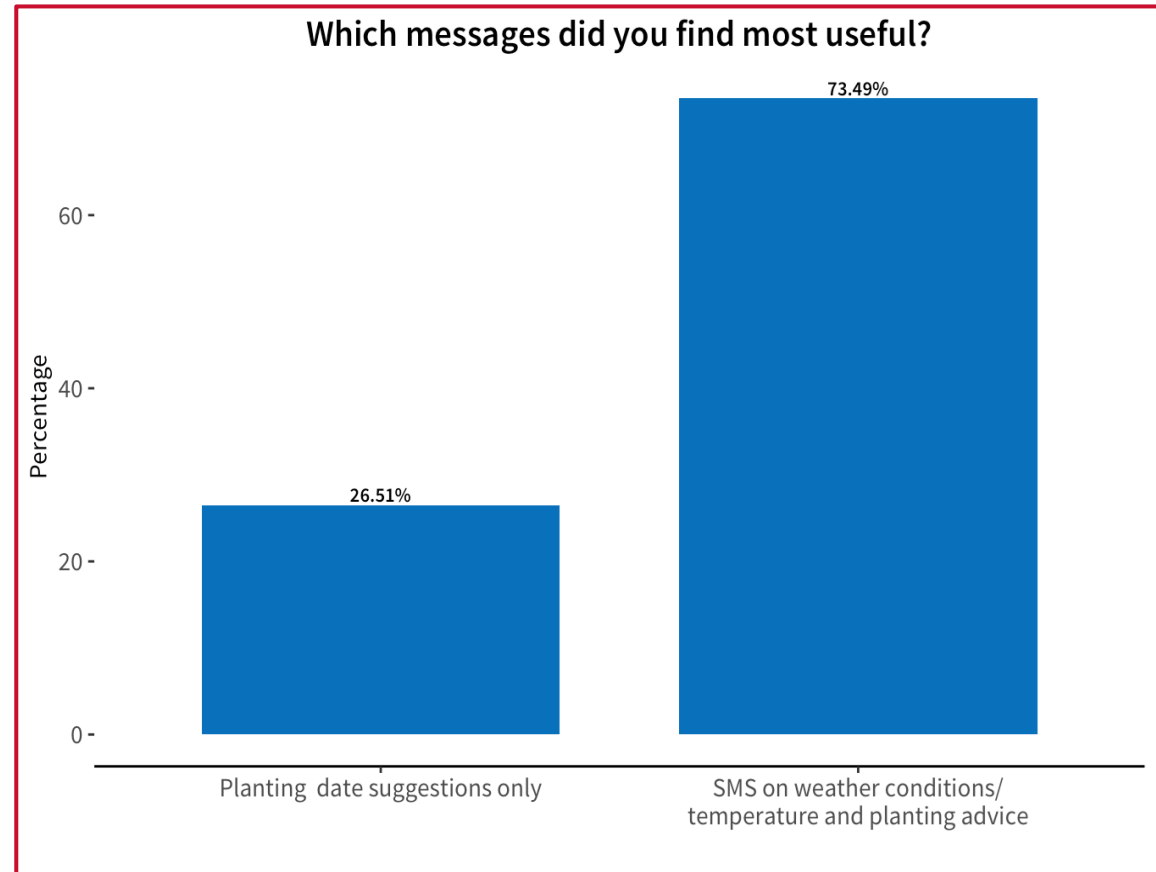
- Using a sample case to illustrate how user adoption and preference may be elicited by bundle scheme for partners who provide machinery products or various value chain services, it is seen that the most preferable product, RainMaker 2.0, hits higher sales when it is bundled with TV.
- Bundled products are commonly seen in other similar business cases where farmers obtain core products along with light bulbs, phone charges and radios.
- A potential behavioral explanation of why farmers might prefer bundled products is that it **reduces the effort and costs of searching for other products needed at home**, particularly among farmers who are less motivated to process information or lack of exposure to information sources.



Data source: a sample case

When receiving agronomic SMS, farmers highly prefer combined contents of agronomic advice and weather

- The same behavioral trigger potentially explains why farmers highly prefer bundled SMS that provides both agronomic advice and weather over a single SMS that gives only agronomic planting suggestion. From farmers' perspective, since they have already invested in the engagement of SMS (time, monetary cost etc.), additional relevant content are likely to increase their marginal benefit from the SMS.
- Recall what is discussed earlier in this report, there are some steps to take SMS as a key channel of agronomic advisory:
 - localization and contextualization
 - gender-specific strategy
 - provision of follow-up service

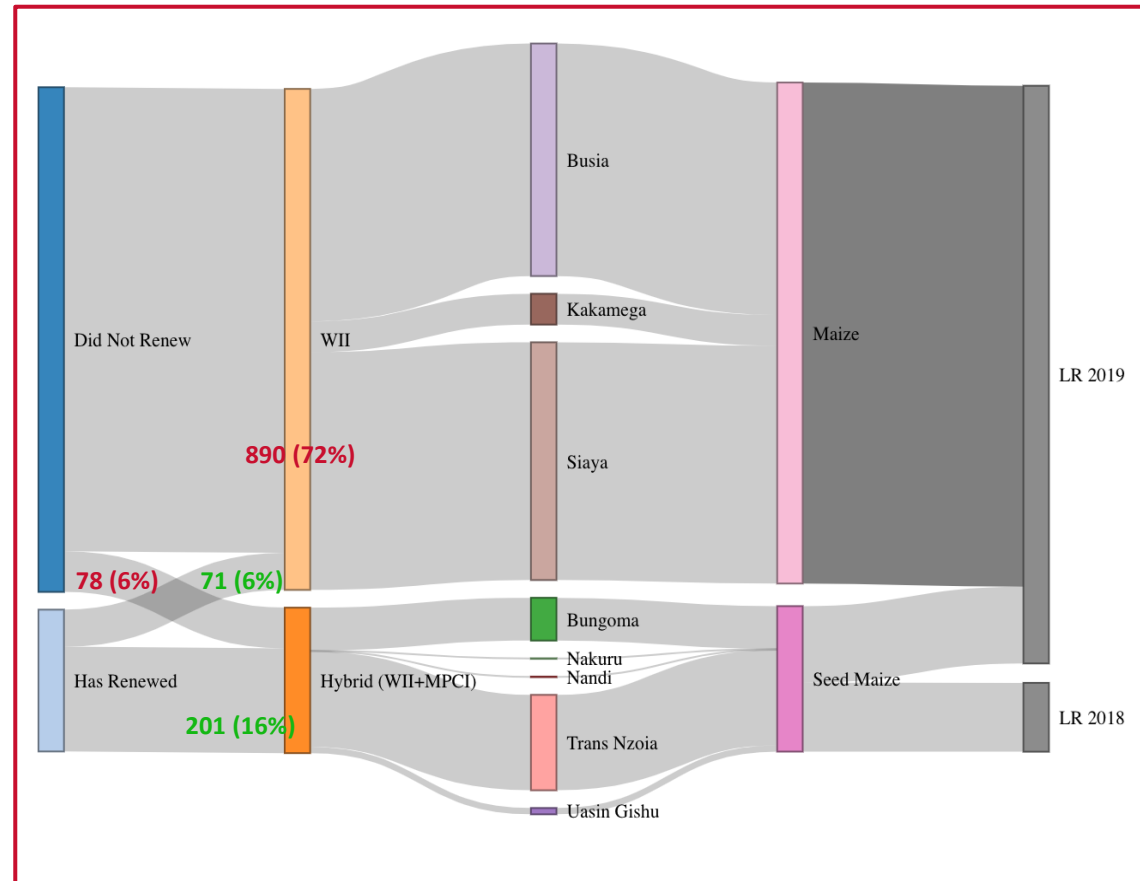


Data source: a sample case

Bundling loans with core risk-mitigation products may be important for continuous usage during shocks

- Although not conclusive, there is some evidence that users of a bundled product such as insurance combined with a loan were more likely to continue use of products compared to users who received an unbundled product.
- This aligns with a finding, which will be discussed in detail in the later part of this report, that farmers tend to use loans as a coping mechanism to strengthen their resilience when faced with emergency or shocks.
- Due to data unavailability, we cannot make inferences about the relationship between bundling the products and renewals. However, the initial finding is worth exploring further, especially in a post-COVID world where farmers are perceiving the impact of COVID differently.

Renewal rate for bundled and unbundled insurance products



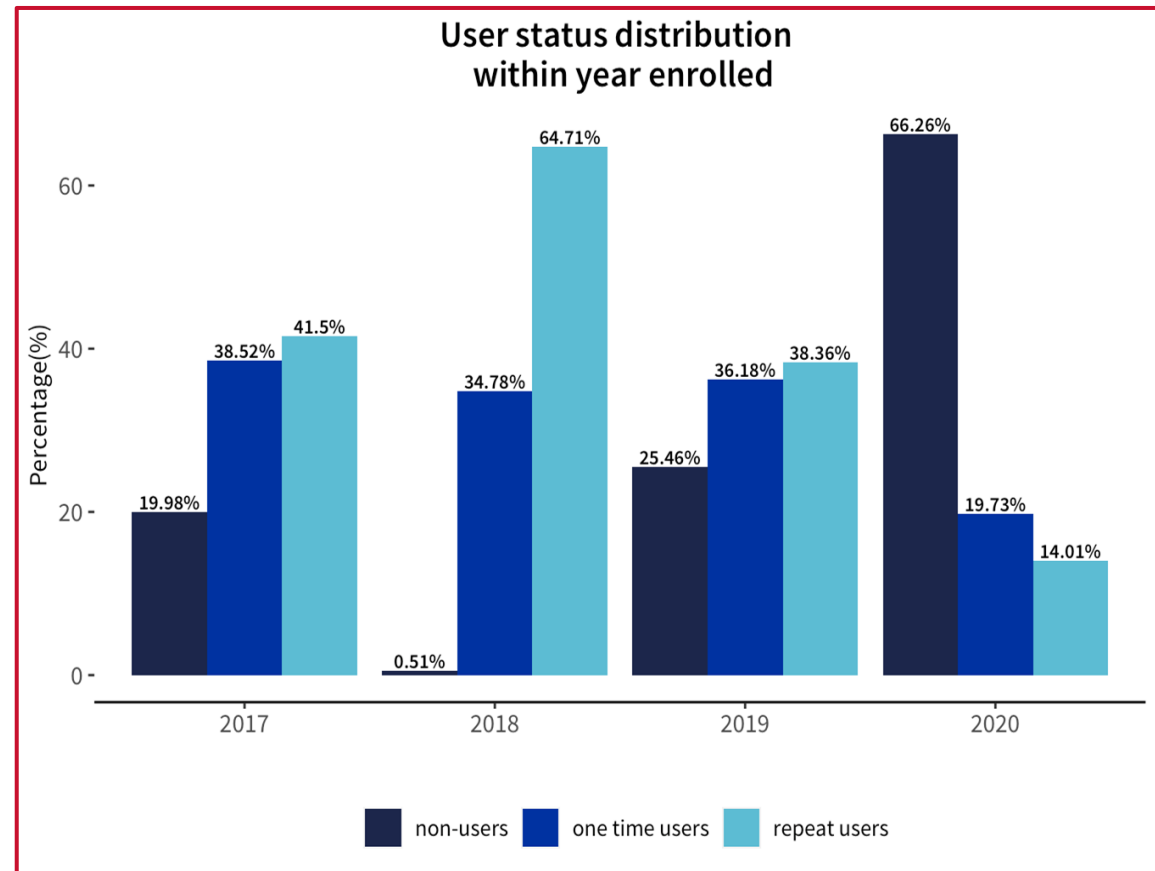
Data source: a sample case

Product usage and external shocks in 2020

In this section, we share insights into how external shocks in 2020 including COVID-19 have impacted product usage. Given the data availability, this section focuses on examples from partners who provide various value chain services or products for mechanisation.

Usage of offtaking solutions has been affected by external shocks in 2020

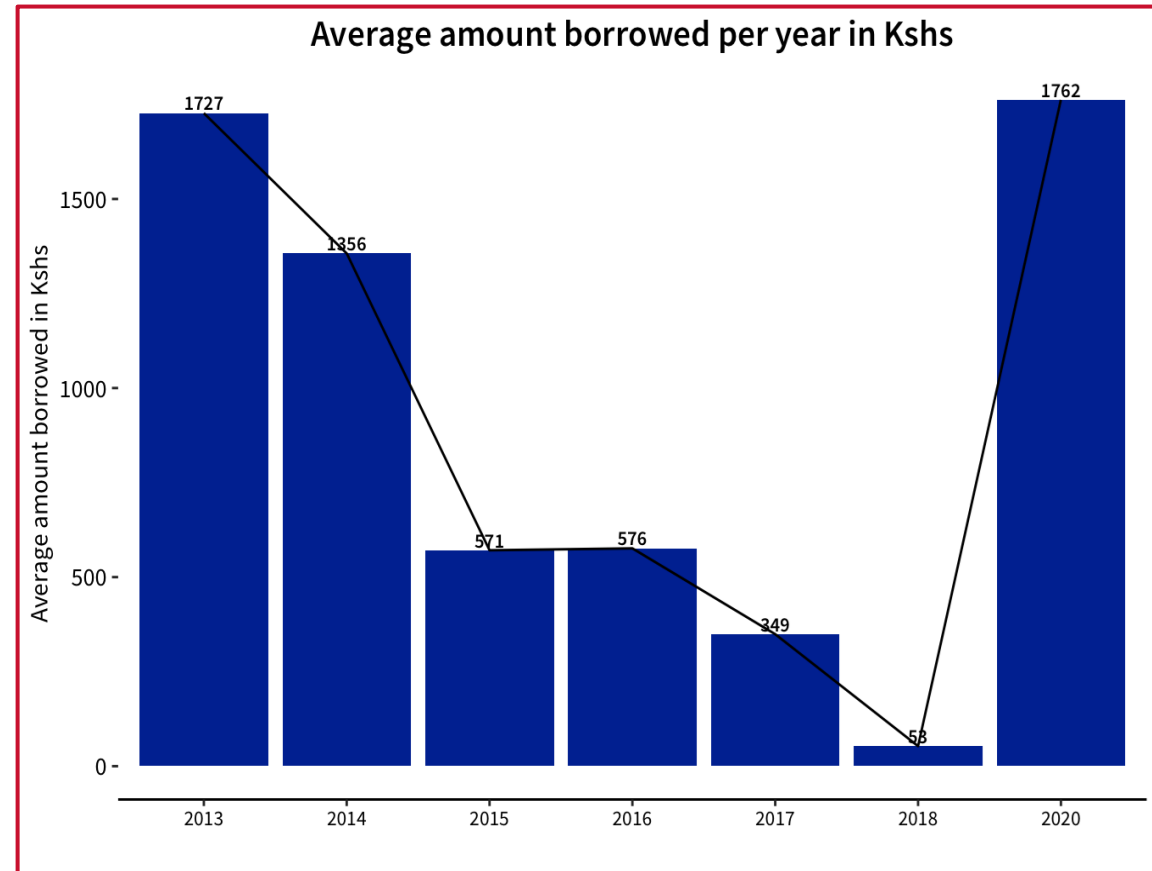
- In a case where the partner integrates farmers into sustainable value chain growth via offtaking solutions, we find onboarding and usage on the platform move in opposite directions in 2020.
- While onboarding figures was at its highest in 2020, usage dropped in 2020. A large number of female Kenyan farmers onboarded were not able to trade due to the impact of mitigation measures put in place to control the spread of COVID-19 such as lockdown and closure of airways.
- In 2020, a significant number of farmers onboarded in the same year had not traded farm products on the platform since registration.



Data source: a sample case

Borrowing has been used as a coping mechanism to absorb the impact of shocks

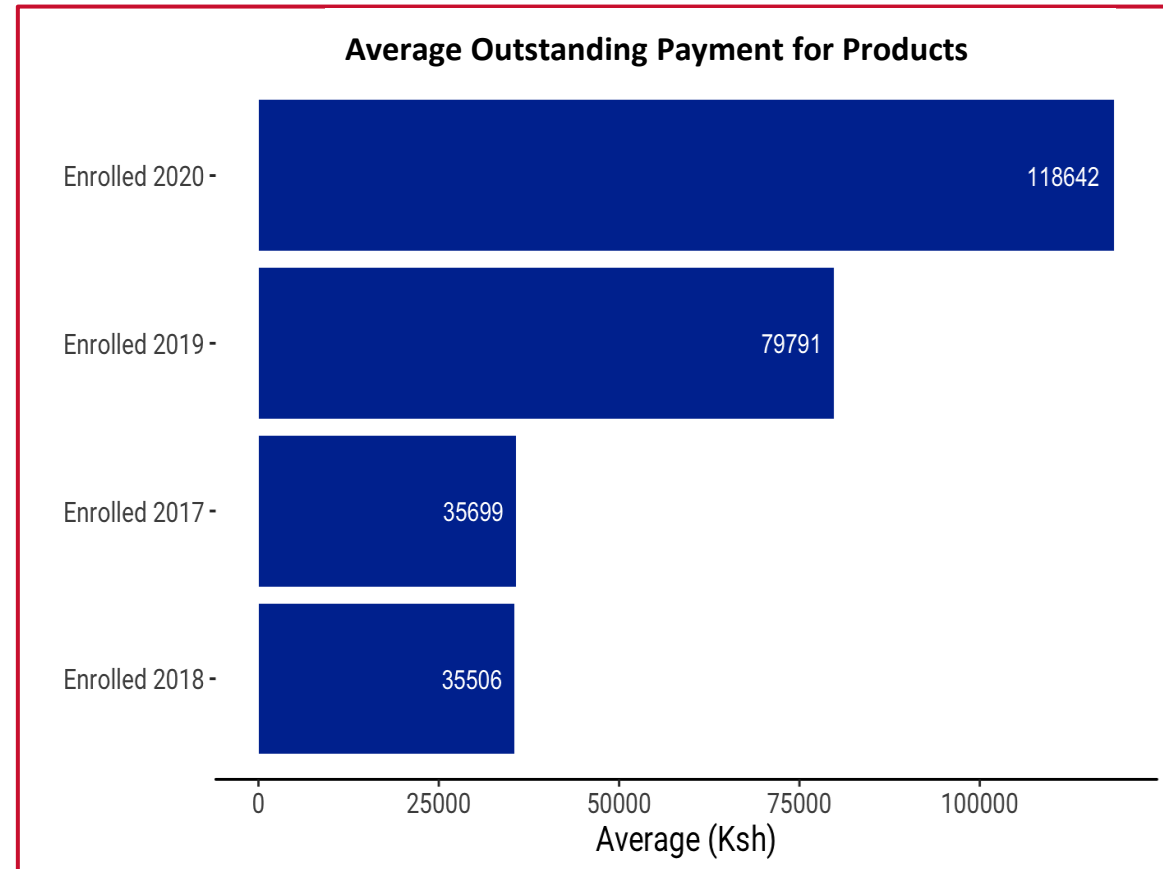
- In another sample case, there was an increase in the average amount of loan taken in 2020. To be specific, we observe a 134 percent increase in 2020's loan amount compared to the average yearly amount borrowed by its farmers.
- Increased usage, indicated by increased loans could be due to the impact of COVID-19 on farmers. This view is supported by this [data](#) from a 60 Decibels study which shows that 42% of Kenyans adopted “taking loans” as a coping strategy amidst the impact of Covid-19 on activities.



Data source: a sample case

Relatedly, delaying repayment seems to be another coping strategy used to absorb shocks

- In a case where the partner offers farmers PAYG (pay-as-you-go) payment scheme, the average outstanding payment of products owned for users who enrolled in 2019 and 2020 is approximately **2x** the average outstanding amount for those who enrolled in the previous years.
- This view is also supported by this [data](#) from a 60 Decibels study which shows that 12% of Kenyan farmers **delayed loan repayment as a coping strategy** amidst the impact of Covid-19 on activities.



Data source: a sample case

The background is a grayscale photograph of a savanna landscape. In the foreground, there is tall grass and a leopard's head and shoulders, partially obscured by a large, solid red rectangular overlay. The red overlay covers the middle portion of the image. In the top-left corner, there is a grid of small squares. The top row of squares is white, and the subsequent three rows are red. The text "Trends Observed in Impact and its Pathway" is centered within the red overlay in a white, sans-serif font.

Trends Observed in Impact and its Pathway

Gender inclusion, digital transformation, technology adoption, awareness of risk mitigation, and financial inclusion have been achieved through multiple impact pathways



The rapid increase of mobile phone penetration in SSA has provided the platform for AFA and its partners to lead the digital transformation and achieve their goals of impact.

- Some fundamental changes to the behavior and livelihood of smallholder farmers have been captured in this study, achieved through various impact pathways.
- **Gender Inclusion:** increased women representation is seen in both agents and direct users or beneficiaries.
- **Digital Transformation:** this has become a common concept and practice for smallholder farmers in SSA.
- **Technology Adoption:** technology-based mechanisation is increasingly used during the planting phase of the farming cycle to improve efficiency.
- **Awareness of Risk Mitigation:** it has seen growing awareness and practice of multiple mechanisms to cope with risks and external shocks is captured.
- **Financial Inclusion:** access to loans and credit has been made much easier for smallholder farmers by AFA partners.

User engagement is found to be positively correlated with farming outcomes through value chain services

- When a partner provides various value chain services, the activeness of user engagement is likely to directly influence the outcome.
- In samples of this study, we find that the more active usage of the platform for selling or trading farm products, the more likely that farmers gain increased market revenue from farm. The difference among sample partners is what drives the usage.
 - Case 1: attendance of in-person training is found to be positively correlated with the volume of production, and the activeness in attending training is correlated with age that the youngest group of farmers attend the fewest trainings.
 - Case 2: value chain and regional specific factors (related to operational strategy) that influence how much a farmer has benefited from trading products.



In a sample case, farmers in Uganda are much more active than users in Kenya given different regional operation strategies. Within the same region and same value chain, on average women earn as much as male farmers from trading.

Nudging users to read SMS and take actions is the key to maximize the impacts of SMS-based agronomic advices



There is a gap between “reading the SMS” and “taking actions” identified among some users that they sometimes do not fully understand the content or have further questions after reading, but do not know a way to seek for next-step guidance. It is suggested that partners that provide agronomic contents through SMS based services consider providing follow-up or Q&A services to facilitate this process.

- When a partner is aimed to improve smallholder farmers’ farming outcome by providing relevant information via phone, there are typically two factors that decide how much impact to expect:
 - How users read the SMS
 - What actions are taken after reading the SMS
- As to how users read the SMS, it involves whether they read it or not, if they can read it on their own or rely on help from others, and how well do they understand the SMS.
- As to what actions are taken after reading SMS, it is, to some degree, affected by how well they understand the SMS. It has seen evidence in the case of a partner that female users are more keen to adjust farming practices after reading SMS and they have performed significantly better with respect to productivity.

Product design scheme plays a critical role in determining the degree of impact when it comes to building resilience via insurance

- When building smallholder farmers' resilience through risk-mitigation solutions such as insurance, how the insurance product is designed largely determines how much smallholder farmers would potentially engage with the product and further benefit from it. Meanwhile, since a natural disaster (e.g. undesired rainfall level) are linked to a geographic region where it happens, the degree of impact of insurance is observed to be partially related to the county.
- It was observed in a sample partner's case that farmers who only got weather index insurance do not benefit as much as farmer who got the hybrid product, mostly due to the different scales of premium price for these two products. It is also found that within Bungoma and Trans Nzoia where all farmers got hybrid products, some farmers benefited significantly more and others. Additional data is required to examine what causes the internal discrepancy.



In counties where weather index insurance is available, farmers can find a local agro-dealer to get a scratch card and obtain registration code. By entering the code via phone, farmers easily get the insurance. We observe that the renewal of this insurance is significantly lower than that of the hybrid product. Additional data is required to examine whether the accessibility and perceived benefits of WII lead to the low renewal rate.

The background of the slide features a photograph of a person, likely a farmer, standing in a field of tall, leafy plants. The entire image is overlaid with a semi-transparent red filter. A large white rectangular box is positioned in the center of the slide, containing the main title text.

Highlight 1: improving farm produce sold through offtaking services

Outcome Statistics of Sample Case A

Expansion



9
number of farmers in
value chains that traded
in 2017



19
number of farmers in
value chains that traded
in 2020

Trading volumes



1,000,000

Kilogramme worth of produce traded 1
year after operations

Trading volumes



472
average kilogramme
produce sold by female
farmers



468
average kilogramme
produce sold by male
farmers

Outcome Statistics of Sample Case B



240

average kg produced
sold by male farmers

450

average kg produced
sold by female farmers

Trading volumes



55,000

2018 farmers' average
yearly income on
platform

27,000

2019 farmers' average
yearly income on
platform

26,000

2020 farmers' average
yearly income on
platform



43,000

2018 male farmers'
average yearly income
on platform

18,000

2019 male farmers'
average yearly income
on platform

15,000

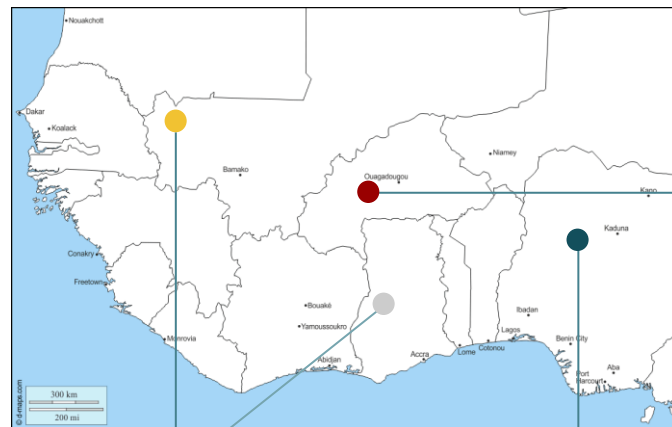
2020 male farmers'
average yearly income
on platform

The average annual volume sold by male farmers through this partner has significantly decreased since 2019

A person is visible in the upper right corner, looking down. The background is a field of crops under a cloudy sky, with a red overlay. A white rectangular box is centered on the page, containing the title text.

Highlight 2: influencing through text-based agronomic advisory

Model 1 - provision of 48-hour weather forecast services (Ghana, Mali, Nigeria, and Burkina Faso)



2

farmers in all the value chains in Burkina Faso recorded increase in their productivity rate post-forecasts messages in 2019

13

farmers in all the 14 value chains in Ghana recorded an increase in their productivity rate post-forecasts in 2018

6

farmers in 6 out of the 11 value chains in Nigeria recorded an increase in their productivity rate post-forecasts messages in 2019

CHANGES IN FARMING PRACTICES

13

out of the 14 value chains in Ghana recorded an increase in their productivity rate post-forecasts in 2017

The Nigerian and Malian users were onboarded through development partnerships, while the Ghanaian and Malian users are direct subscribers who decide to subscribe and pay for the forecasts. The differences in outcomes across countries might come from this design scheme difference.

Model 2 - provision of planting date suggestions and weather related agronomic contents (Kenya)



55%
think aWhere has changed the way they plant

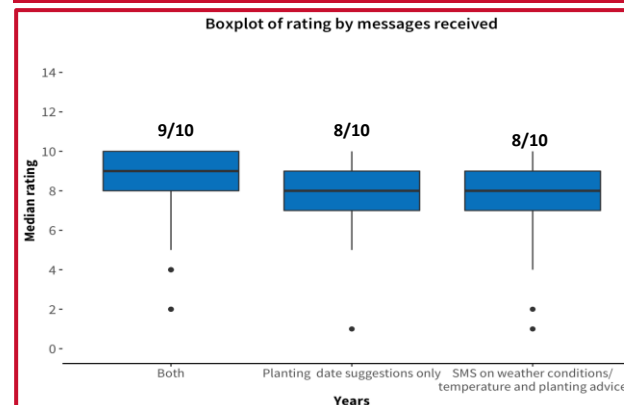


52%
think aWhere has changed the way they apply fertilizers



91%
think farm income has increased as a result of messages

Farmers who received planting data suggestions and weather conditions slightly rate the SMS-based agronomic advisory service higher



8/10

median rating of service experience

6/10

median rating of other digital services



Need for Building A Robust Data Management System

Purpose, Quality and Feasibility



Purpose

Data management strategy should align with business goals

- Internal purpose: monitor operation, track progress, decide goals of growth, advise business strategy, etc.
- External purpose: seek investment opportunities, etc.
- Clear purpose will help define the types of data to collect and focus on the most relevant ones



Quality

Regularization and automation is key to control quality

- When applicable and possible, automate data input to minimize manual errors
- Regularize quality check process to monitor quality
- Automate analysis of selected data (e.g. key variables) to help frequently evaluate data quality



Feasibility

Leverage from existing systems to start with lower-hanging fruit

- More data is likely to contribute to a better understanding, but consider feasibility for short run and long run, prioritize
- Start with embedding expanded data collection into current systems
- Take advantage of partnership with external organizations for additional data assessment

Enrich the data around user profiles, user behavior and perception, and outcomes to help partners track growth and impact

| Theme | Data Need | Justifications |
|------------------------------|--|--|
| User Profiles | <ul style="list-style-type: none"> - Richer demographics (e.g. gender, edu, age, region, HH size, etc.) - Economic profiles and activities (e.g. farm size, income sources, farm resource flows, etc.) - Records of registration or enrollment - Pressing needs (e.g. in finance, farming, external shocks) - Top constraints in life | <ul style="list-style-type: none"> - Segmentation analysis can be applied with sufficient user data including rich demographics and product usage (or logged data) - Personas and journey maps can be created with sufficient data to visualize user pain points, which inform opportunities for innovation - These variables will also allow inferential analysis to identify factors influencing product adoption |
| User Behavior and Perception | <ul style="list-style-type: none"> - Usage of products or services (e.g. active time/date, frequency, ownership, renewal or continuous purchase, etc.) - Purpose of use, outstanding payment (if applicable) - Self-assessment of the (process of using) products/services | |
| Magnitude of Impact | <ul style="list-style-type: none"> - Direct outcomes related to farming output (e.g. saved time or costs, yields, revenues from selling products, etc.) - Changes in attitude and behavior around new ways of handling farming - Changes in other aspects (e.g. resilience, habits of planning, decision-making process, etc.) | <ul style="list-style-type: none"> - In-depth impact evaluation can be achieved with rich data on outcomes |



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