



Behavior change and impact evidence for Covid-19 information

Impact Evaluation Report - Combined SMS and TV Campaign Delivered by

Table of contents

1. [Executive Summary](#)
2. [Introduction](#)
3. [What is the impact of the communication content on farmers' knowledge, attitude, and behavior?](#)
4. [What are the farmers' preferred channels?](#)
5. [Appendix](#)
 - [Profile of survey respondents](#)
 - [Covid-19 Timeline in Kenya](#)

In this report

This report presents the findings from the impact evaluation conducted on behalf of Mercy Corps AgriFin. In this report, we focused on the combined SMS and TV communication campaign delivered by iShamba and Mediae

We sought to evaluate the impact of current communication campaigns on knowledge, attitudes, and behavior regarding Covid-19 and safe farming practices among Kenyan farmers. The findings from this report can be used to understand effective ways of reaching farmer populations with life-saving information and behavior change across communication channels.

A photograph of a banana plantation with large green leaves and brown stalks, set against a blue sky with light clouds. A large, solid blue rectangular overlay covers the middle portion of the image, containing the text.

Executive Summary

Executive summary

This report presents the findings from the impact evaluation conducted on behalf of Mercy Corps AgriFin. We sought to evaluate the impact of current communication campaigns on knowledge, attitudes, and behavior regarding Covid-19 and safe farming practices among selected farmers in Kenya.

We evaluated the combined SMS + TV campaign delivered by iShamba and Mediae to understand behavior change.

- **Quantitative Survey:** iShamba conducted 198 complete quantitative surveys. A bulk of the messages were implemented prior to the baseline survey, therefore this initial approach of establishing a baseline prior to the campaign became impossible. So, we modified our research approach to a narrative approach by asking respondents to tell us the impact of the Covid-19 communications campaigns, specifically how the messages changed their Covid-19 knowledge, attitude, and behaviors.
- **Administrative data analysis:** We tracked SMS Covid-19 message themes between April to July 2020.
- **Timeline:** iShamba and Mediae launched their Covid-19 communications campaign in April 2020 and ended in mid August. ***Due to the timing of the intervention and data collection we effectively assess post-intervention changes.***

Executive summary

There were positive trends on overall knowledge compared to a control group and declines in attitude and behavior since the campaign ended. The combined SMS + TV Covid-19 campaign had a positive effect on farmer behavior. The knowledge increase is driven mainly by a big increase in people answering correctly for whether livestock spread Covid-19, and a smaller increase in people knowing about the need to socially distance. The behavioral decrease comes from a reduction in people staying 1m away from each other on the farm, and from a reduction in general mask-wearing. The first might be explained by more on-farm activities, but the second is a clear example of behaviors getting worse. People have slowly stopped wearing masks

There is a near universal preference for receiving information through the SMS channel. Convenience and trust are the main drivers for this preference. Surveyed farmers trust the information that they receive through the SMS channel. This might be explained by the fact that the SMS channel has been around longer than other relatively newer channels like social media platforms. It takes time to build trust on newer digital channels. A mixed-channel messaging campaign can be used to build trust on digital channels that farmers are less familiar with.

SMS+TV campaigns can be optimized by providing tailored Covid-19 content that supports farmers in maintaining their livelihoods in face of Covid-19. There is evidence that farmers are particularly concerned about livelihoods. Providing Covid-specific content that takes farmers crop cycle into account such as providing information about working safely in the planting or traveling to markets post-harvest, would be relevant to farmers.

An aerial photograph of a rural landscape featuring rolling hills, golden-brown fields, and a blue sky with scattered white clouds. A large, solid blue rectangular overlay covers the center of the image, containing the word "Introduction" in white text.

Introduction

The overall objective of this engagement is to understand the types of information farmers need in relation to Covid-19, effective communication modalities, and the impact on farmer behavior

To gain an understanding of this, this research has two goals:



Goal 1

To understand and segment farmers to inform ongoing communication campaigns

[Mid-point Report](#) shared in September



Goal 2

To conduct an impact evaluation of the communication campaigns

Focus of this report

We evaluated the effects of the combined SMS and TV campaign on farmer behavior

Kenya

SMS + TV

Delivered by iShamba and Mediae



ishamba and Mediae launched their Covid-19 communications campaign in April 2020.

The image contains two logos. On the left is the iShamba logo, which features a green house with two figures inside, flanked by two mobile phones, with the word 'iShamba' written in a green arc above and below the house. On the right is the logo for 'THE MEDIAE COMPANY', which includes a stylized bird icon above the company name and the tagline 'MEDIA FOR EDUCATION AND DEVELOPMENT' below it.

This study used administrative data and quantitative surveys to generate evidence to meet the research goals

SMS+TV Quantitative Survey

A bulk of the SMS+TV messages were implemented prior to the baseline survey, therefore this initial approach of establishing a baseline became impossible. So, we modified our research approach to a narrative approach. Using this narrative approach, we asked respondents to tell us the impact iShamba had on them, specifically how iShamba's messages changed their Covid-19 knowledge, attitude and behaviors. We also asked farmers what their communication channels preferences are.

We were then able to use the baseline and endline comparison to look at the changes post-intervention. This allows us to see if iShamba's content drove longer term change. We conducted a baseline and endline survey to understand the trends in knowledge, attitude and behavior after the SMS+TV case study stopped sending out Covid-19 messages.

iShamba conducted quantitative phone surveys among their farmer base. iShamba conducted these baseline phone surveys in August 2020 and endline surveys in September 2020. They achieved 198 complete surveys.

Busara conducted the same baseline and endline survey among manufactured control group using farmers from Busara's lab. The control group served as a comparison group. We completed 227 surveys. This group did not receive any communication messages from the iShamba or any of the partner organizations.

Administrative data

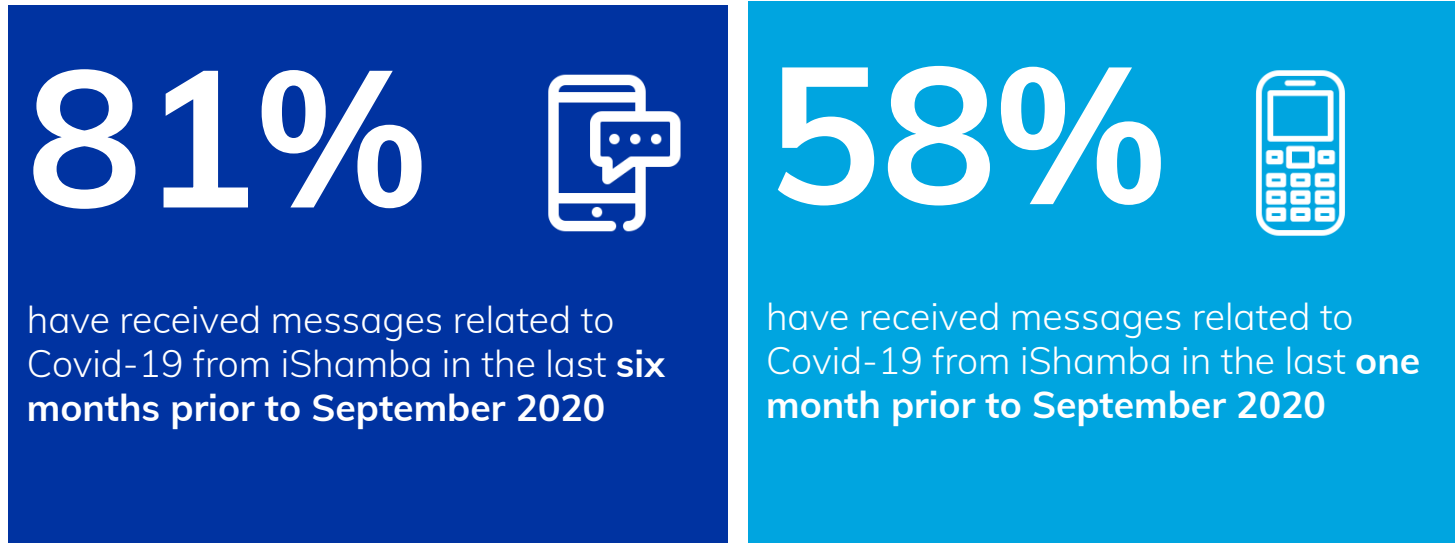
We received SMS data containing Covid-19 mentions from iShamba farmers. We tracked the message themes between April 2020 to July 2020. These themes provide insights into any changes in the types of information farmers want to know.

A photograph of a banana plantation with large green leaves and brown trunks, serving as the background for the text.

Change in knowledge, attitude, and behavior after the intervention

iShamba shifted their communication strategy in August and have mostly been sending out farming-related SMSs to their farmers since. In this section, we start by presenting what farmers told us about the effect of the Covid-19 content they received through the SMS+TV campaign. Then, we explore the changes in message themes between April and July 2020. We conclude with the changes in knowledge, attitudes, and behavior after SMS+TV campaign ended

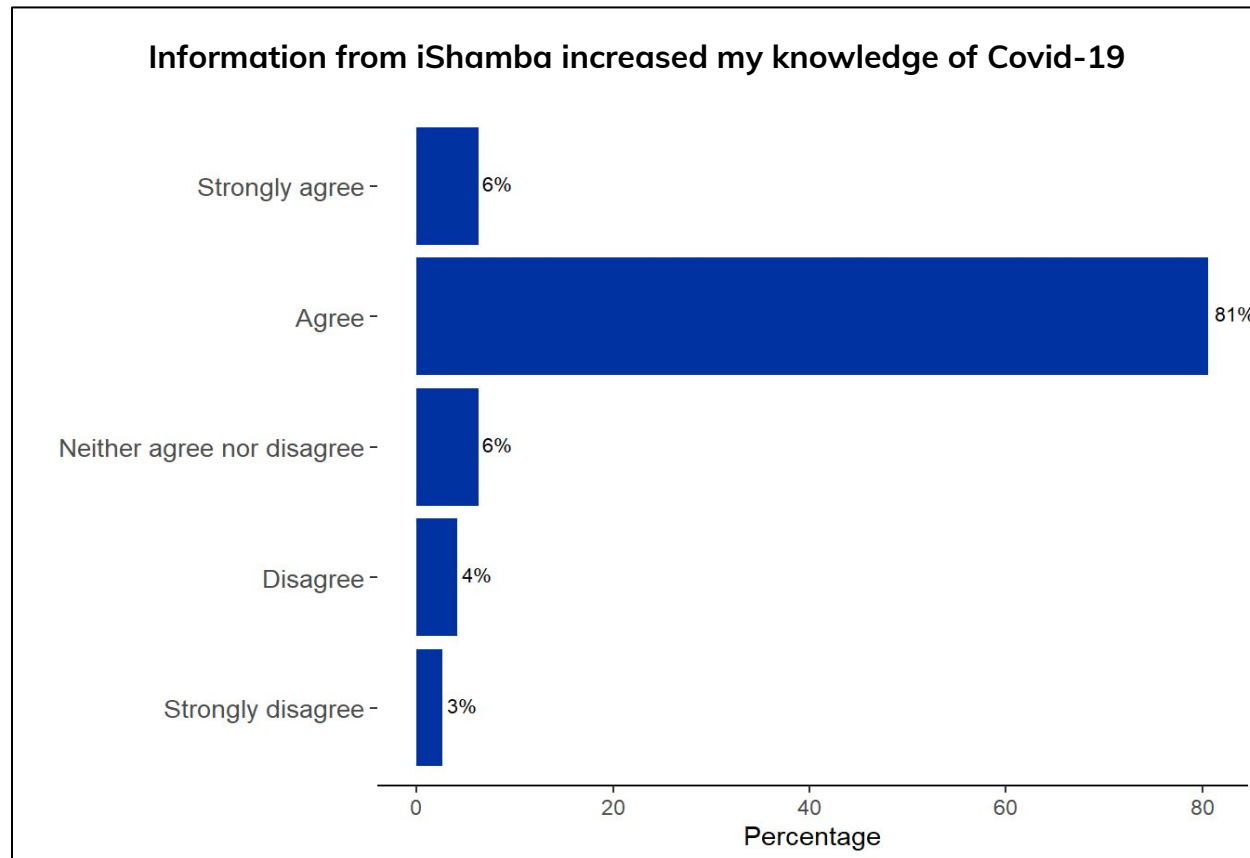
Fewer surveyed farmers reported receiving Covid-19-related messages in the last one month



Data source: iShamba Quantitative Survey

- Between March to August 2020, iShamba implemented a Covid-19 information campaign targeted at their farmers through Shamba Shape Up TV, SMS, radio, and WhatsApp. iShamba scaled back the Covid-19 campaign in August, which explains why fewer surveyed farmers reported receiving Covid-19-related messages in from iShamba in the last one month.

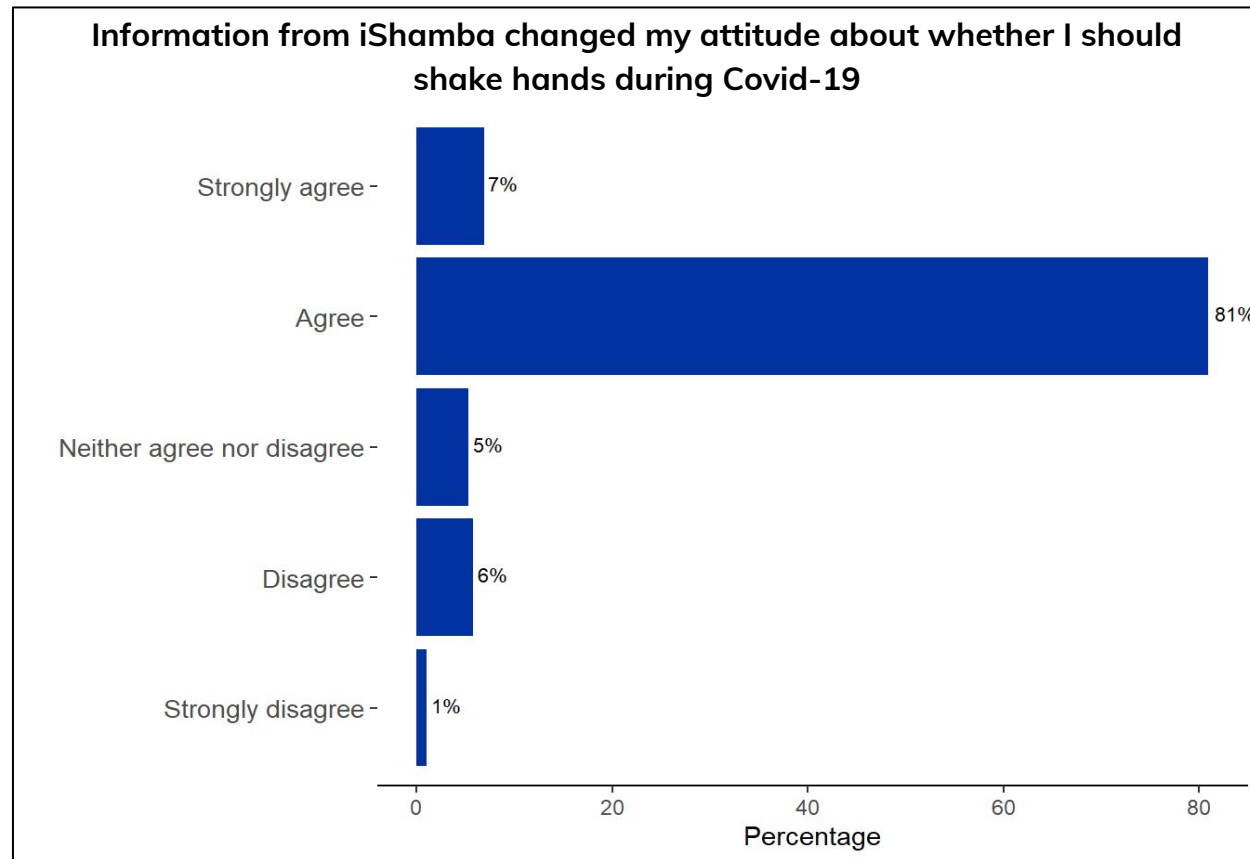
Surveyed farmers think their Covid-19 knowledge increased



Data source: iShamba Quantitative Survey

- 81% of survey respondents think their knowledge increased as a result of information from the combined SMS+TV campaign
- The Covid-19 communication campaign shared information on Covid-19 symptoms, prevention, transmission, and social distancing guidelines.

Surveyed farmers think their attitude towards Covid-19 changed

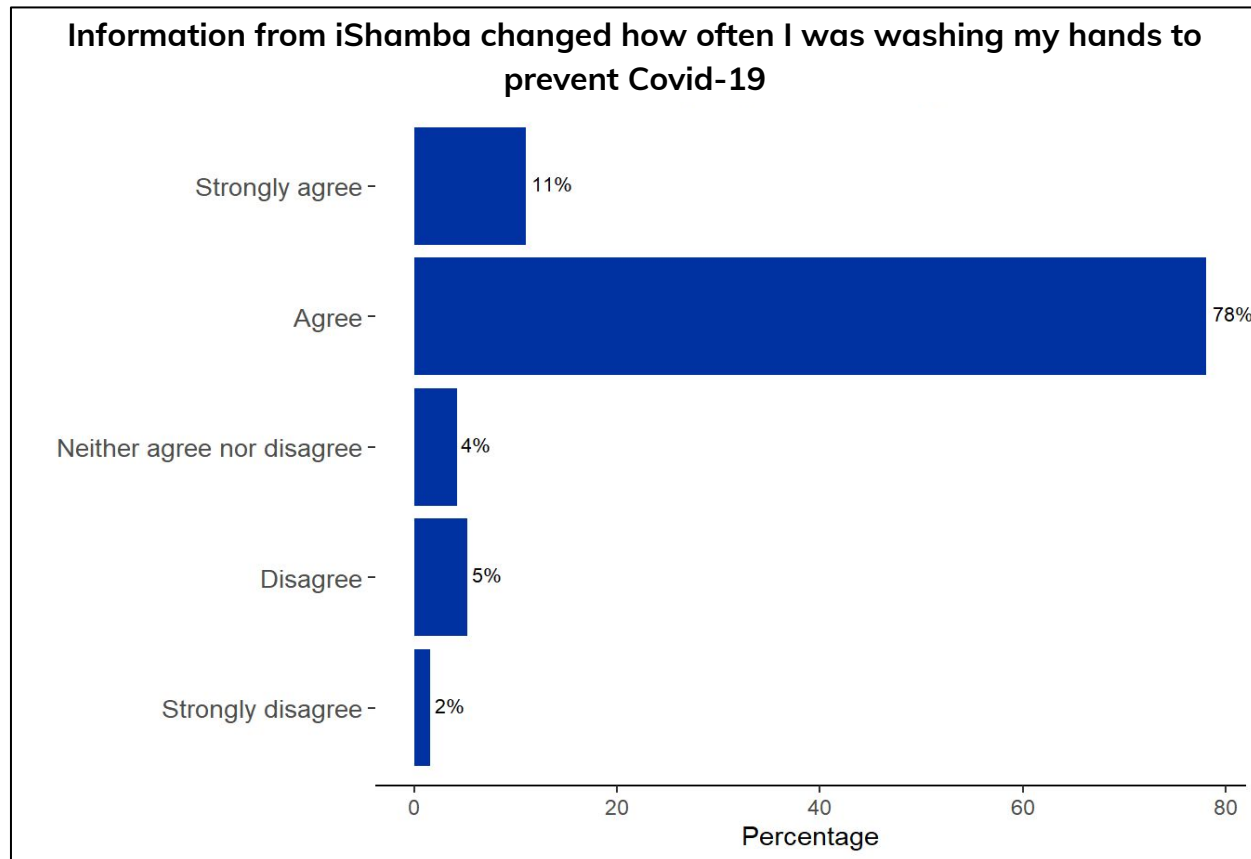


Data source: iShamba Quantitative Survey

Busara Center For Behavioral Economics | 2020

- 81% of respondents think their attitude changed as a result of information from iShamba.

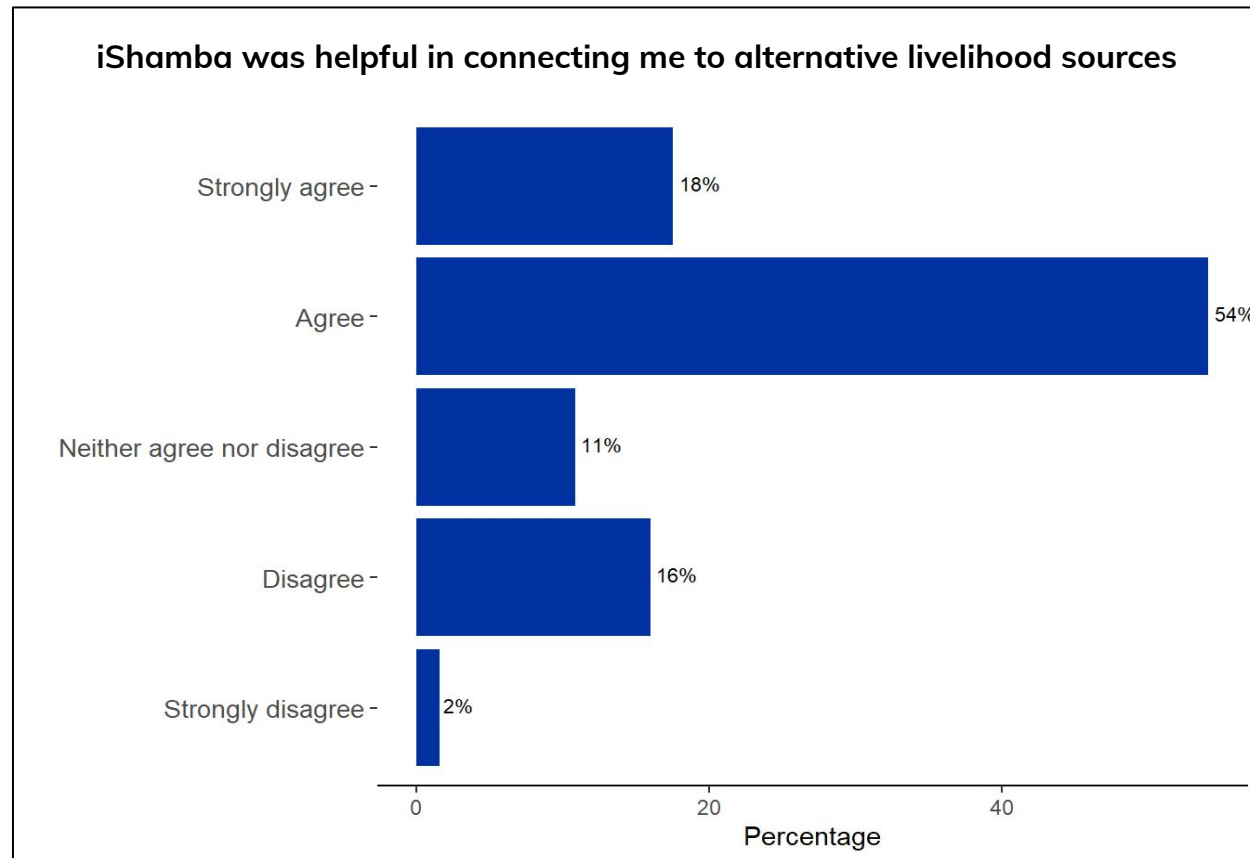
Surveyed farmers think their behavior changed as a result of the SMS+TV campaign



Data source: iShamba Quantitative Survey

- Handwashing was a proxy measure for behavior. 78% of respondents think their handwashing behavior changed as a result of information from the SMS+TV campaign.
- A [previous KAP study in Kenya](#) indicated that they are challenges in practicing preventive behavior. The ability to practice handwashing and social isolation is a major challenge due to lack of access to water/soap and inability to forgo income.

The SMS+TV campaign connected surveyed farmers to livelihood sources

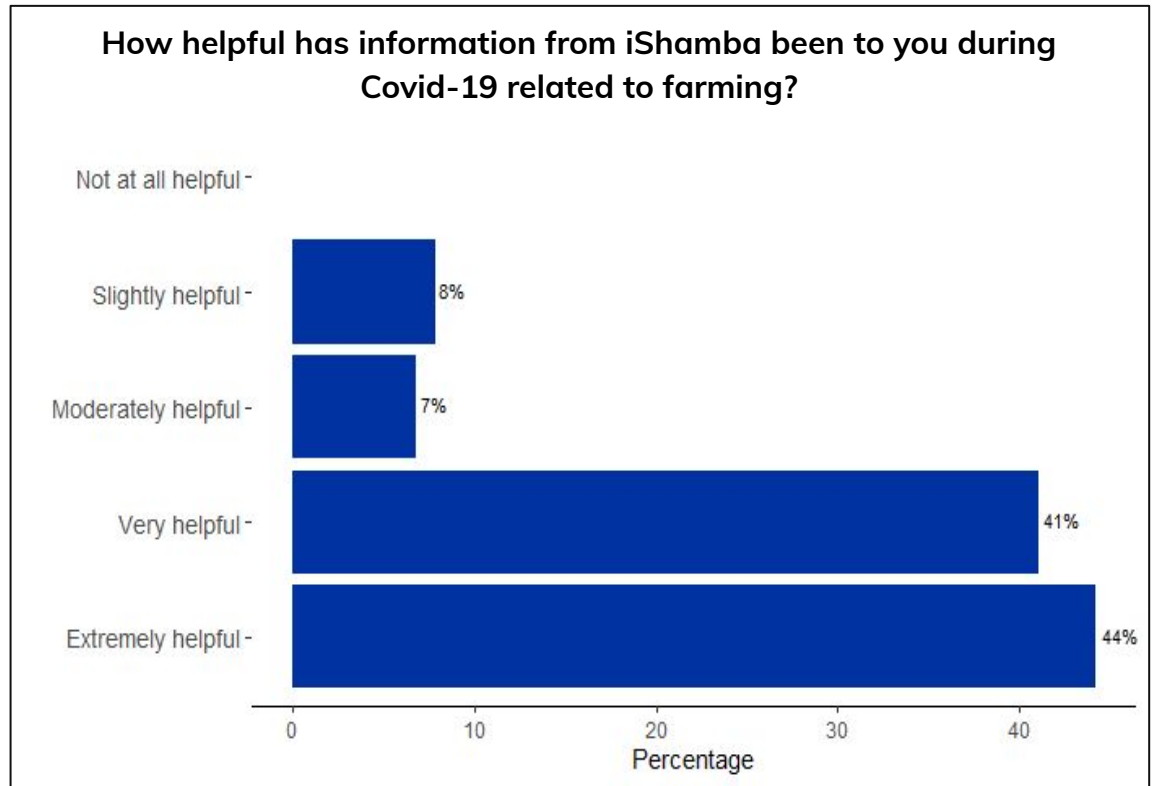
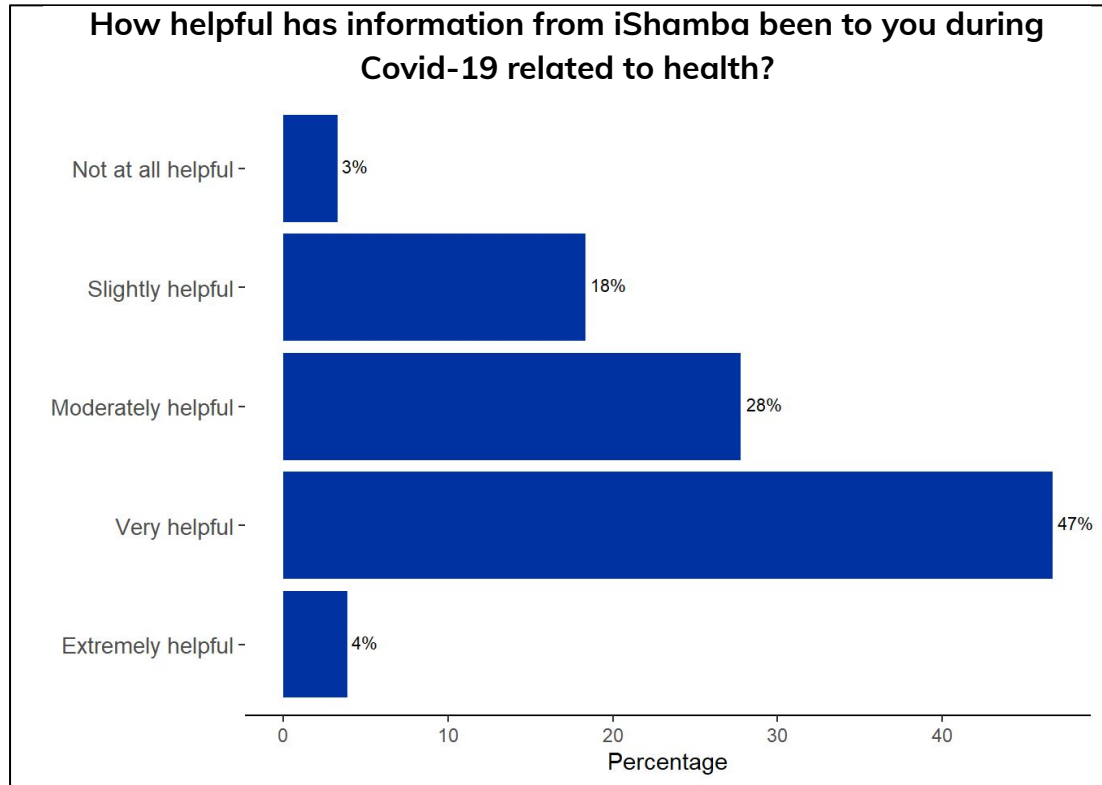


Data source: iShamba Quantitative Survey

Busara Center For Behavioral Economics | 2020

- 72% of people **agreed or strongly agreed** that iShamba connected them to alternative livelihood sources.
- Impact on livelihood is a key concern among farmers. This was a key insight from the quantitative survey and the study by [60 Decibels](#) that indicated that farmers are requesting for support in cash, agricultural inputs and access to markets.

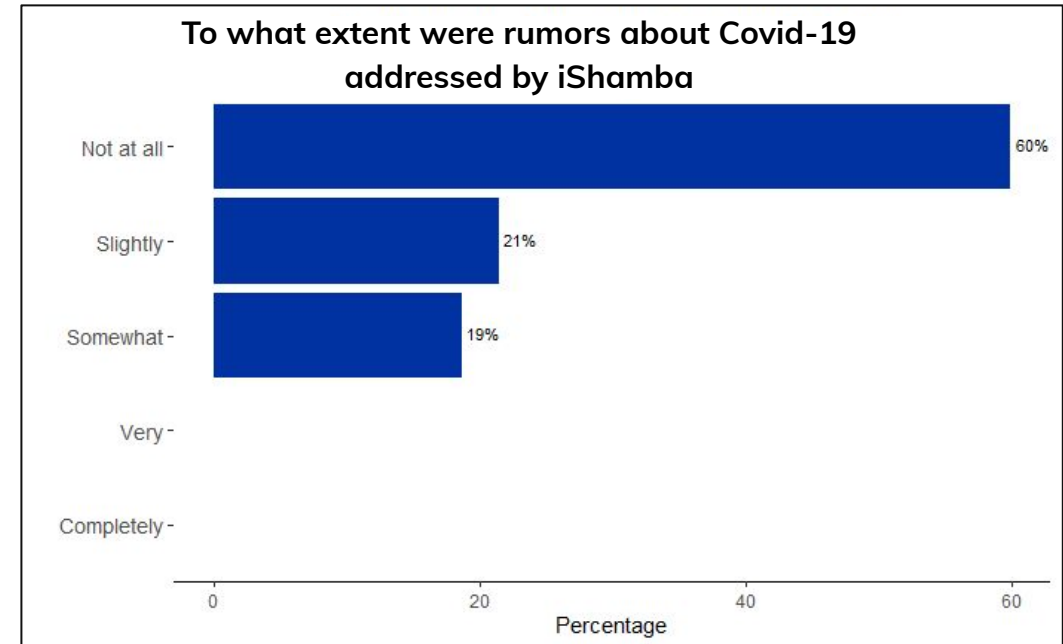
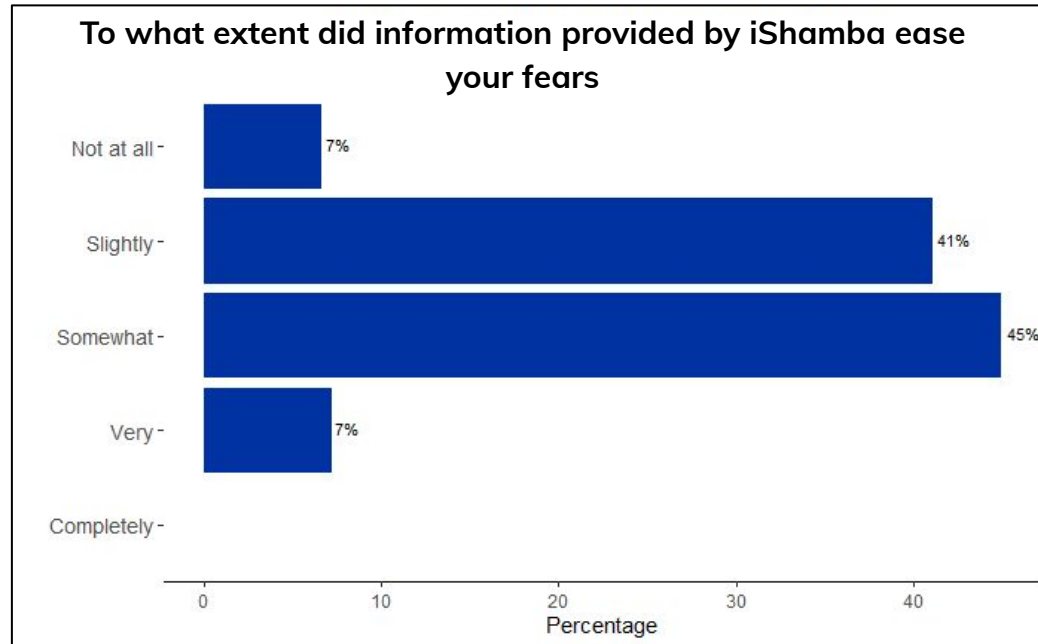
Surveyed farmers found the health and farming messages helpful. They prefer the farming information.



Data source: iShamba Quantitative Survey

Busara Center For Behavioral Economics | 2020

Surveyed farmers think iShamba's messages have eased fears but not addressed Covid-19 rumors



Data source: iShamba Quantitative Survey

- Misinformation and rumors complicates Covid-19 pandemic responses. It's even more challenging when influencers endorse false claims. In April 2020, the governor of Nairobi was criticized for misleading remarks about alcohol and Covid-19.
- Knowing the facts about Covid-19 can stop the spread of rumors. Providing the public with evidence-based information and amplifying these facts through trusted organizations are ways to address misinformation.

Changes in what farmers need to know

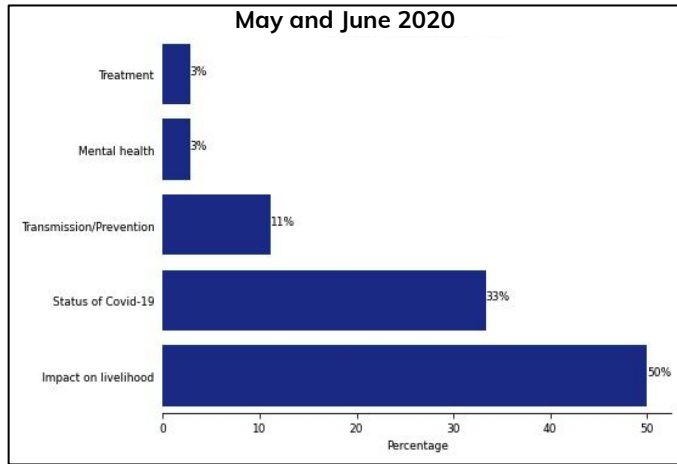
In this section, we analyzed iShamba's administrative data and categorized the inbound inquiries into message themes.

We explored changes in farmers inbound messages tracked in iShamba's administrative data

Thematic approach to analyzing the administrative data from April to July 2020: Prior to coming up with the themes, we proofread a randomly selected subset of the administrative data shared with us. This was to help in generating high level insights and patterns of what farmers are asking or talking about in the messages. Then we defined themes based on these findings. For context, we have provided the Covid-19 timeline in Kenya in the Appendix.

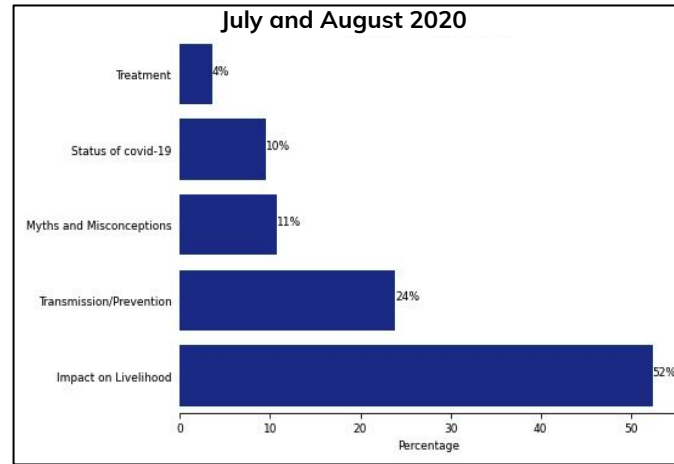
Theme	Definition	Sample messages
Status of Covid-19 in Kenya	Focuses on general questions around Covid-19.	"Is there any confirmed Covid-19 case in Nandi county so far?"
Transmission & prevention	Questions and discussions around prevention and how the virus is transmitted.	"Do i need to wash hands that regular and mostly am in the shamba alone and rarely get out of the compound?"
Treatment	Questions asking if there is a cure/vaccine for Covid-19.	"Is there Corona vaccine that has been developed Globally?"
Misinformation & misconceptions	Misinformed statements/questions around Coronavirus.	"Is Covid-19 19 really in kenya coz i really doubt it"
Impact on livelihood	Farmers questions and mentions of being adversely affected by the virus. This involves reduced market demand and financial difficulty	"Please I request you to assiist my community with inputs...."
Fear	People who are afraid of contracting the virus and are warning others about it and encouraging prayer.	"...Also the personnel to work on the farms who fear contracting the virus.."

The impact of Covid-19 on livelihoods is a key theme among inbound messages



Number of Covid-19 Messages Received (May-June 2020)

Treatment: 1
 Mental health: 1
 Transmission/Prevention: 4
 Status of Covid-19: 12
 Impact on livelihood: 18
Total: 35



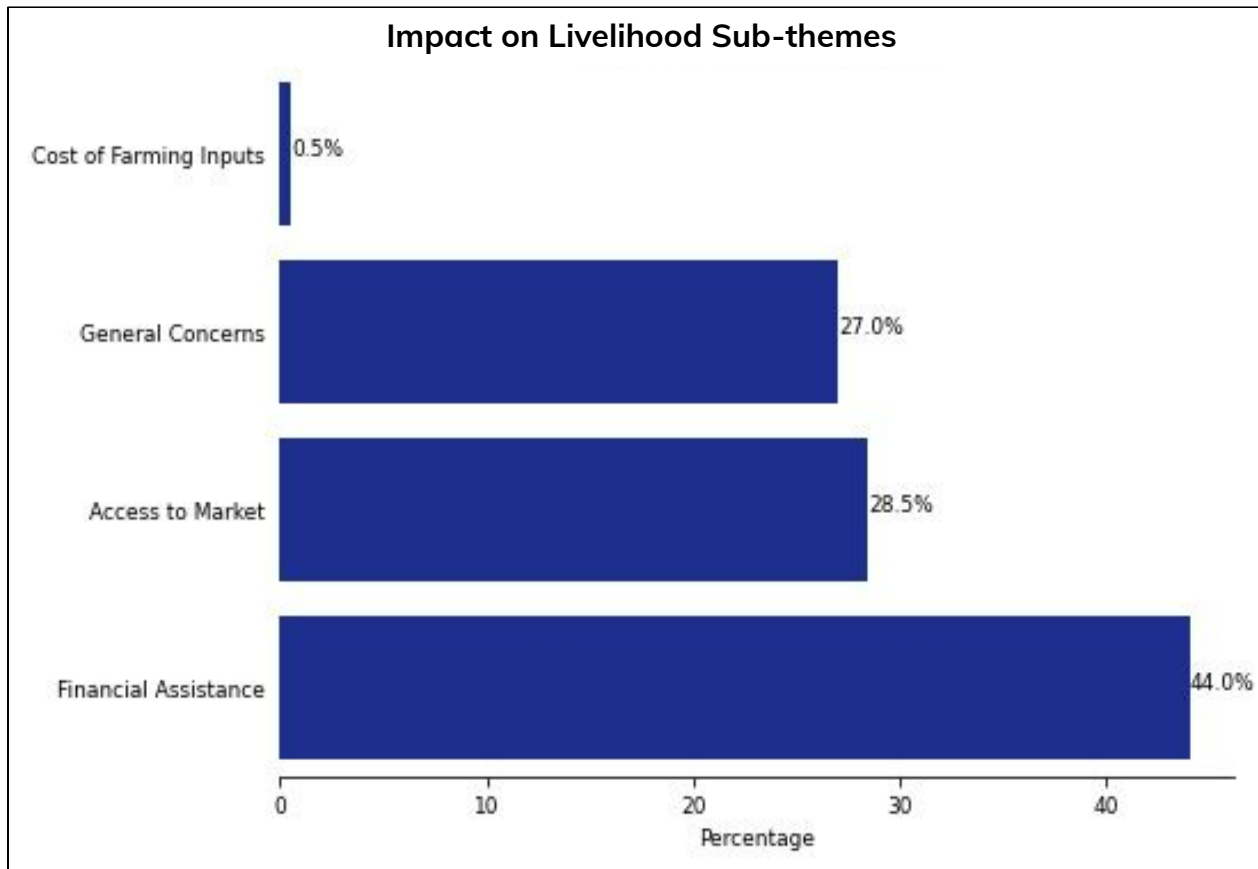
Number of Covid-19 Messages Received (July-August 2020)

Treatment: 3
 Status of Covid-19: 8
 Myths and Misconceptions: 9
 Transmission/Prevention: 20
 Impact on livelihood: 44
Total: 84

- Impact on livelihood has been the topmost concern. The lockdown has led to disruptions in transportation and labor force. The messages are mainly around access to market options as their perishable produce is rotting, lack of customers, ways to diversify their crops among others.
- In July and August, there were fewer inquires about the status of Covid-19, and more questions about transmission/prevention.

Data source: iShamba Administrative Data

Farmers are mainly asking for financial assistance



Data source: iShamba Administrative Data

- Breaking down impact of livelihood into sub-themes, it indicates that 44% of messages are farmers requesting for financial assistance.
- Some examples of farmers requesting for financial assistance include:
 - “I was depending on you for a loan for farming could you still assist?”
 - “Hi , need some loan to start poultry farming, a boost of 15k”

Trends in KAB after the intervention

We used a quantitative assessment to understand the trends in KAB after the SMS + TV case study stopped sending out Covid-19 messages in August. We conducted the same assessment with a control group to serve as a comparison group. This control did not receive any communication messages any partners in this engagement.

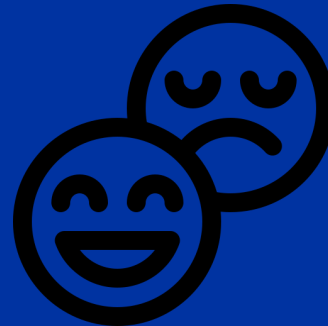
Creating a knowledge, attitude, behavior score

We created an index measure that combines knowledge, attitude and behavior questions into one more powerful measure.



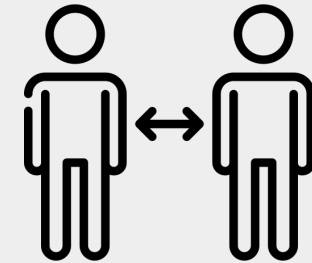
Knowledge

Do farmers know the symptoms and prevention methods of Covid-19?



Attitude

How are farmers responding to Covid-19 regulation, positively or negatively?



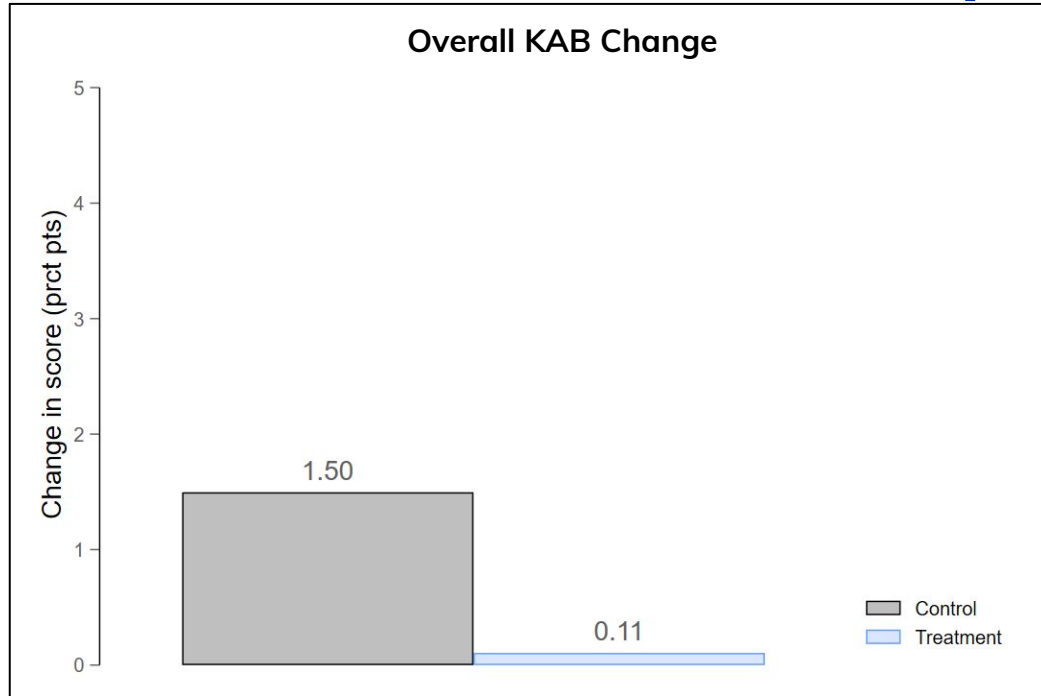
Behavior

Are farmers observing safe Covid-19 behaviors?

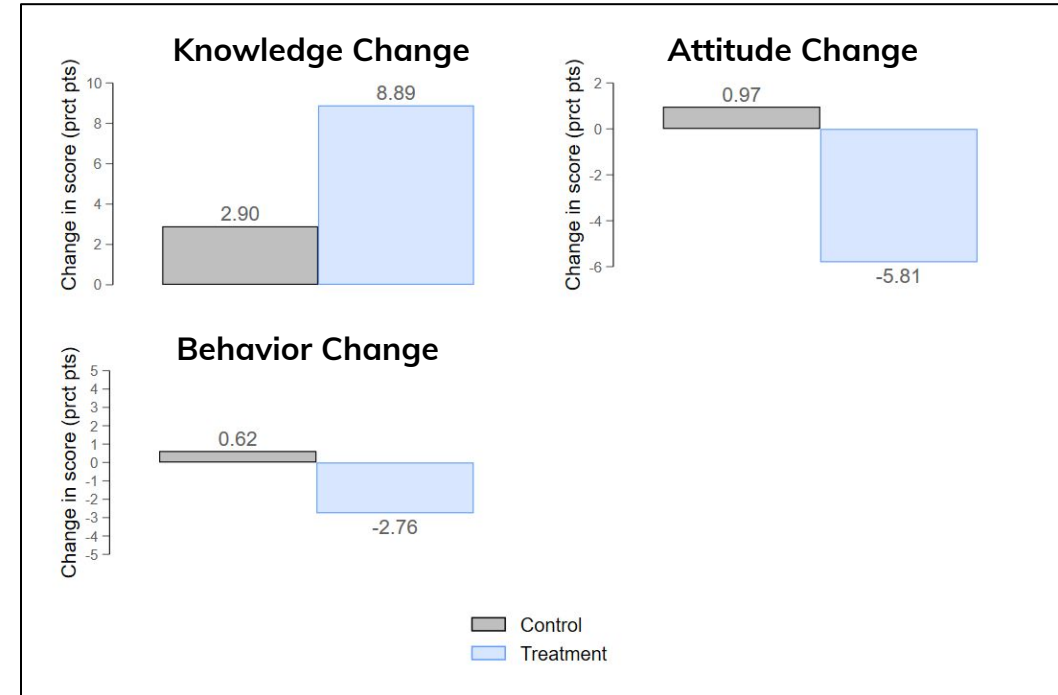
We used a set of questions to build the KAB score

Area	Questions used to building the KAB score
<p>Knowledge</p> <p>Average score calculated for knowledge questions to create the 'knowledge score'.</p>	<p>Do you need to maintain social distance from workers on your farm?</p> <p>What is the distance you should maintain from workers on your farm, measured in meters (that don't live at your house)?</p> <p>During Covid can you share tools with other farmers?</p> <p>How should fresh food (ex. fruits and vegetables) be cleaned after they are purchased from the market to prevent Covid transmission?</p> <p>Can livestock transmit Covid?</p>
<p>Attitude</p> <p>Average score calculated for attitude questions to create the 'attitude score'.</p>	<p>What do you think: should people in your country not shake other people's hands because of Covid right now?</p> <p>Do you think the reaction of your country's government to the current Covid outbreak is appropriate, too extreme, or not sufficient?</p>
<p>Behavior</p> <p>Average score calculated for behavior questions to create the 'behavior score'.</p>	<p>Have you been able to keep a distance of one meter from other people in the last 7 days?</p> <p>Are you wearing a mask during normal daily activities?</p> <p>Do you wear a mask while you farm?</p> <p>To what extent do you agree: "I avoid taking mass transportation to the market"</p> <p>To what extent do you agree: "I use mobile money at the market."</p> <p>To what extent do you agree: "I wash my hands more frequently than before Covid"</p>
<p>The mean of the knowledge, attitude, and behavior components is taken to create a final KAB score.</p>	

There was little change in KAB scores after the combined SMS + TV campaign ended



Data source: iShamba Quantitative Survey



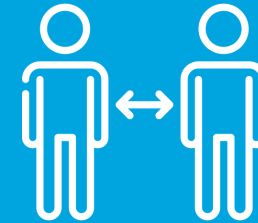
- The overall measure of knowledge, attitude and behavior saw little change for iShamba respondents from baseline to endline.
- Looking at individual KAB components, there was a large positive shift in knowledge, and decrease in attitude and behavior.
- In other words, attitude and behavior decreased after the campaign ended.
- 34 percentage point increase in farmers knowing livestock does not transmit Covid-19.

Drivers of the KAB in the SMS +TV case study after the intervention ended



Knowledge

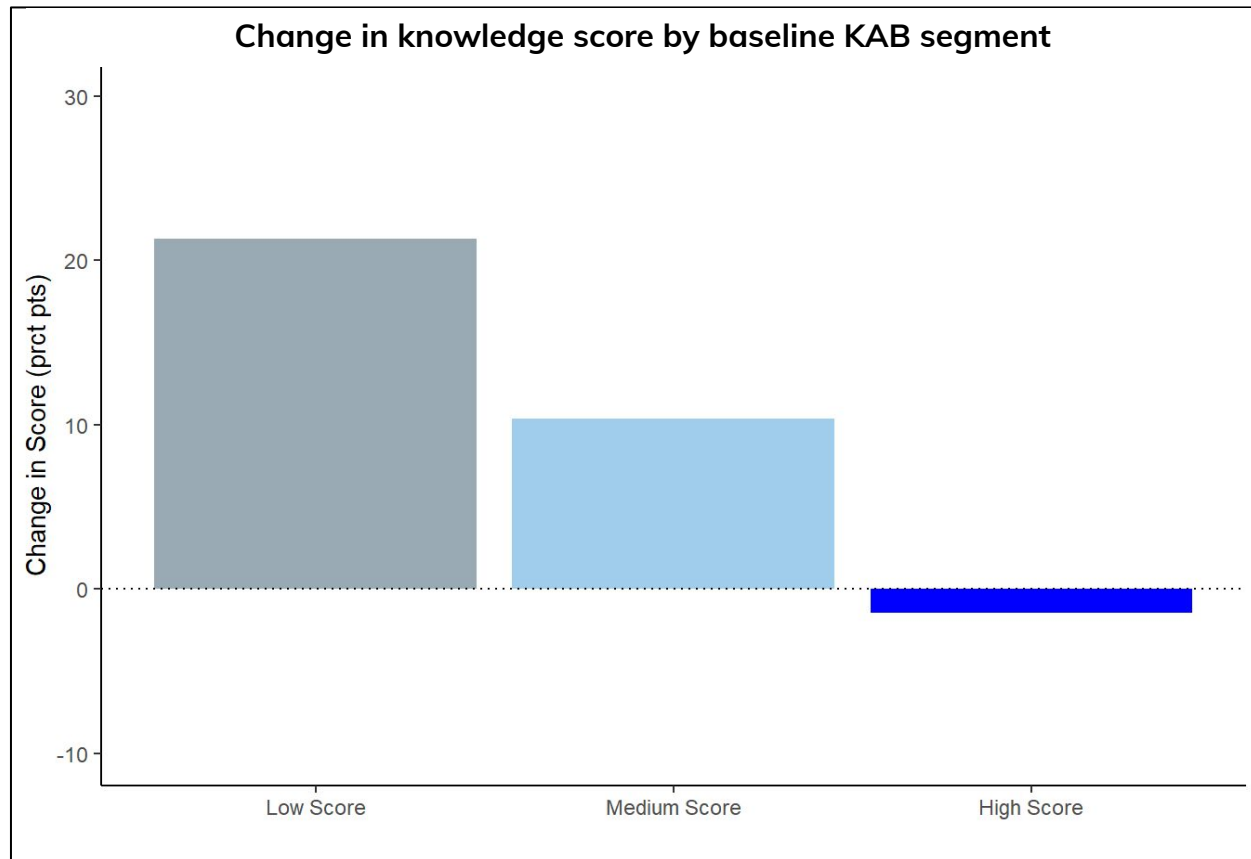
The **knowledge increase** is driven mainly by a big increase in people answering correctly for whether livestock spread Covid-19, and a smaller increase in people knowing about the need to socially distance



Behavior

The **behavioral decrease** comes from a **reduction in people staying 1m away from each other** on the farm, and from a reduction in general mask-wearing. The first might be explained by more on-farm activities, but the second is a clear example of behaviors getting worse. People have slowly stopped wearing masks.

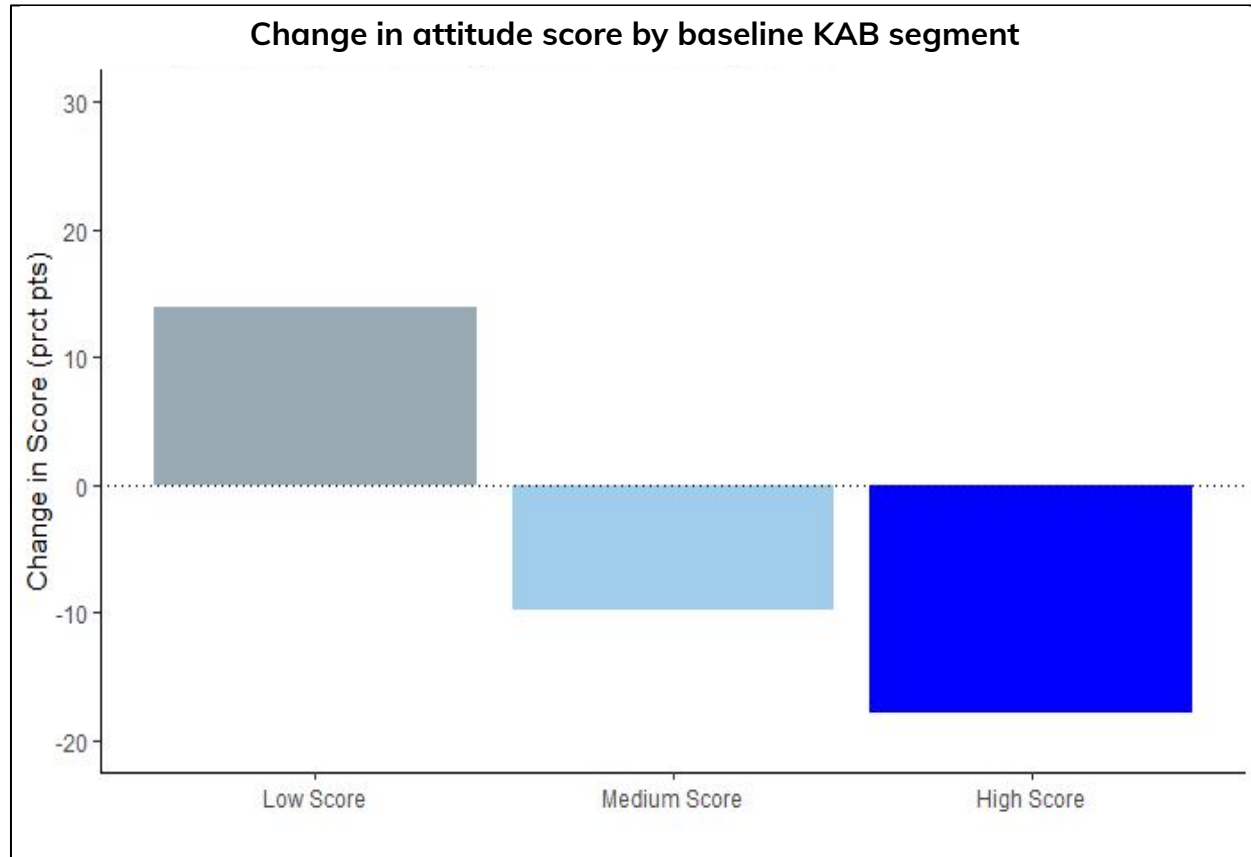
Largest gains in knowledge from the low KAB segment



Data source: iShamba Quantitative Survey

- The **low KAB segment** saw a large increase (**21.3 percentage point increase**) in Covid knowledge after the intervention ended.
- The **high KAB segment** saw a slight decrease (**1.49 percentage point decrease**) in Covid knowledge.

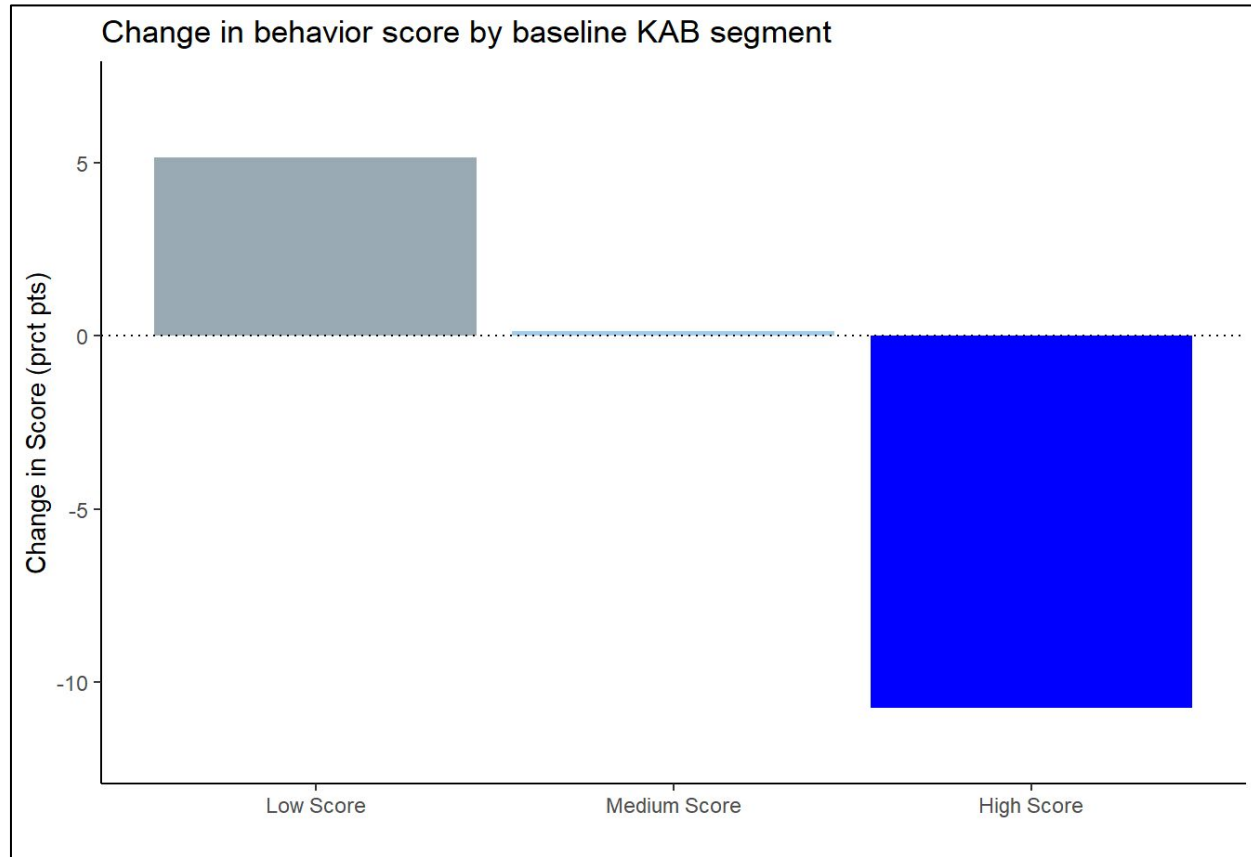
Large losses in attitude for the highest KAB score



Data source: iShamba Quantitative Survey

- The **high KAB segment** saw the largest decrease (**17.9 percentage point decrease**) in attitude towards Covid after the intervention ended.
- The **low KAB segment** saw an increase (**13.9 percentage point increase**) in change in Covid attitude.

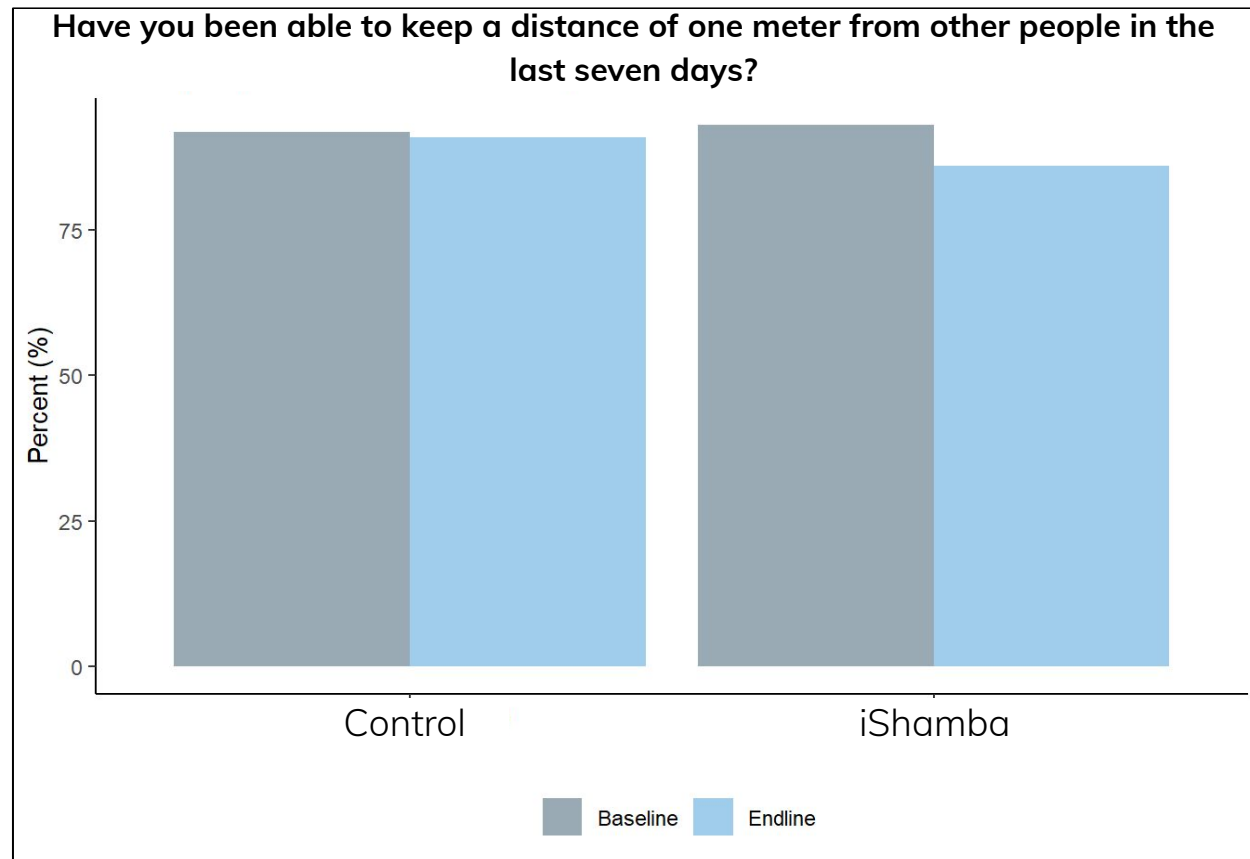
High KAB segment driving behavior losses



Data source: iShamba Quantitative Survey

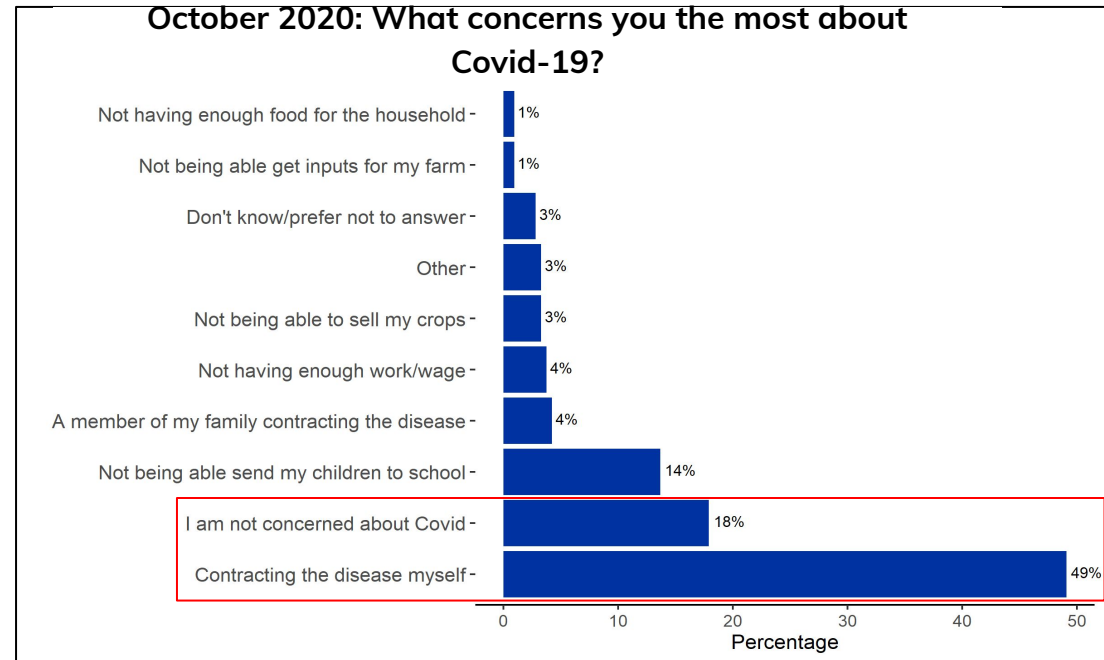
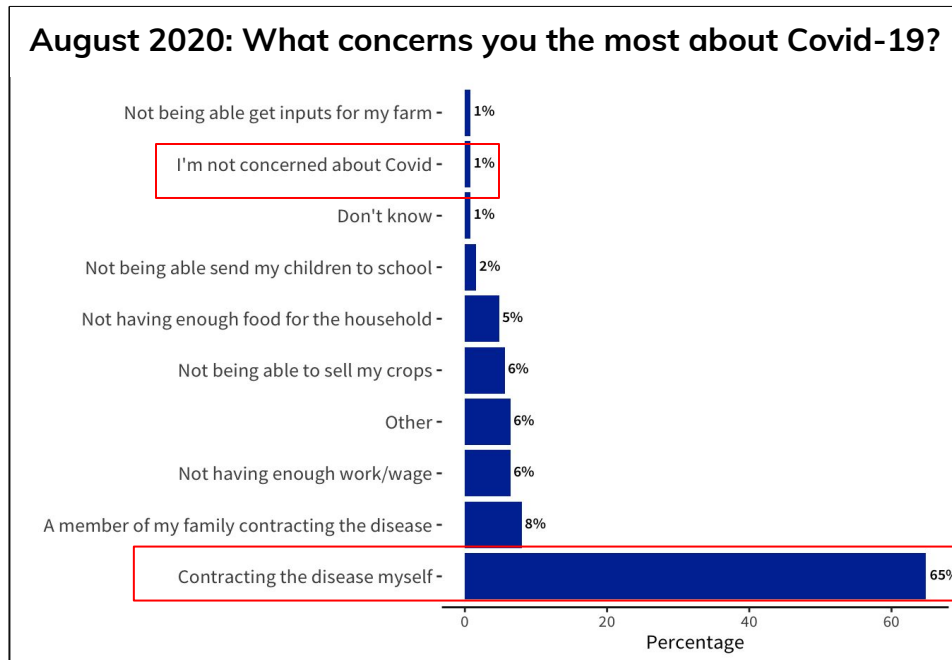
- The **high KAB segment** had the largest losses (**10.74 percentage point decrease**) in behavior change after the intervention ended.
- The **low KAB segment** saw an increase (**5.17 percentage point increase**) in behavior change from baseline to endline.

iShamba respondents are social distancing less



- Self-reported ability to social distance declined from 93.9% at baseline to 85.8% at endline.
- This is a 8 percentage point decline, relative to a less than 1 percentage point decline in the control group.

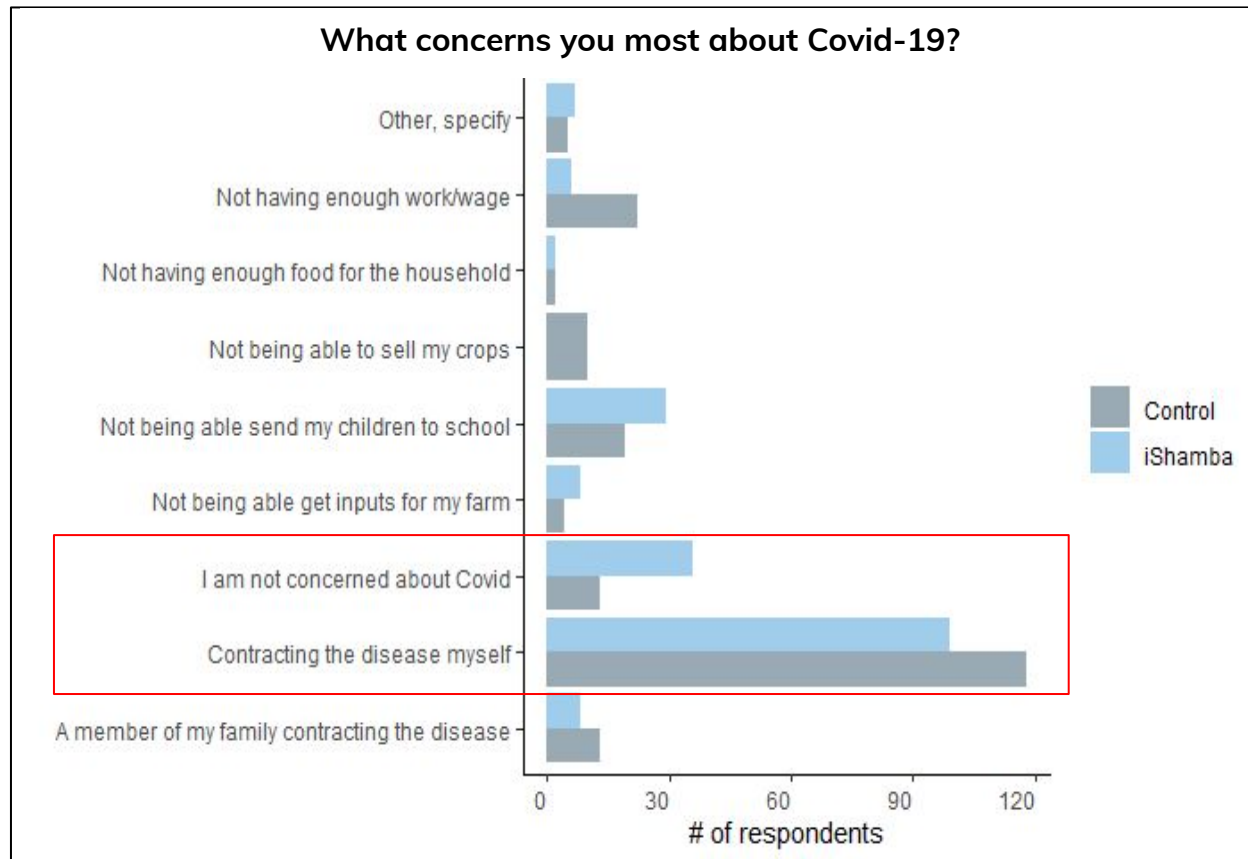
Respondents are less concerned about Covid-19 now compared to August



Data source: iShamba Quantitative Survey

- Farmers are significantly **less concerned about Covid-19** at endline up from 1% to 18%.
- Farmers are concerned the most about contracting the disease themselves, however they are **less concerned about contracting the disease at endline**. There was a 16 percentage point decrease from baseline to endline.
- The ease of lockdown in Kenya could have had an influence in the respondents' concerns.

iShamba respondents are less concerned about Covid-19 than the control group



- Surveyed iShamba farmers are significantly **less concerned about Covid-19 than the control group** at endline.
- Farmers in both the control and iShamba groups are concerned the most about contracting the disease themselves.

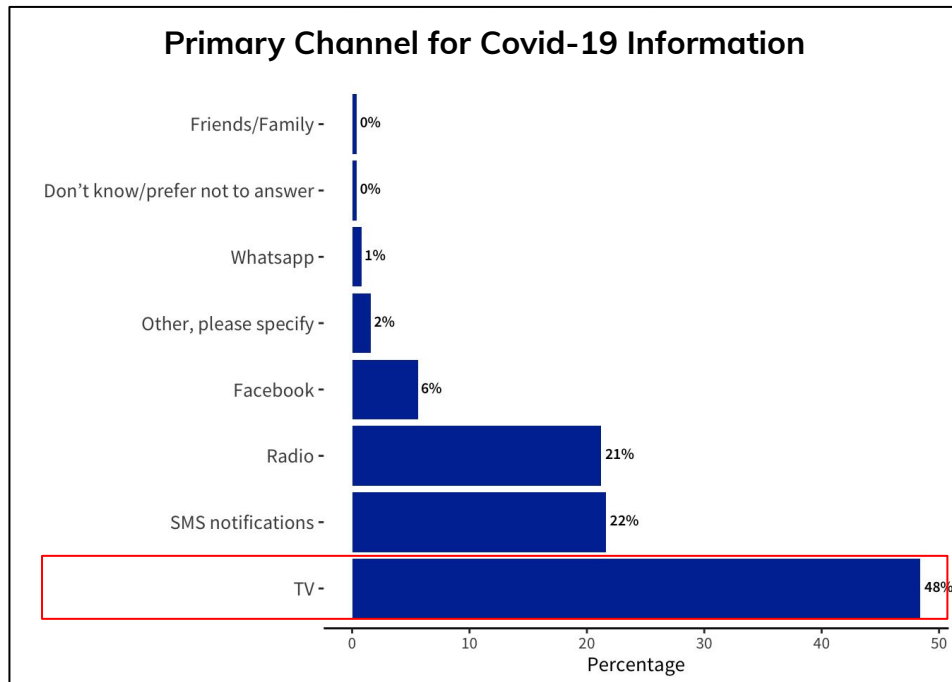
A photograph of a banana plantation with large green leaves and stalks under a blue sky with light clouds. A solid blue rectangular box is overlaid on the image, containing white text.

How to reach farmers on digital channels effectively

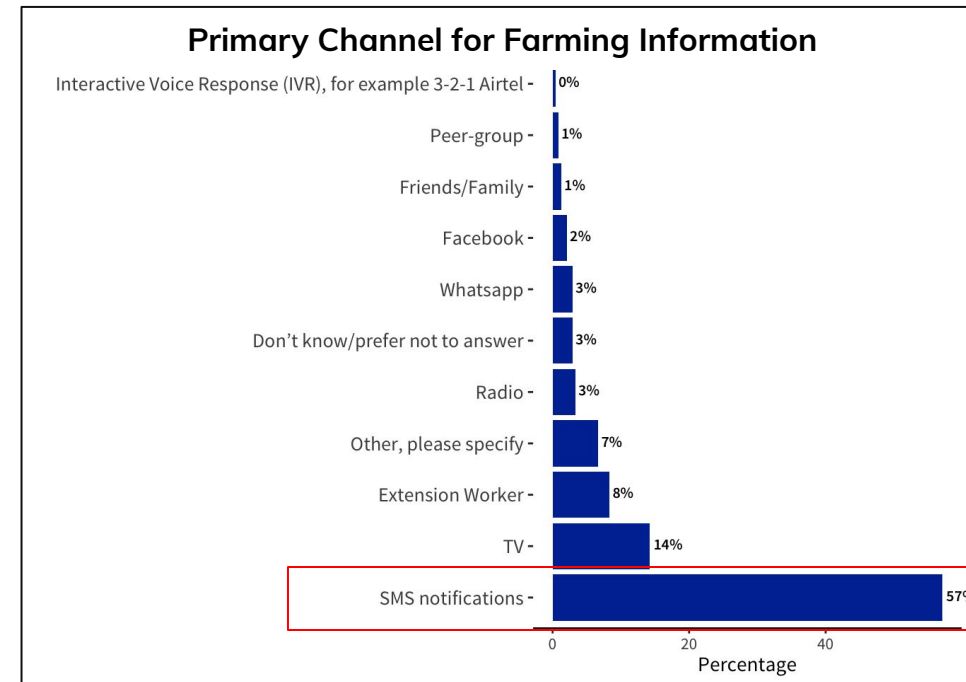
In this section, we assess suitable channels to deliver health and agriculture information. Then, we present ways to optimize the digital channels.

**How suitable are the
digital channels for
Covid-19 health and
farming information?**

Farmers from the iShamba survey reported having different sources for Covid-19 and farming information

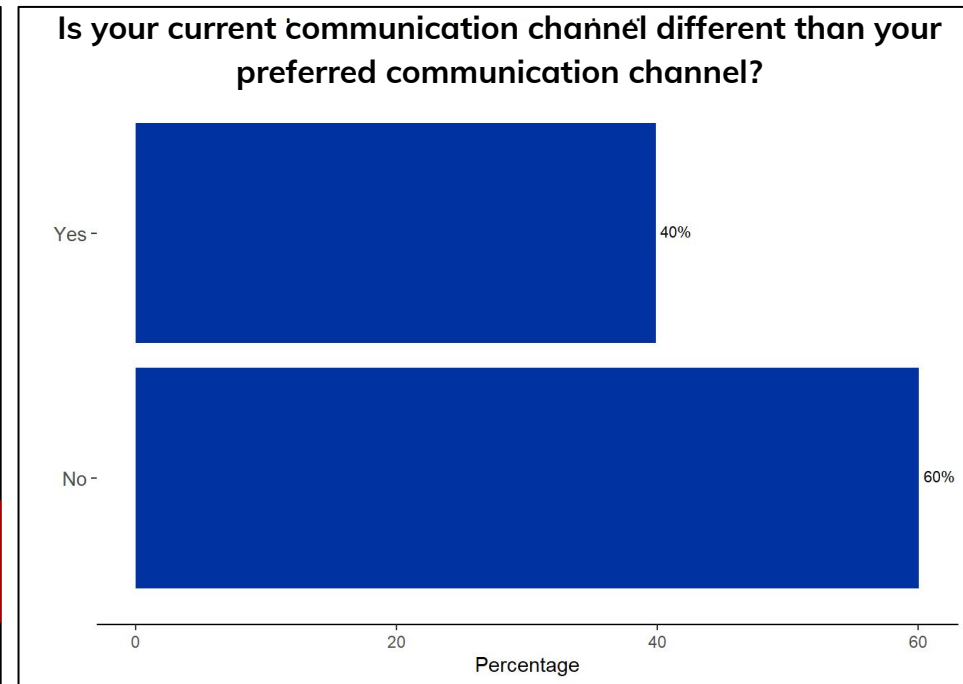
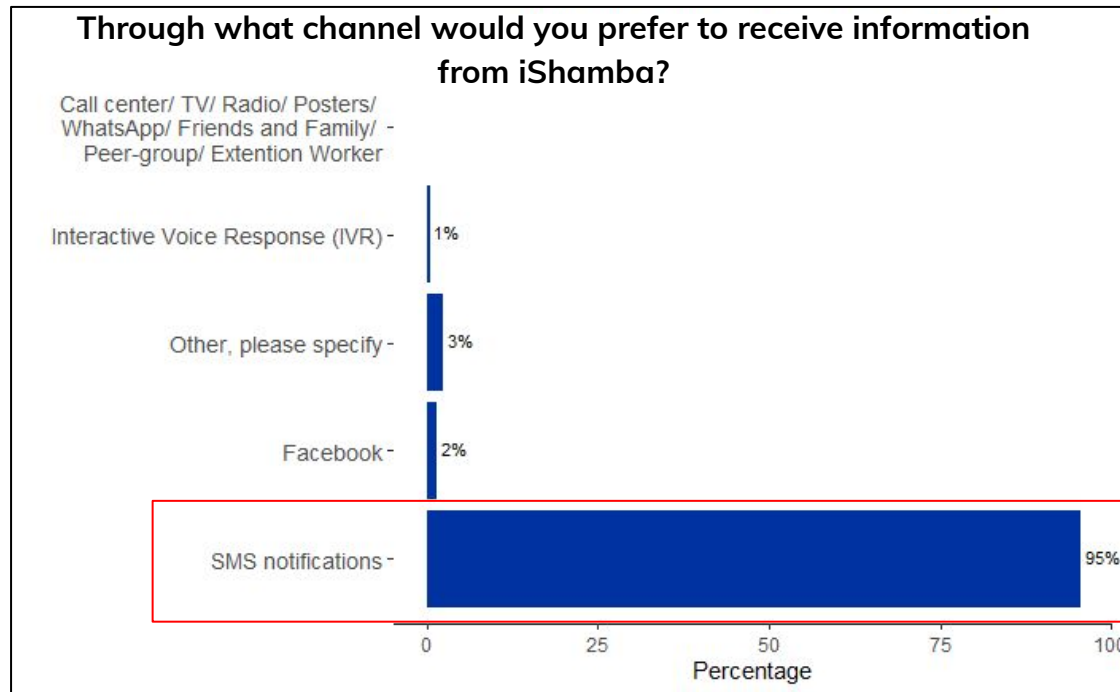


Data source: Ishamba Quantitative Survey



- In follow up questions about how well they trust information they receive through these channels, surveyed farmers reported high trust in the information.

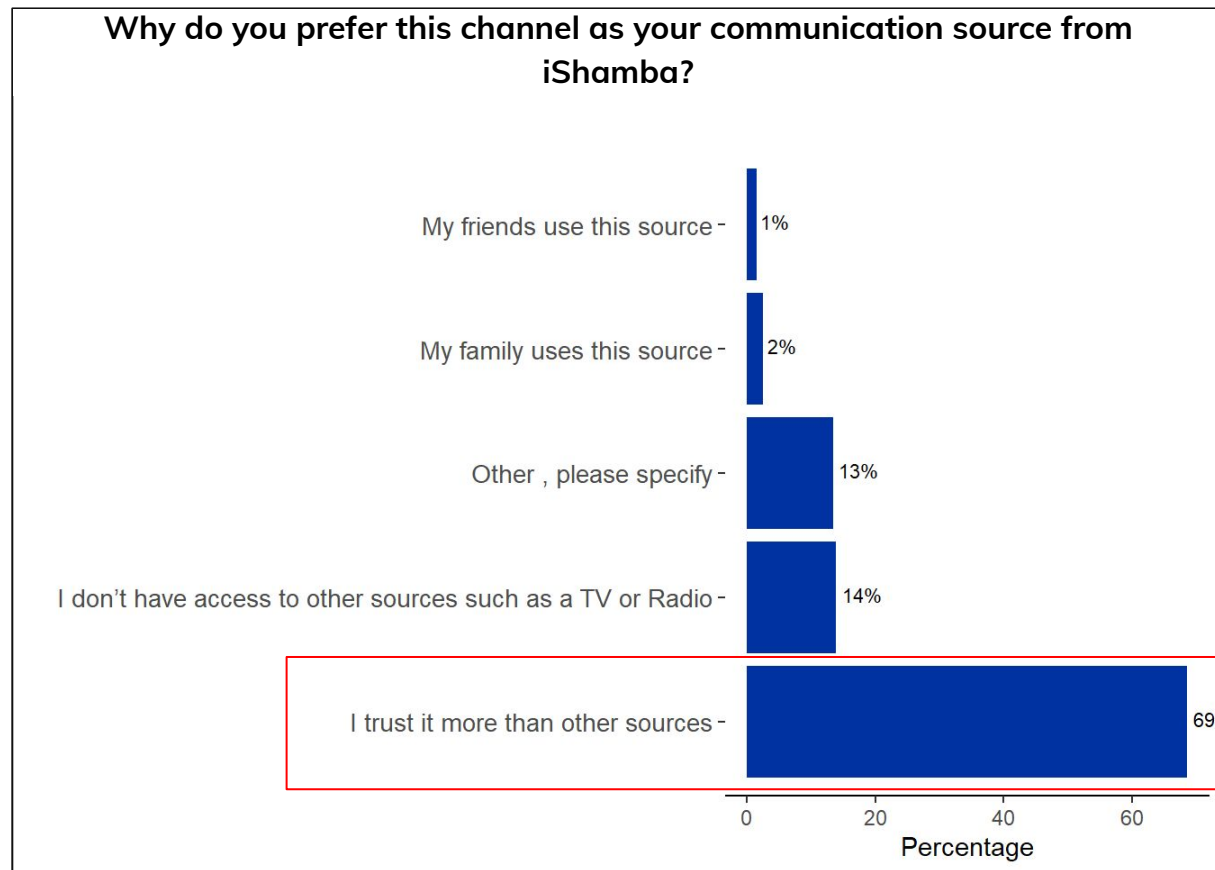
Near universal preference of receiving information through SMS notifications



Data source: iShamba Quantitative Survey

- Surveyed farmers prefer to receive information from iShamba via SMS and 40% are not receiving information through their preferred channel. This could be because people interact with iShamba predominantly through the Shamba Shape-Up TV show.

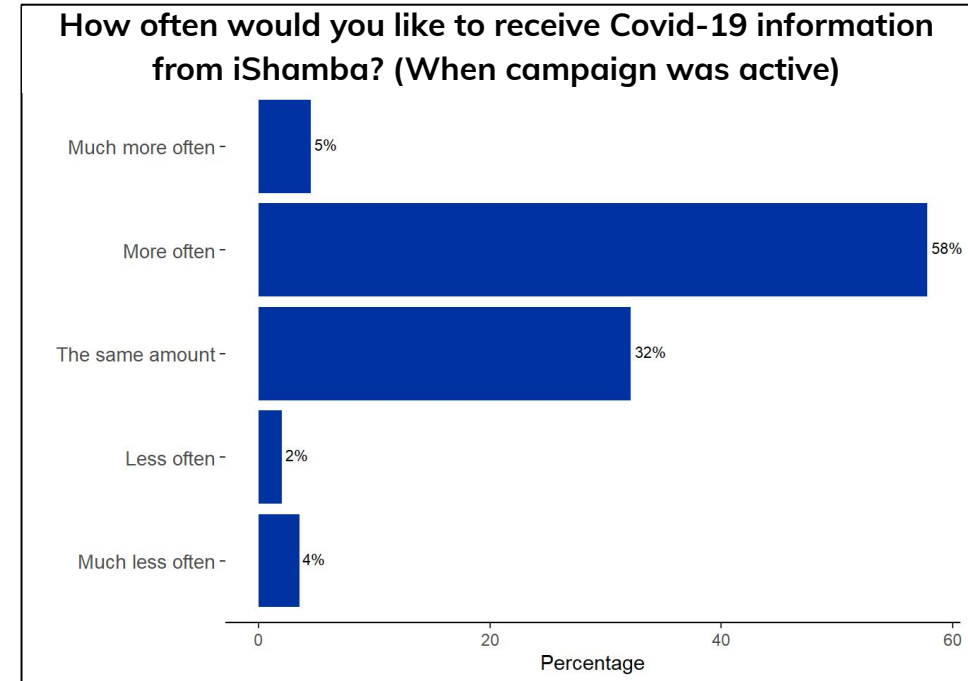
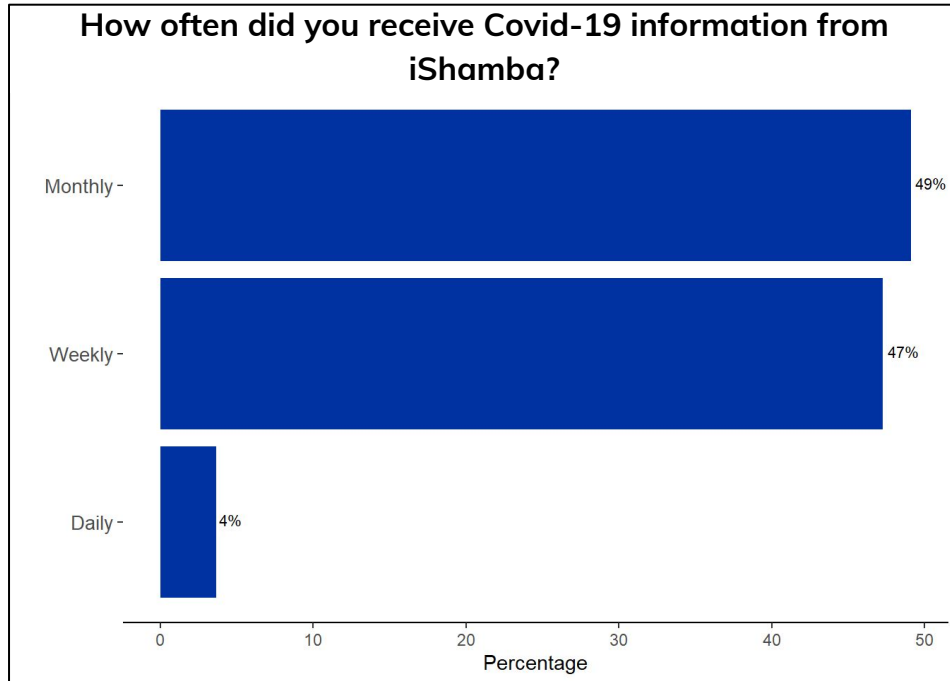
Trust and convenience are drivers for SMS preferences



Data source: iShamba Quantitative Survey

- 69% of farmers identify a preferred communication channel because they trust it.
 - 95% of farmers surveyed want to use SMS.
 - **Surveyed farmers trust SMS**
- People who said “other” were likely to cite **convenience and ease of use.**
- For years, [SMS has been used as a learning tool](#). The prevalence of SMS as the preferred means for receiving farming information can be linked to the fact that it serves as a point of reference for the farmers at a later time.

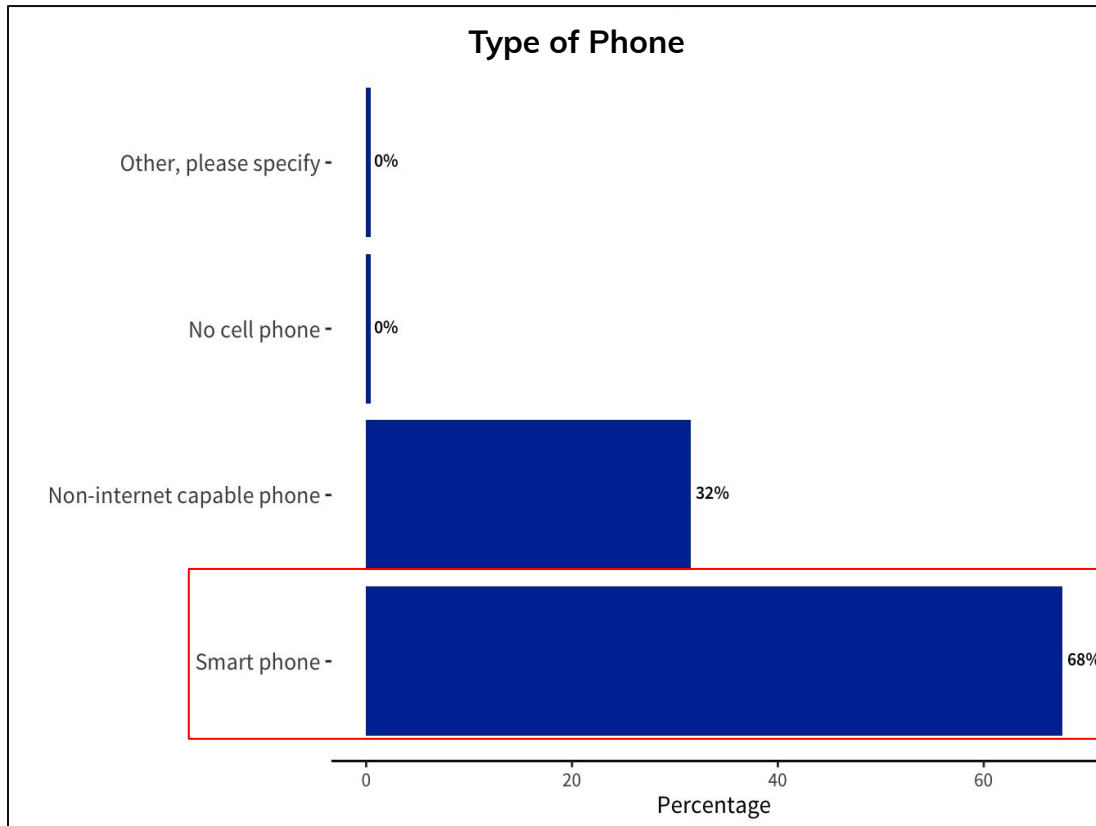
Surveyed farmers want to receive Covid-19 information more often from iShamba



Data source: iShamba Quantitative Survey

- There is an almost even split between people who think they receive information weekly and monthly. iShamba should examine if this matches administrative records for how often farmers are being contacted.
- Although iShamba stopped sharing Covid-19-related content in August, this insight shows that surveyed farmers would still like to receive Covid-19 information from iShamba.

Internet access is not driving channel preferences for surveyed farmers



Data source: Ishamba Quantitative Survey

75%
Access to internet
Ishamba respondents

24%
Access to internet¹
National

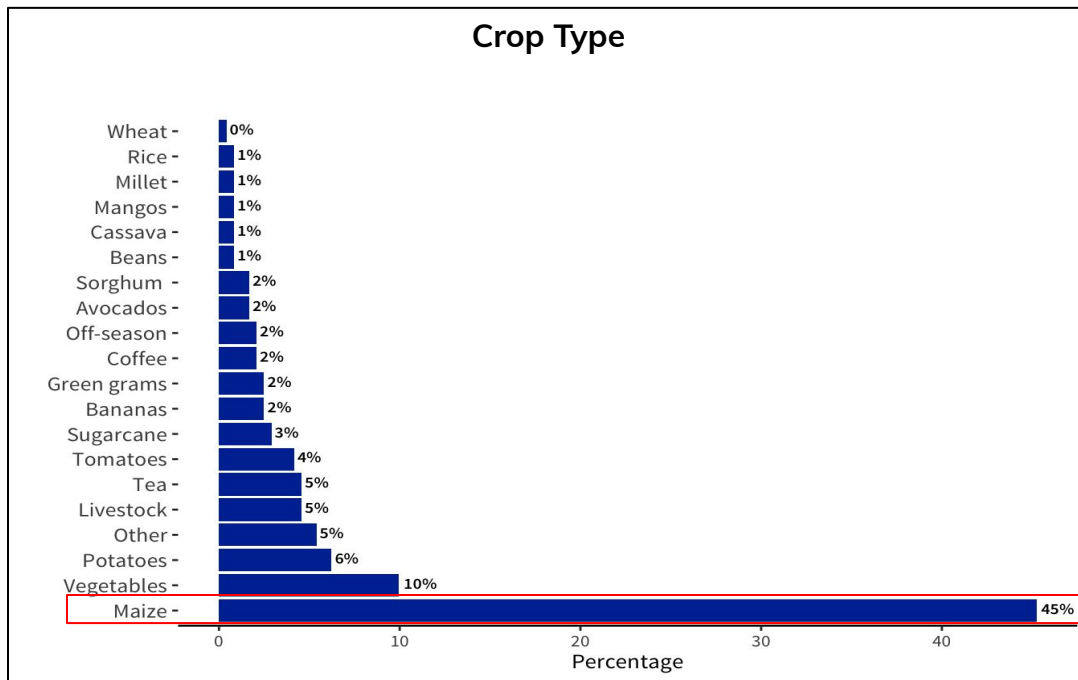
- Although surveyed farmers have access to the internet, they still have a preference for the SMS channel. This insight is useful as organizations plan for future emergency response.
- The high smartphone ownership might be due to a limitation of phone surveys and selection bias. In some cases, there are slight differences in the profiles of phone survey respondents when compared to in-person survey respondents.
- It will be useful to Ishamba to compare this finding to their general farmer database. Does this align with the types of farmers Ishamba works with?

¹GSMA, Mobile Internet Connectivity, 2019

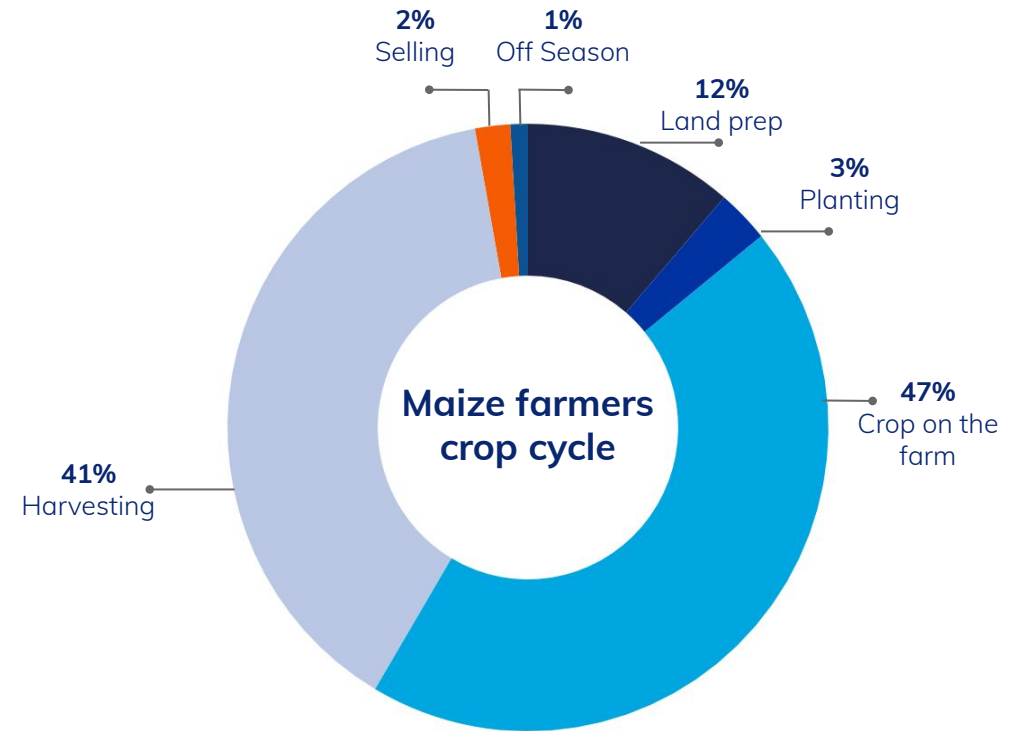
How might we optimize the digital channels?

Customer information needs are constantly evolving. A successful communications strategy requires updating the strategy to meet these needs. Farmer information needs may change based on their farming cycle, the consequences of Covid-19, and communication preferences. This section presents how digital channels can be optimized to suit the farmers' Covid-specific needs.

Covid-specific content should take farmers crop cycle into account

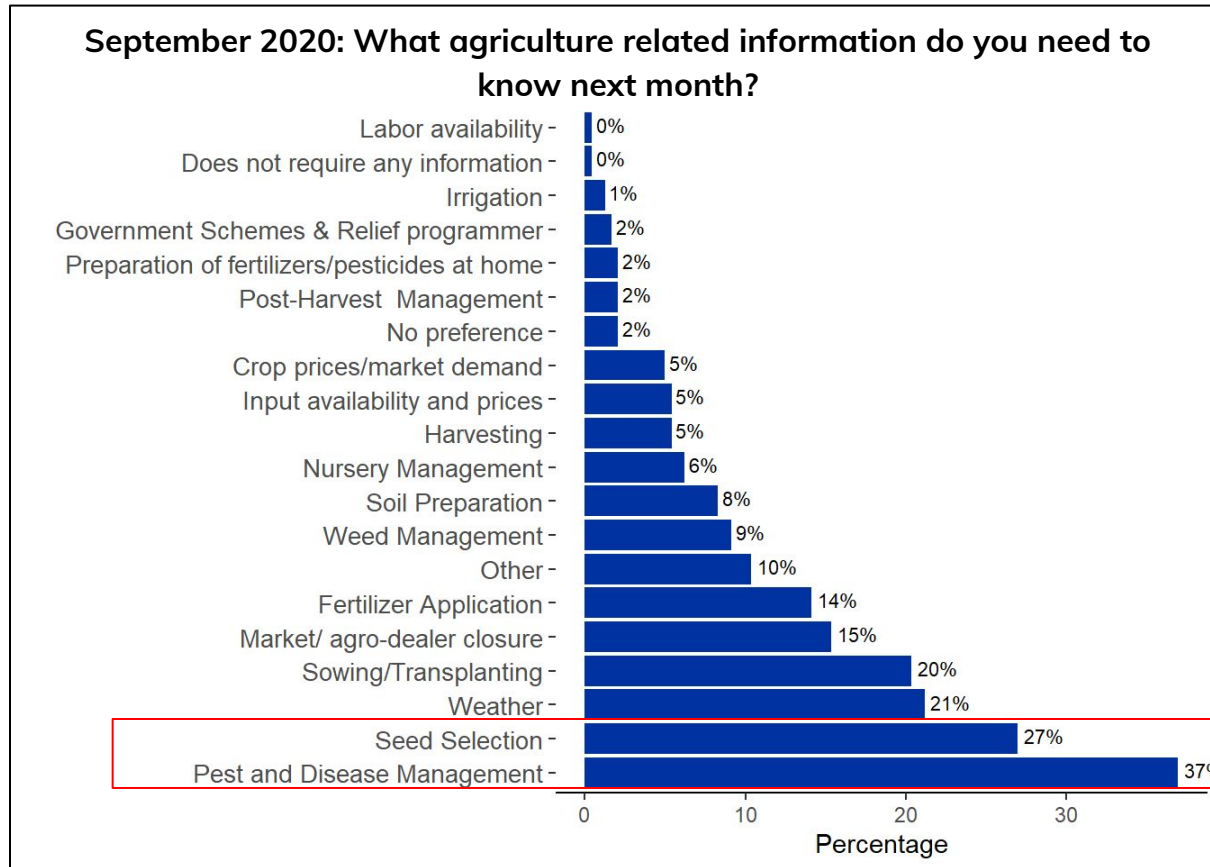


Data source: iShamba Quantitative Survey



- Farmers are particularly concerned about livelihoods, therefore the content needs to be tailored throughout the year to help farmers know how to maintain livelihoods in face of Covid (ie. working with people safely in the planting season, traveling safely to markets post-harvest).

Information about pest management and seed selection would be the most useful information to farmers now



Data source: Ishamba Quantitative Survey

- Information needs are likely to change based on what phase of the crop-cycle farmers are in
- Surveyed farmers were able to select multiple topics of information that they needed in the next month:
 - The two most popular topics, pest and disease management (37%) and seed selection (27%) are not Covid-specific.
 - This might have to do with where farmers are on the crop cycle. The majority of maize farmers still have their crops on the farm or are harvesting their crops.

Open channels and registered users: A multi-channel approach can be used to build trust

Multi-channel communication campaigns seem to be more effective in reaching farmers because they generally have a wider reach. **The multi-channel approach can be leveraged further to build trust among farmers.** Given that farmers prefer and trust the SMS channel, this can be used as primary channel in combination with other digital channels (WhatsApp or IVR) that might not be familiar to farmers.

The combined SMS+TV case study in this engagement provide evidence that support this:

- In the combined SMS +TV case study, the partner organization combined the SMS channel with an open communication channel (TV). The organization primarily communicates with its farmers through the SMS channel. Farmers also have the option of registering to receive more information from the partner organization. Together these strategies establish trust among farmer in this cohort. Farmers are used to the SMS channel and trust the information that the organization shares on this channel.
- Registered farmers can be targeted for future emergency response and are more likely to responsive to similar information that comes through other channels associated with the partner organization.

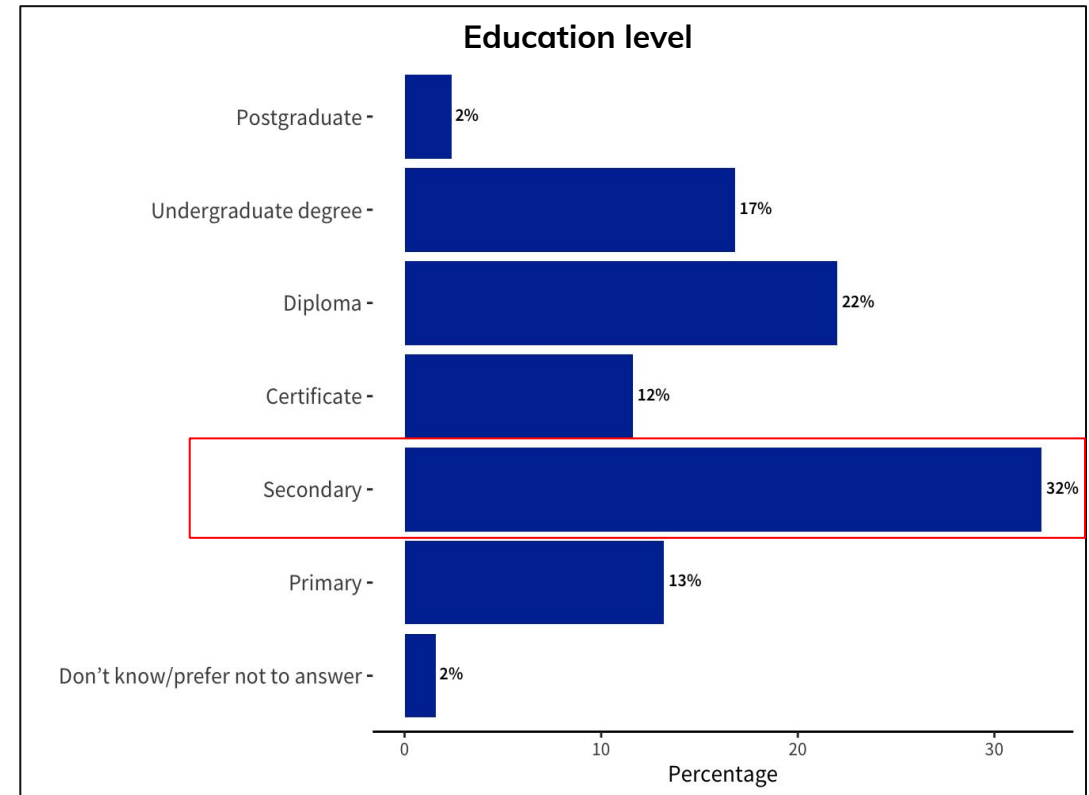
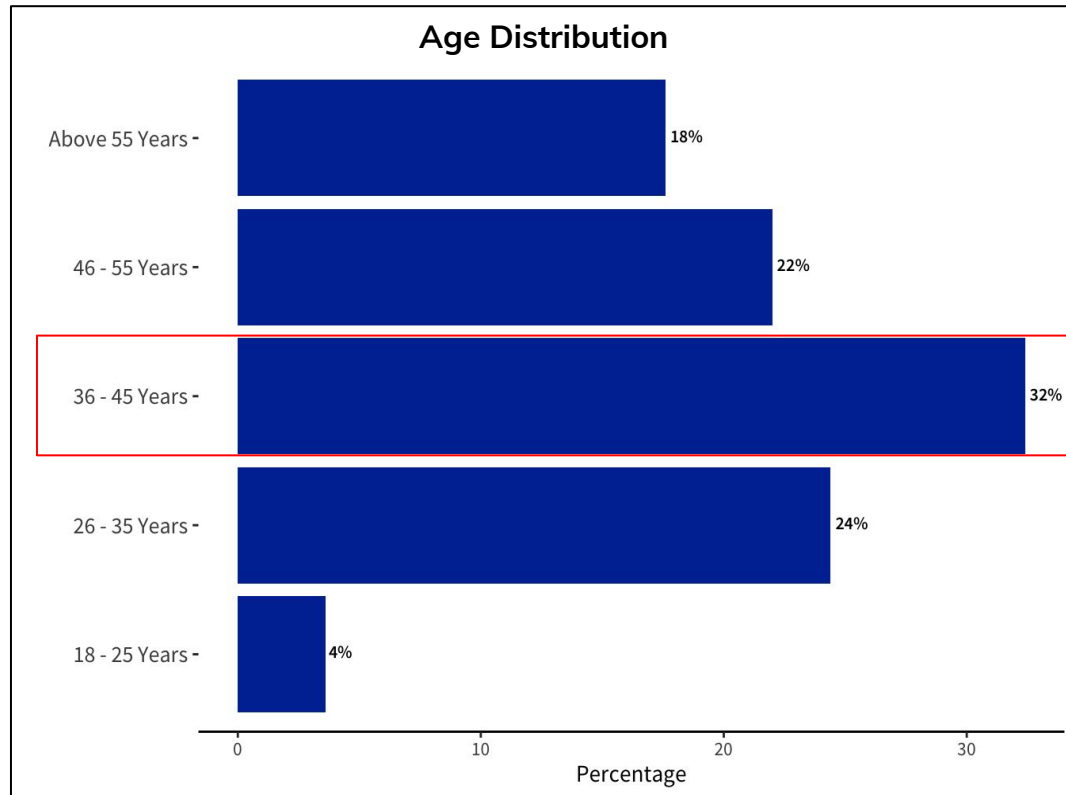
Appendix



Profile of Survey Respondents

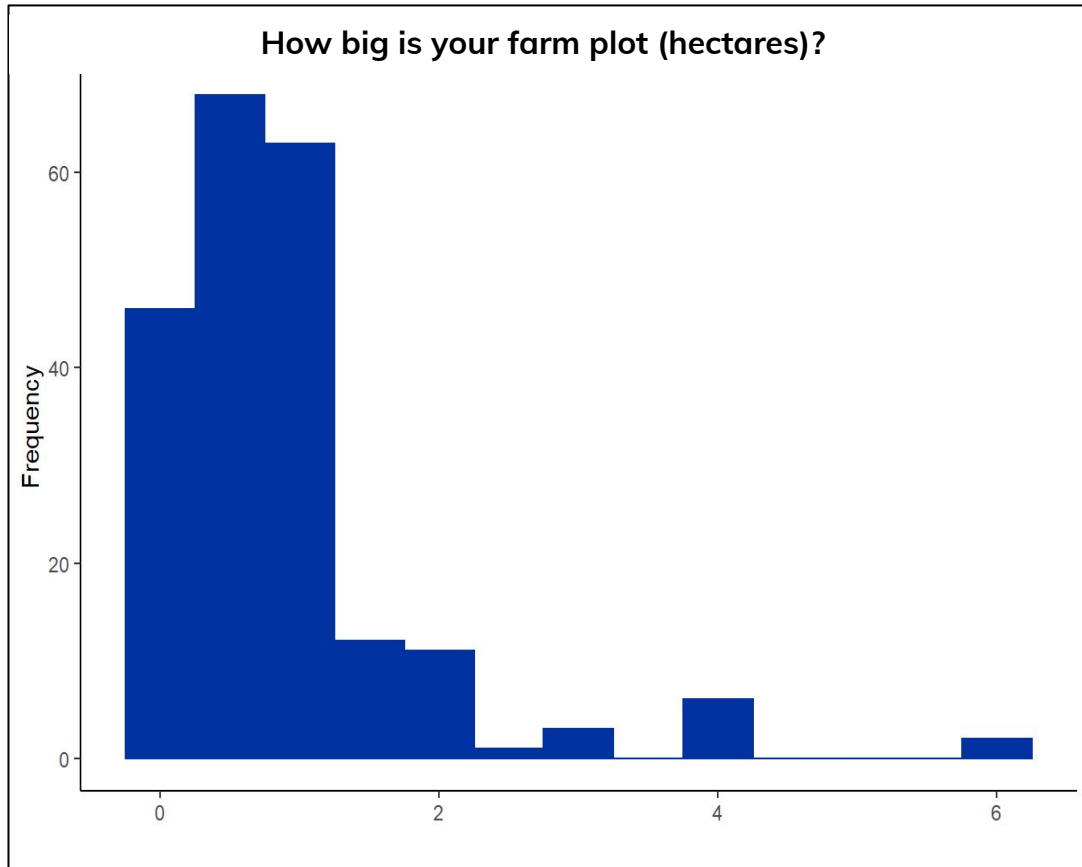
In this section, we present the demographics of the overall survey respondents

Surveyed farmers are on average older than the average Kenyan and have at least a secondary education



Data source: iShamba Quantitative Survey

Surveyed farmers on average have smaller sizes of farm land than the average Kenyan farmer



Data source: iShamba Quantitative Survey

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0.88 hectares
Average plot size of iShamba respondents

1.86 hectares
National average for farmers

- iShamba respondents have smaller plots than the average plot size in Kenya.
- 72% of Kenyan farmers have plot sizes under 5 hectares.

Covid-19 Timeline in Kenya

Covid-19-19 Timeline in Kenya

Date	Directive/Activity
13th March, 2020	First case reported in Kenya
15th March, 2020	Travel restrictions from international countries and closure of schools in the same week, ban on congressional meetings
25th March, 2020	7pm - 5am nationwide curfew
6th April, 2020	Cessation of movement in Nairobi, Kwale, Mombasa, and Kilifi
6th June, 2020	Ease of curfew hours down to 9pm - 4am
6th July, 2020	Lifting of lockdown in the counties, re-opening of places of worship
15th July & 1st Aug, 2020	Resumption of local air travel and international air travel respectively
28th September, 2020	Ease of curfew hours down to 11pm to 4am, resumption of operation of bars and restaurants, increase of no. of people allowed in gatherings



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