

# Understanding the Demand for Financial, Agricultural, and Digital Solutions from Smallholder Households:

Insights from the Household Survey in Bangladesh



DECEMBER 2017

BANGLADESH

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# BACKGROUND

Photo by Arifur Rahman / World Bank

# Financial innovation for smallholder families

This deck is part of a series which explores the research that CGAP and partners have conducted to explore the financial needs and behaviors of smallholder households.

Research was conducted as a basis for guiding financial solution providers, mobile network operators, donors and governments to design, improve, and scale solutions that address the needs of smallholder families.



CÔTE D'IVOIRE



NIGERIA



BANGLADESH



UGANDA



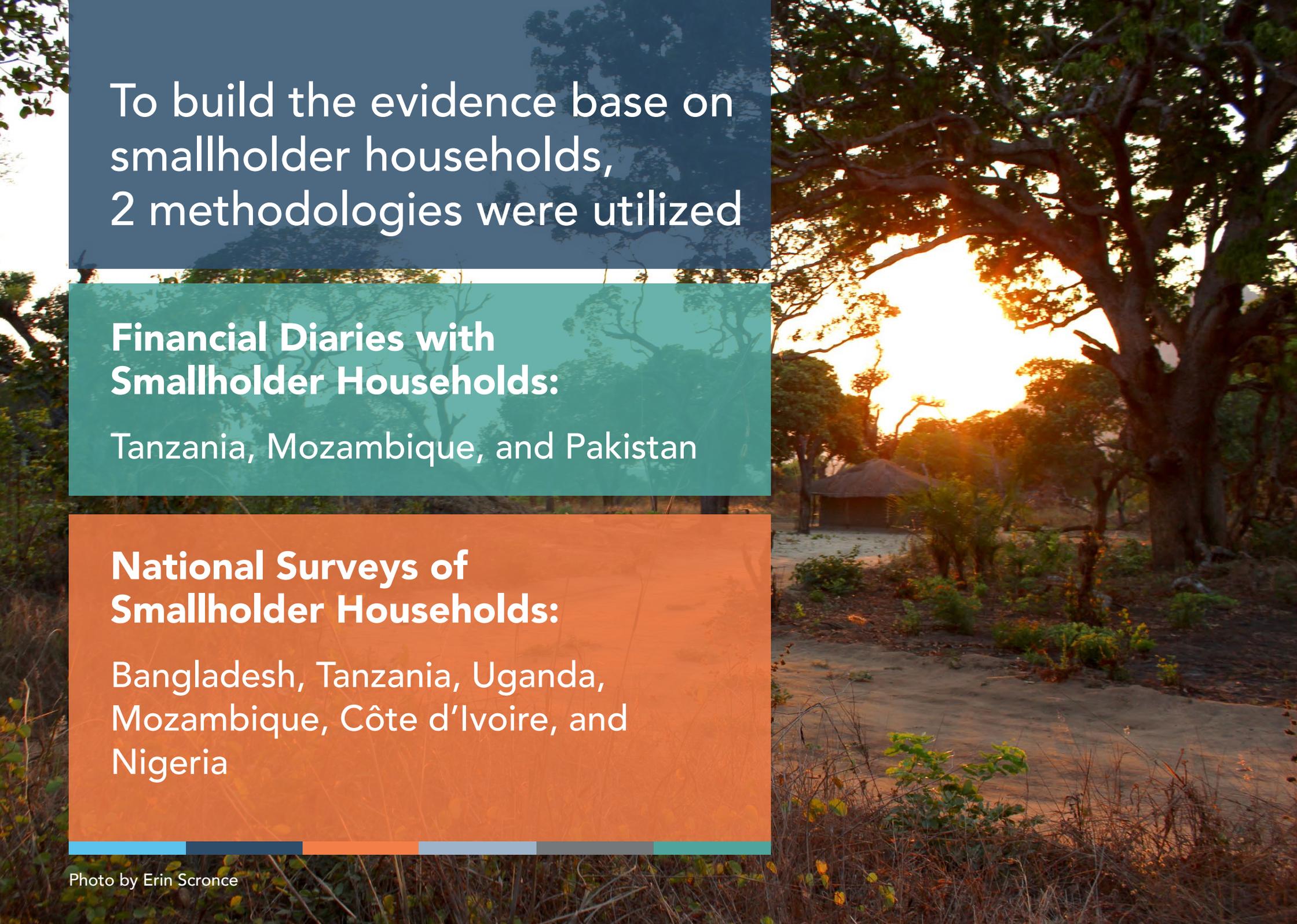
MOZAMBIQUE



TANZANIA



PAKISTAN



To build the evidence base on  
smallholder households,  
2 methodologies were utilized

**Financial Diaries with  
Smallholder Households:**

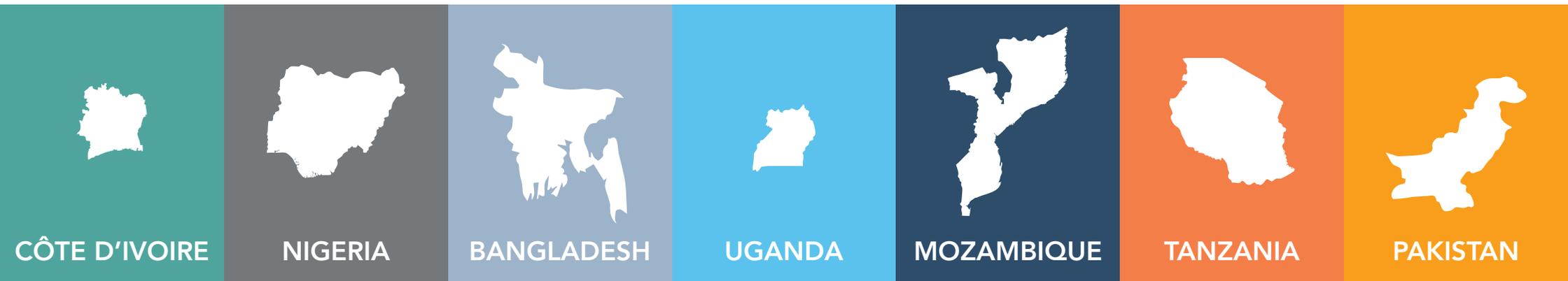
Tanzania, Mozambique, and Pakistan

**National Surveys of  
Smallholder Households:**

Bangladesh, Tanzania, Uganda,  
Mozambique, Côte d'Ivoire, and  
Nigeria

# Data sources

Six countries have data from  
National Surveys of Smallholder Households



Mozambique, Tanzania, and Pakistan utilize  
an additional data source: Financial Diaries



Agriculture has played a key role in Bangladesh, a densely populated country of more than 162 million people.<sup>1</sup> It employs 47% of the total labor force and makes a significant contribution to the national economy, with 16% of its gross domestic product (GDP) coming from agricultural production.<sup>2</sup>

Smallholder families in Bangladesh rely on income from their agricultural activities, as well as from running their own businesses, regular employment and casual labor.

A range of challenges confront smallholder households in Bangladesh and the agricultural sector itself is changing.



To explore the financial needs and behaviors of smallholder households, CGAP working with close partners BRAC, USAID, and the Bangladesh Bureau of Statistics conducted a nationally-representative survey of smallholder households in 2016.

This presentation highlights key insights from this research.

# National Survey of Smallholder Households

## Sample Design

The smallholder household survey in Bangladesh is a nationally-representative survey with a target sample size of 3,000 smallholder households.

## Sampling Frame

Working closely with the Bangladesh Bureau of Statistics, InterMedia conducted a household listing operation in all selected enumeration areas (EAs) between 14 February and 13 March 2016 to construct a reliable sampling frame. The listing operation was implemented by MRB Global, InterMedia's local field partner.

## Questionnaire Implementation

To capture the complexity of smallholder households, the questionnaire consisted of three parts, with certain questions asked of all relevant individuals in the household, not just one household member.

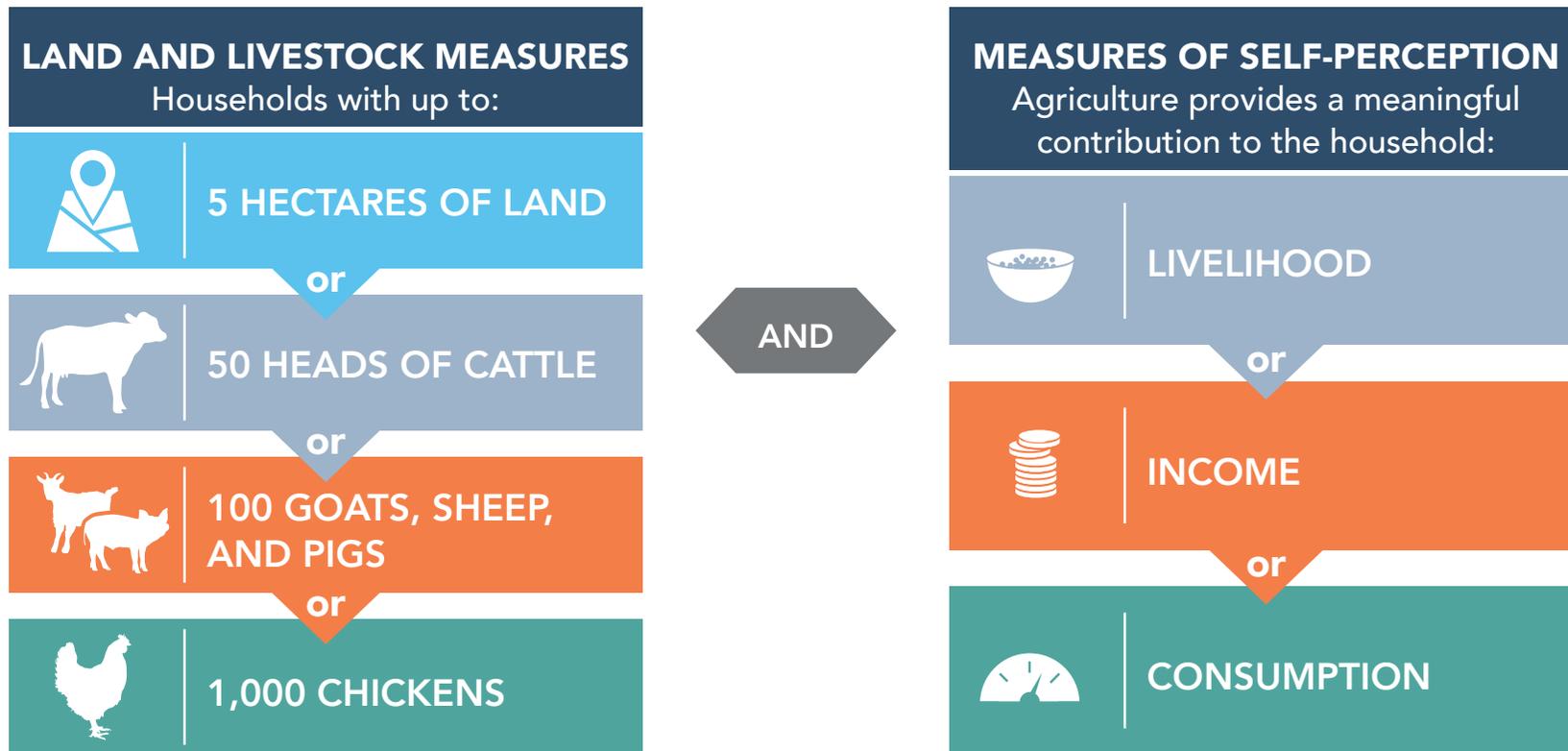
## Data Collection

The questionnaire was translated into Bengali and then pretested and validated to ensure the integrity of the questions and that they were in line with social and cultural customs. Data collection took place from 17 March to 21 April 2016, using computer-assisted data collection tools that regularly yielded data for analysis and quality control to provide timely feedback to field staff. The survey was implemented by MRB Bangladesh, InterMedia's local field partner.

# National Survey of Smallholder Households

*Identification of relevant smallholder households to sample*

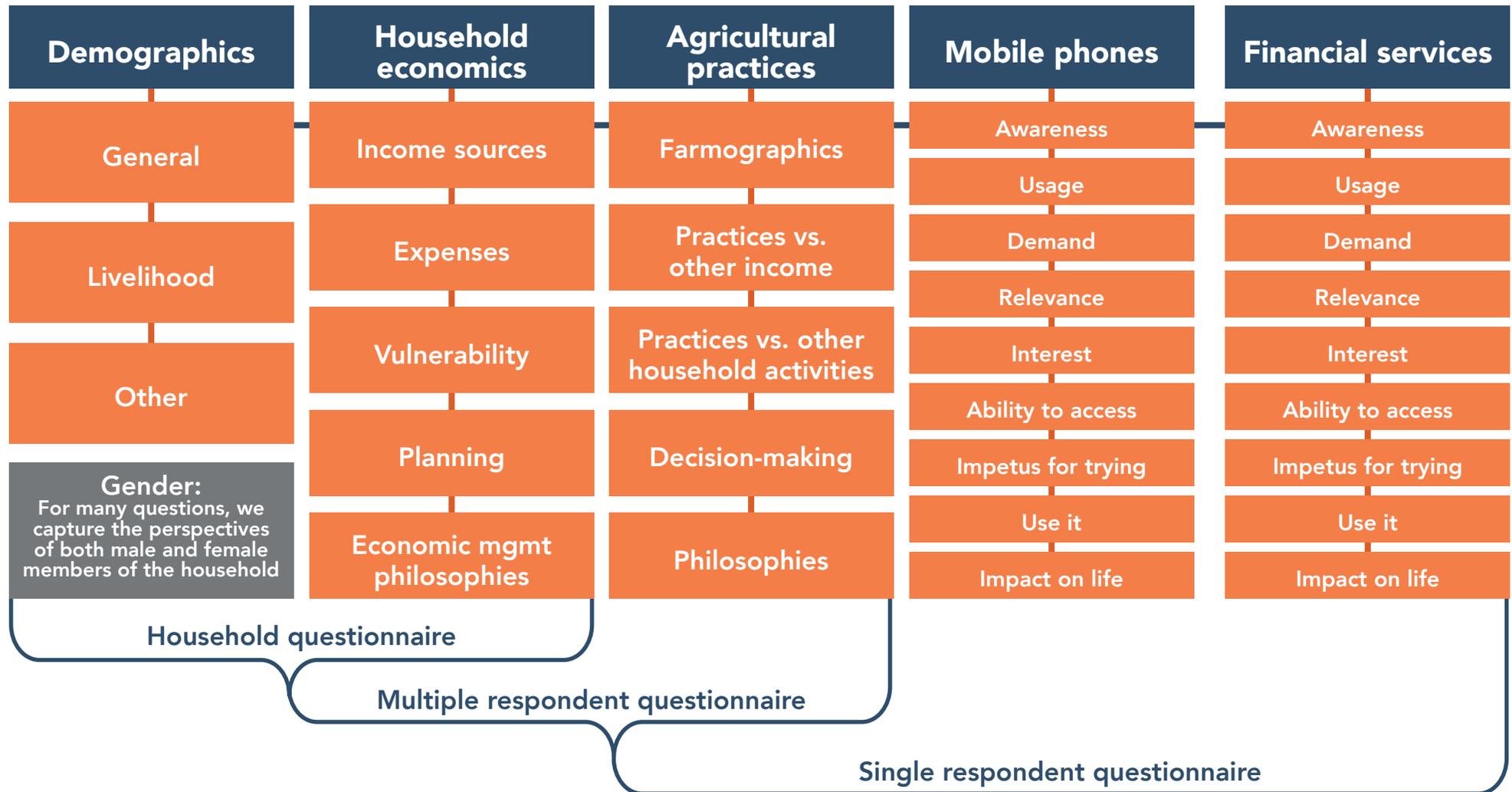
## Listing criteria for the national surveys of smallholder households



CGAP conducted national surveys of smallholder households in Bangladesh, Uganda, Mozambique, Côte d'Ivoire, Nigeria, and Tanzania. Care was taken to use an approach in the listing exercise that would encompass the wide variety of smallholder families across all 6 countries.

# National Survey of Smallholder Households

Three questionnaires to capture household information and perspectives



# Financial diaries with smallholder families

## Methodology

The Diaries methodology combines in-depth quantitative and qualitative research. Research teams met participating families about every two weeks to collect granular data on their cash flows in and out of the household, financial tools, assets, major life events, and attitudes toward agriculture and financial services.

## Sample Design

The Financial Diaries, conducted between June 2014 and June 2015, captured the financial and in-kind transactions of about 270 total households in impoverished northern Mozambique, the fertile farmlands of western Tanzania, and the Punjab province, the breadbasket of Pakistan.

# Financial diaries with smallholder families

*Sample locations and key characteristics*



Sample households:  
93

Monthly p.c. net income:  
\$5.50

Major crops and livestock:  
Cassava, beans, peanuts,  
poultry



Sample households:  
86

Monthly p.c. net income:  
\$10

Major crops and livestock:  
Maize, potatoes, rice,  
beans, poultry



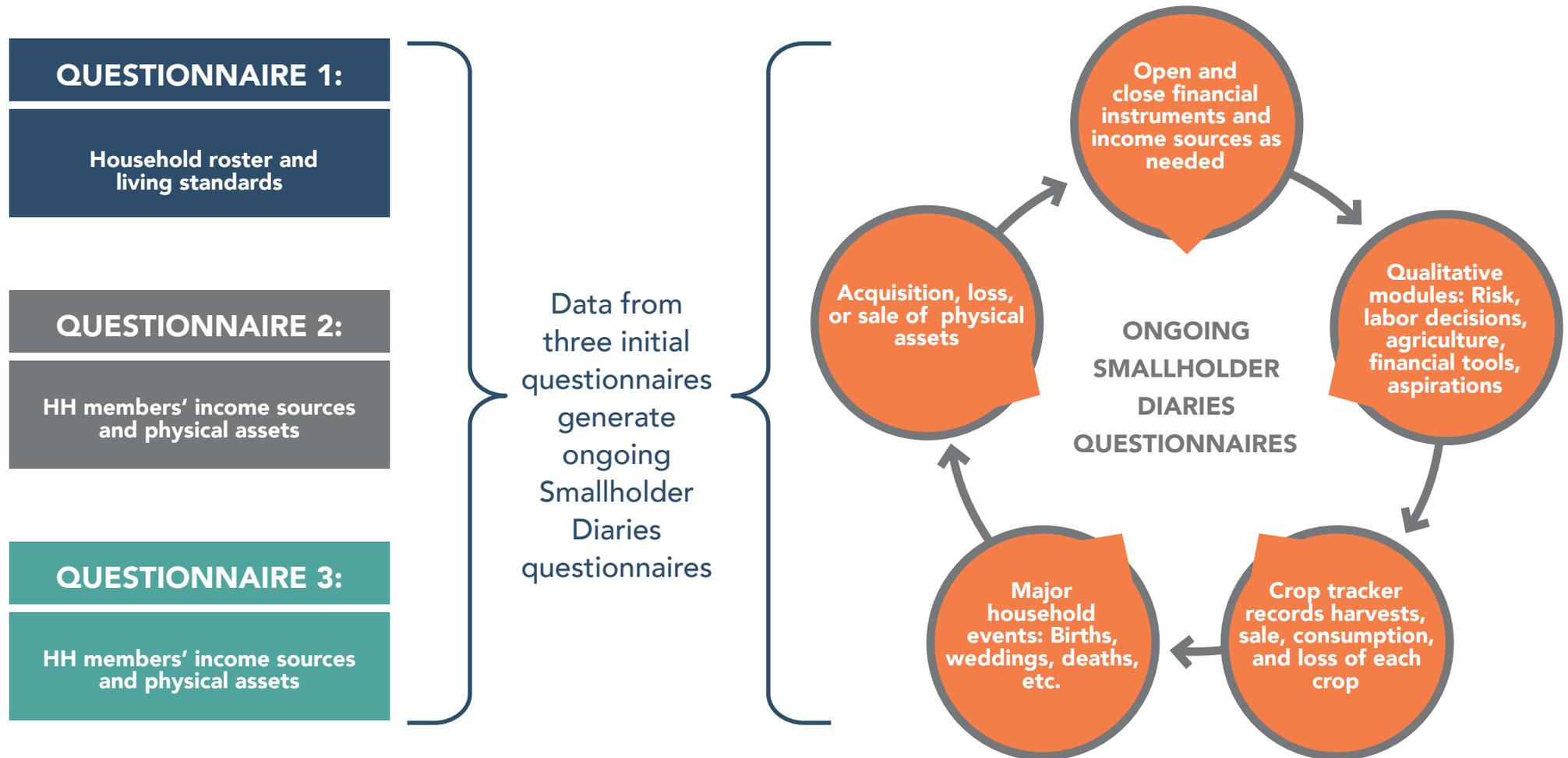
Sample households:  
94

Monthly p.c. net income:  
\$25.99

Major crops and livestock:  
Wheat, rice, cotton,  
buffalo, goats

# Financial diaries with smallholder families

Three initial questionnaires inform ongoing biweekly questionnaire





## WHY IT MATTERS

14

# Agriculture plays a key role in Bangladesh...

Agriculture in Bangladesh accounts for\*:

**16%**  
of the GDP<sup>1</sup>



**47%**  
of the labor force<sup>1</sup>

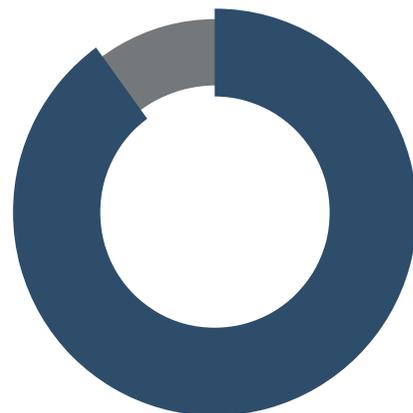


Agriculture has also been leveraged to reduce poverty:

Growth in farm income accounted for nearly

**50%**

of the reduction in poverty in Bangladesh between 2000 and 2010.<sup>2</sup>



Its influence was even sharper later in that decade: Farm income growth drove over

**90%**

of poverty reduction between 2005 and 2010.<sup>2</sup>

\*Source: 1) CIA (Central Intelligence Agency). 2016. The World Factbook—Bangladesh. Washington, D.C.: CIA. 2) Gautam, Madhur et al. 2016. "Dynamics of Rural Growth in Bangladesh: Sustaining Poverty Reduction." Washington, D.C.: World Bank, 17 May. <http://www.worldbank.org/en/news/feature/2016/05/17/bangladeshs-agriculture-a-poverty-reducer-in-need-of-modernization> and <http://documents.worldbank.org/curated/en/951091468198235153/Dynamics-of-rural-growth-in-Bangladesh-sustaining-poverty-reduction>.

# ...but the sector is changing, and families are struggling.

Agriculture has been an important industry and lever for poverty reduction in Bangladesh.

While it remains a key sector, agriculture in Bangladesh is changing, impacted by climate change, rural-to-urban migration, and growing demand for labor in the ready-made garment industry and overseas.

And agricultural producers struggle to meet their needs.

# 77%

of smallholder households live in poverty.

And over one-quarter,

# 27%

of smallholder households live in extreme poverty, on **less than \$1.25 per day.**

# Key statistics from the National Survey of Smallholder Households in Bangladesh

**77%**

of smallholder households live in poverty, below \$2.50 per day

**95%**

of smallholders sell their crops and livestock without a contract

**80%**

of smallholders have a voter's card for identification

**90%**

of smallholder households own or rent less than one hectare of land

**62%**

of smallholders own a basic phone without internet capability

**73%**

of smallholders see weather-related shocks as the greatest risk to their agricultural activities

**99%**

of payments for the sale of crops are in cash

**53%**

of smallholders have ever entered a bank, and **22%** have a bank account in their name

**87%**

of smallholders intend to keep working in agriculture

**63%**

of smallholders store crops after harvest, **78%** in the home

**80%**

of smallholders have heard of mobile money, but only **19%** have a mobile money account

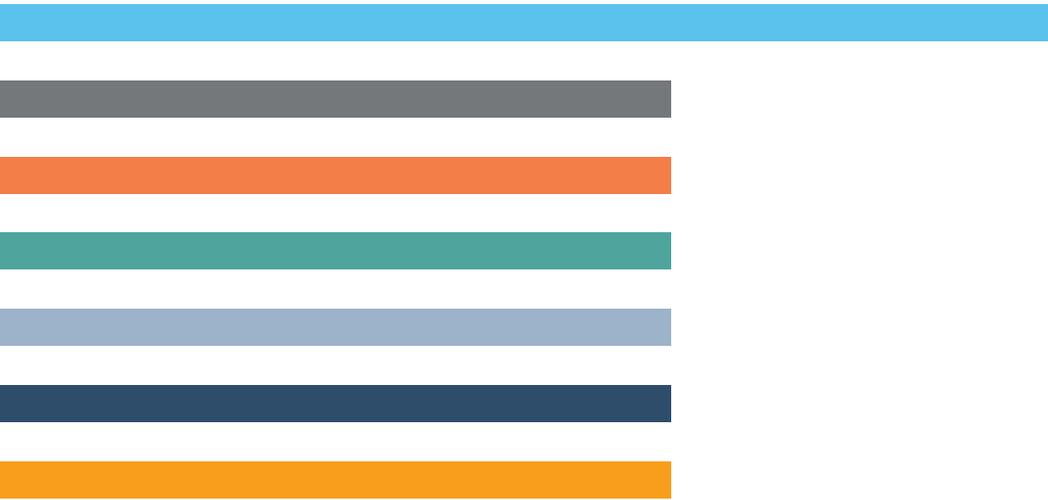


## INSIGHTS

18

What does the data tell us about advancing financial inclusion among smallholder households?

# 7 insights

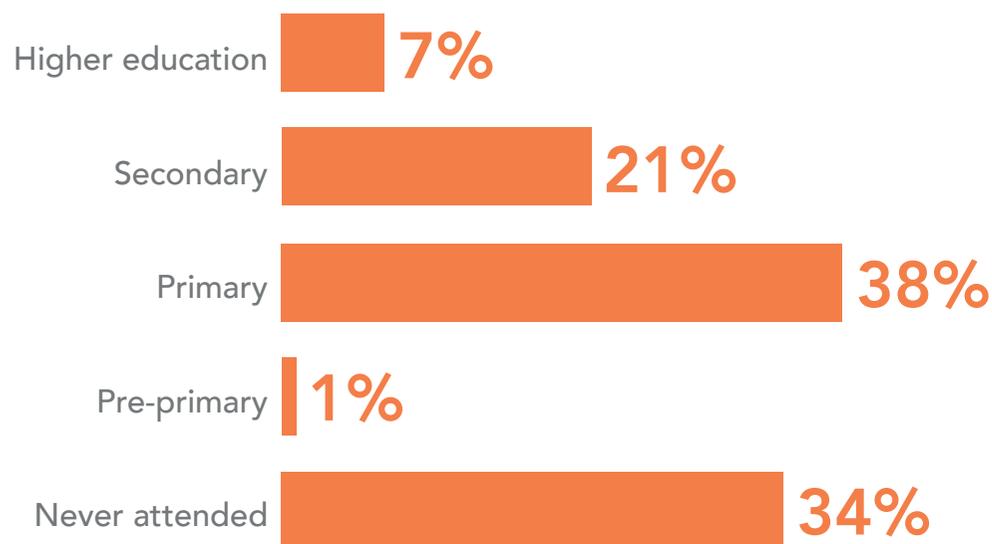


# 1 Demographics

# Most smallholders in Bangladesh have limited education and are over 40.

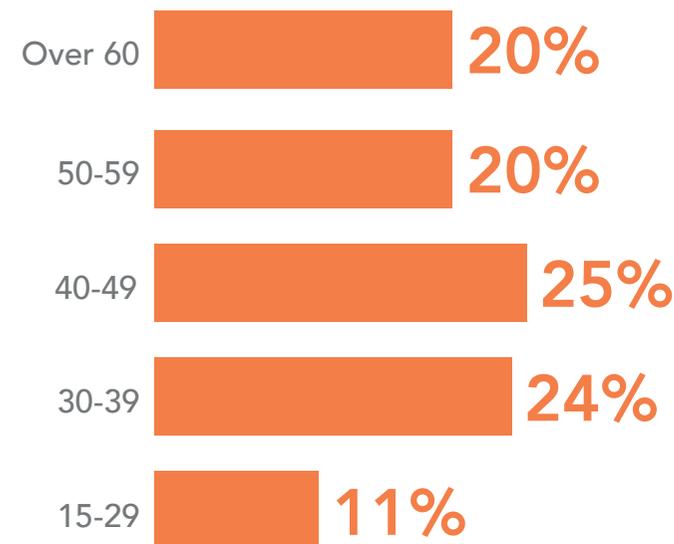
## Highest education attended by head of household

Sample: Smallholder households, n=3,154.



## Age of head of household

Sample: Smallholder households, n=3,154.

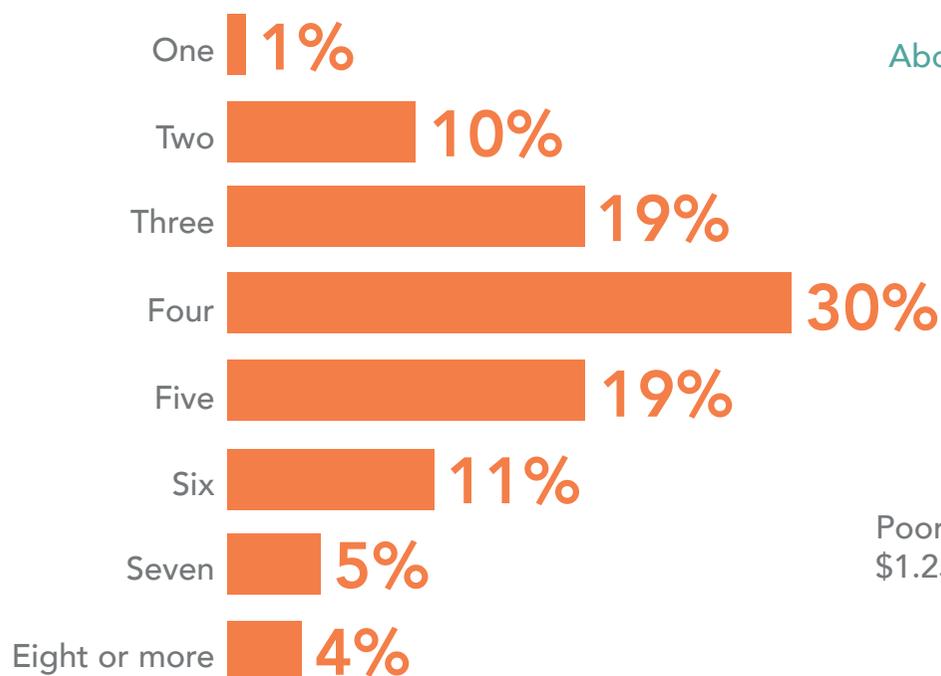


Among smallholder families in Bangladesh, 40% of the household heads are at least 50 years old. About one-third (34%) never attended school and another third (38%) completed primary school.

# The size of smallholder households varies, and most live in poverty.

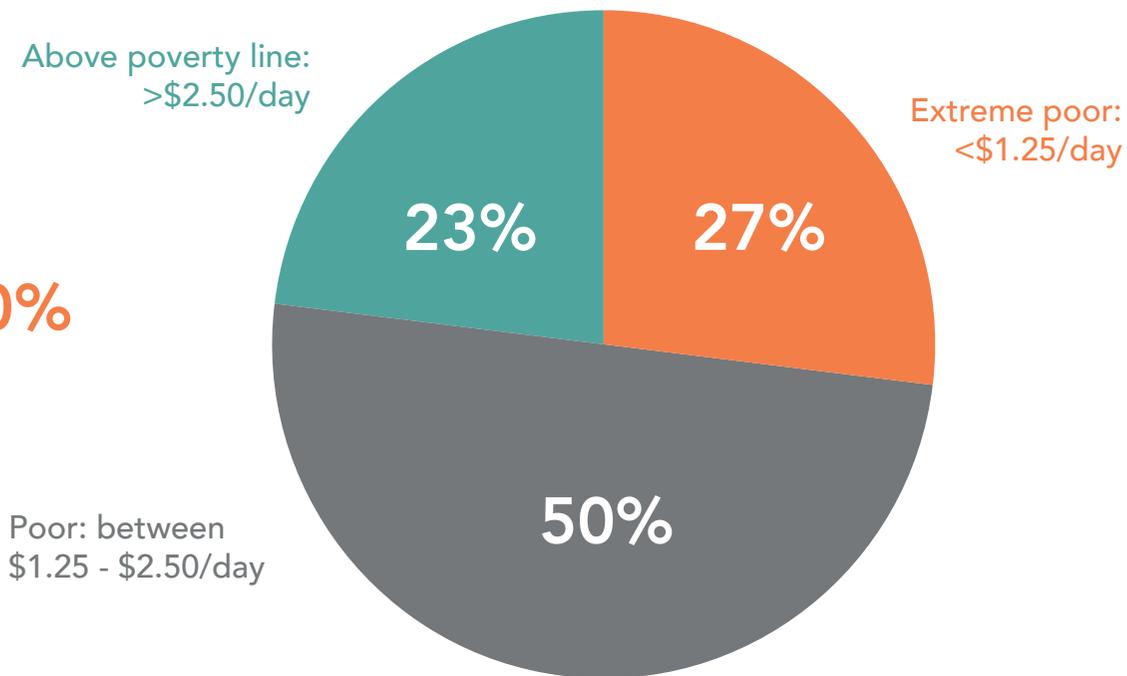
## Number of people in household

Sample: Smallholder households, n=3,154.



## Extreme poverty status of household

Sample: Smallholder households, n=3,154.



Almost 40% of Bangladeshi smallholder households have five or more people in the household. Less than a quarter (23%) of smallholder households live above the poverty line, and another quarter (27%) live in extreme poverty.

# Most smallholder households can meet only their basic needs.

## Household's current financial situation (self-assessed)

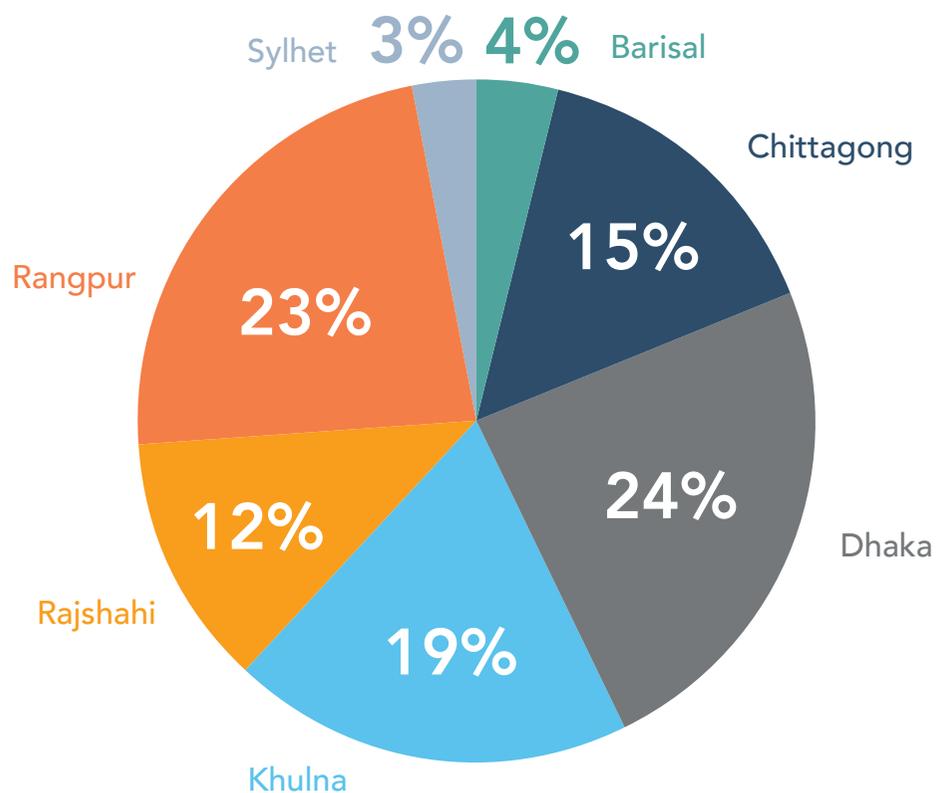
Sample: Smallholder households, n=3,154.



# Men typically manage smallholder households...

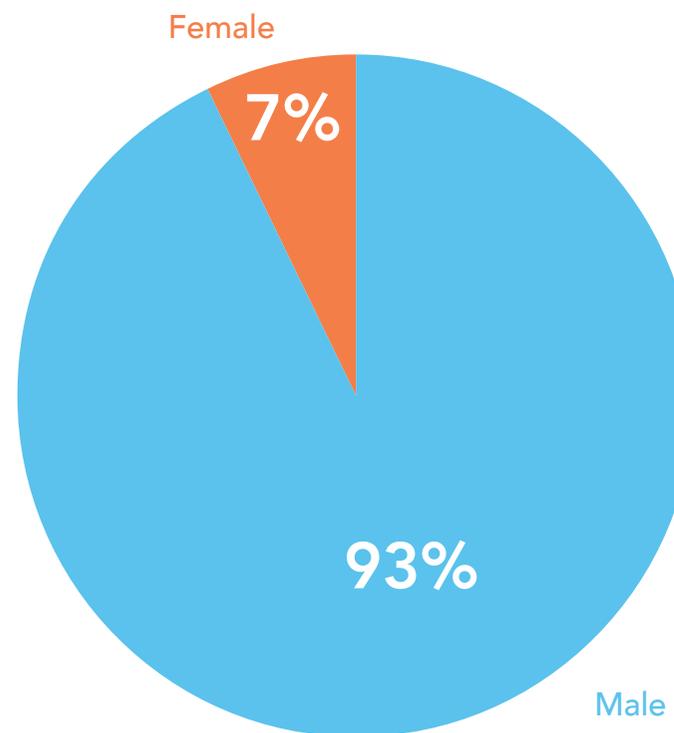
## Division

Sample: Smallholder households, n=3,154.



## Gender of head of household

Sample: Smallholder households, n=3,154.

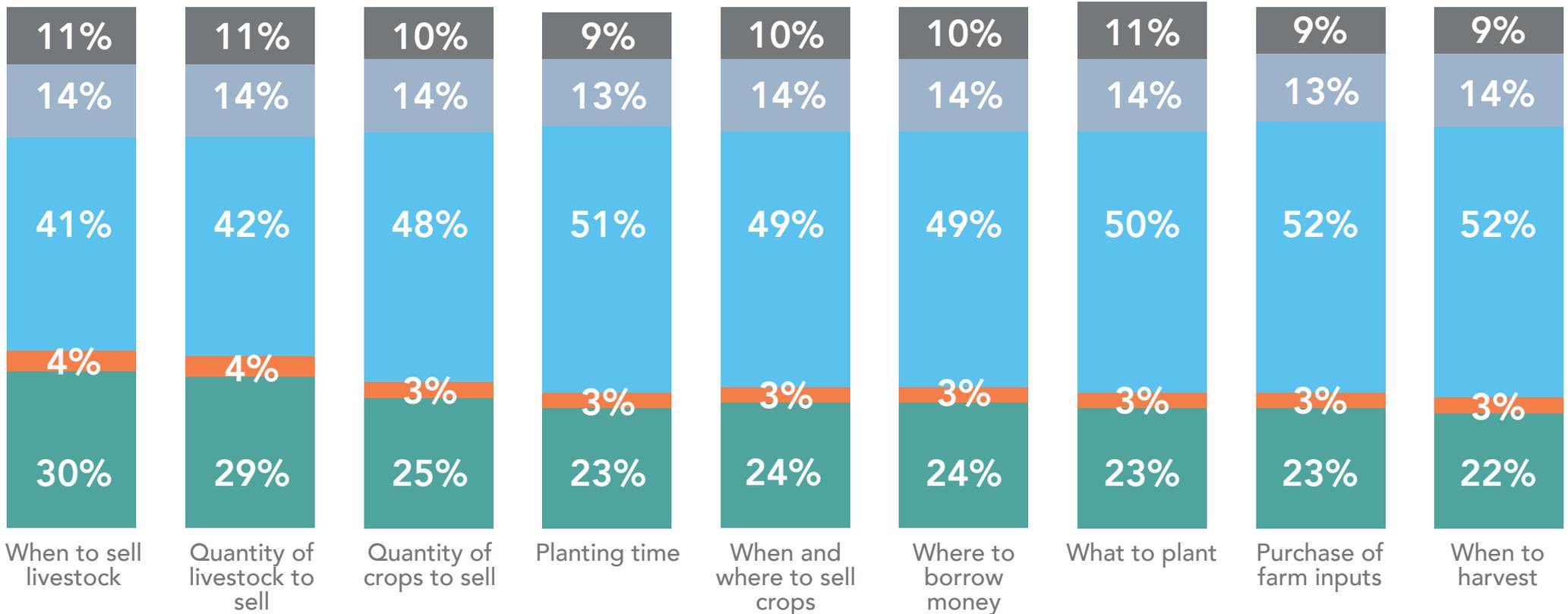


The largest concentrations of smallholder households are in the Dhaka and Rangpur divisions.

# ...and women have a limited role in decision-making.

## Agricultural decision-making

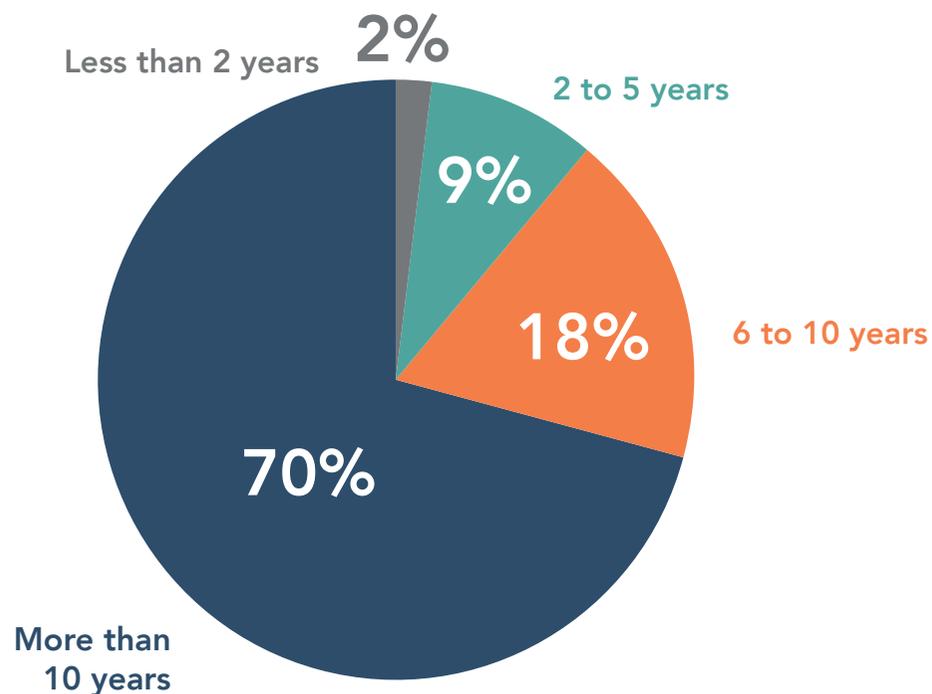
Sample: Smallholder households, n=3,154.



# Smallholders have been farming for a long time.

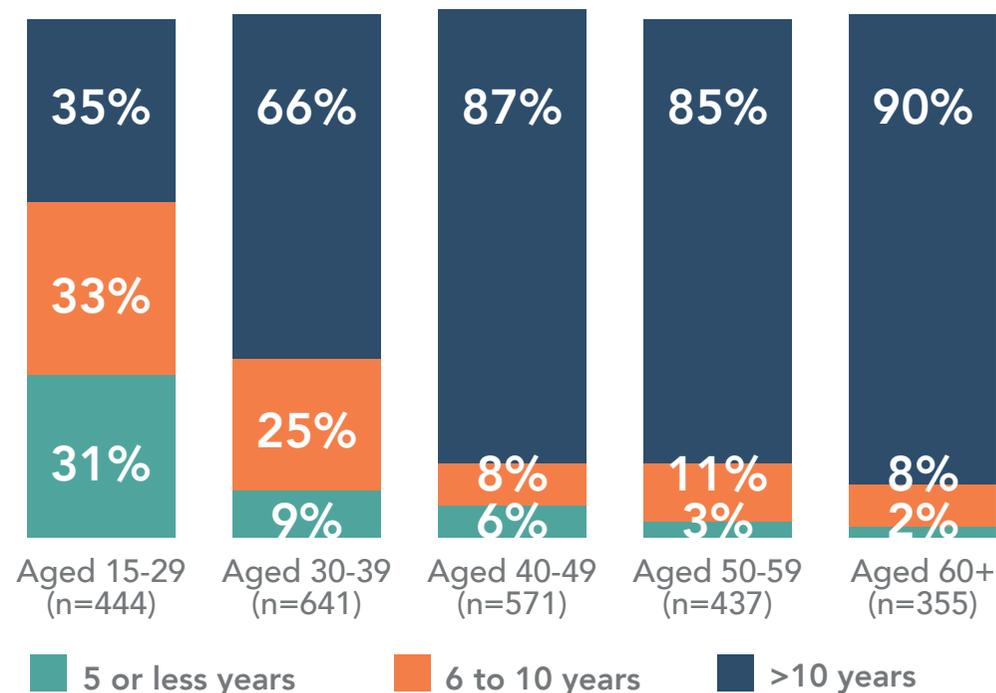
## How many years have you been farming?

Sample: Smallholder farmers who participate in agricultural activities, n=4,742.



## How many years have you been farming? By age of respondent

Sample: Smallholder farmers, n=2,638. (Smallholder farmers who participate in household's agricultural activities and in each age category)



Most smallholders (70%) have been farming for more than 10 years. There are few new entrants to the sector, and even younger smallholders appear to have spent their working life in farming.

# What does the data teach us?

## Most smallholder households are struggling to meet their needs.

- The heads of smallholder households typically are men, and most are over 40 years old. Their education has been limited and households range in size, most with at least four people.
- Smallholders households typically face high rates of poverty. Almost half have money only for food and clothes, and one quarter of smallholder families live in extreme poverty.
- Smallholders of course have significant experience in agriculture, and have been farming for a long time.



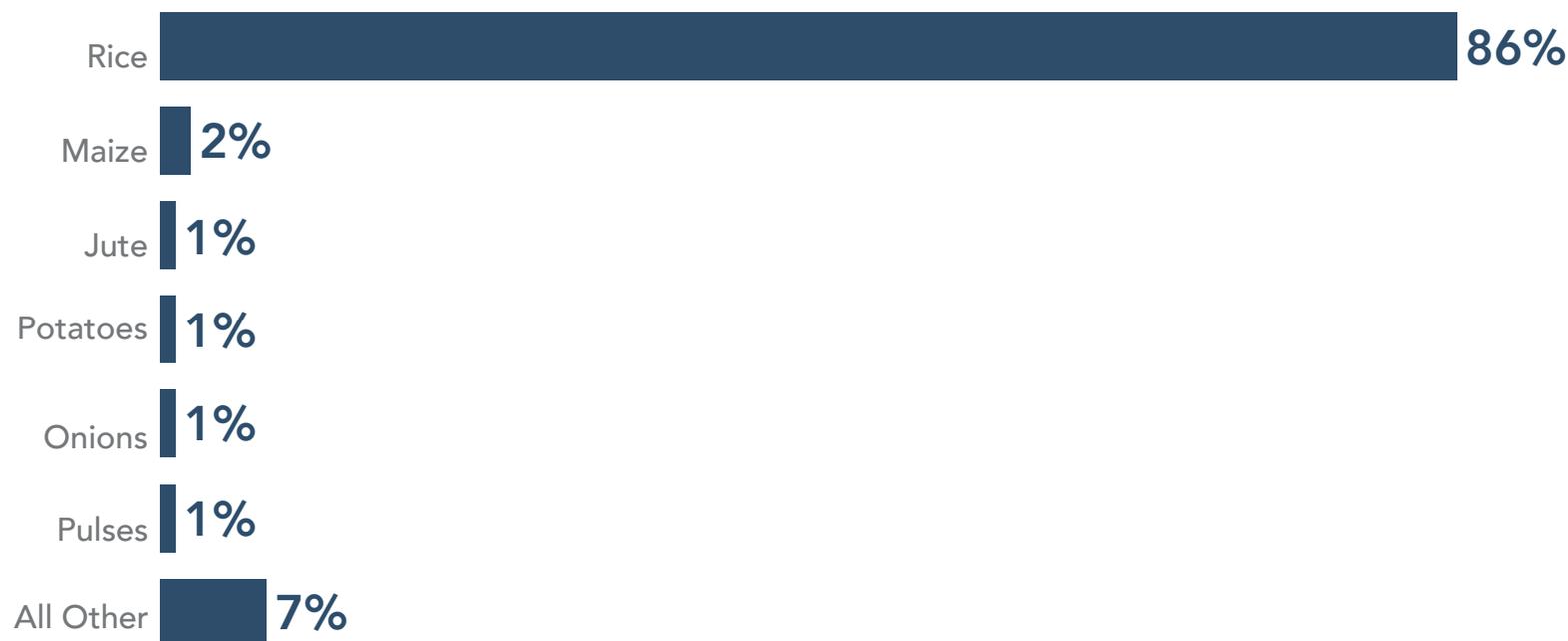
# 2

## Agriculture

# Most smallholder households are growing rice on small plots.

## Which of the following crops that you grow is the most important to you and your family?

Sample: Smallholder farmers participating in agriculture who grow at least one crop, n=3,866.

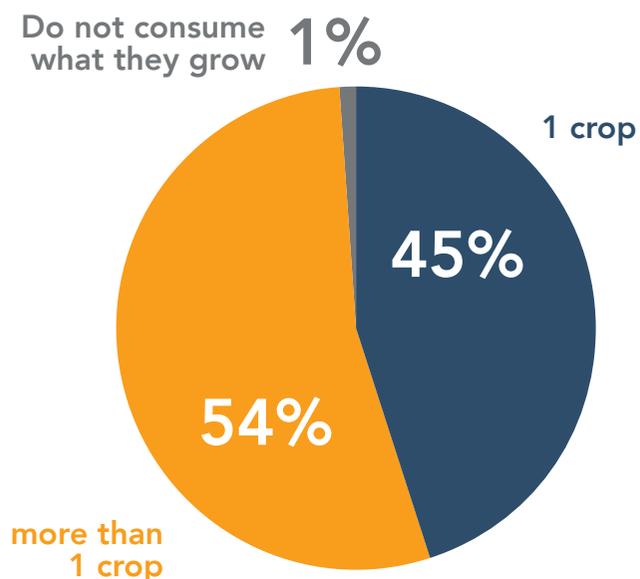


Smallholders in Bangladesh rely heavily on one crop: rice. It is clearly their most important crop, both in terms of what is grown and what is sold. Nine in ten smallholders own or rent less than one hectare of land. Nearly one in ten own between one and two hectares.

# Smallholder families largely consume and sell what they grow

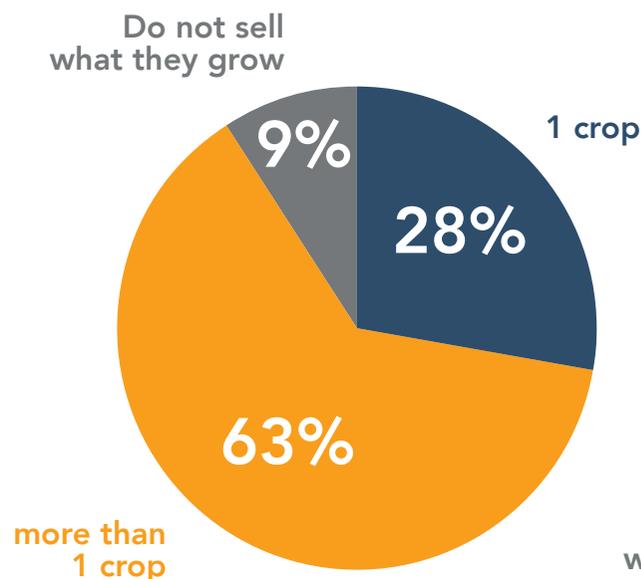
## Number of crops grown for consumption

Sample: Smallholder farmers who grow crops, n=3,866.



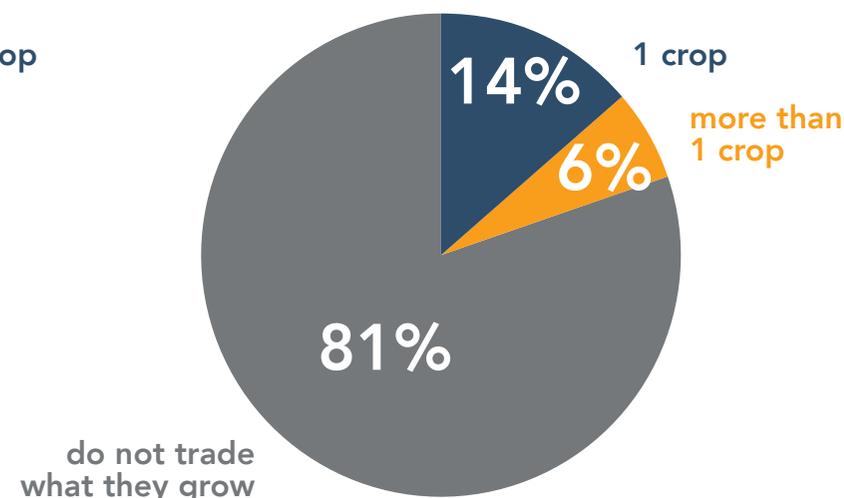
## Number of crops grown for selling

Sample: Smallholder farmers who grow crops, n=3,866.



## Number of crops grown for trading

Sample: Smallholder farmers who grow crops, n=3,866.

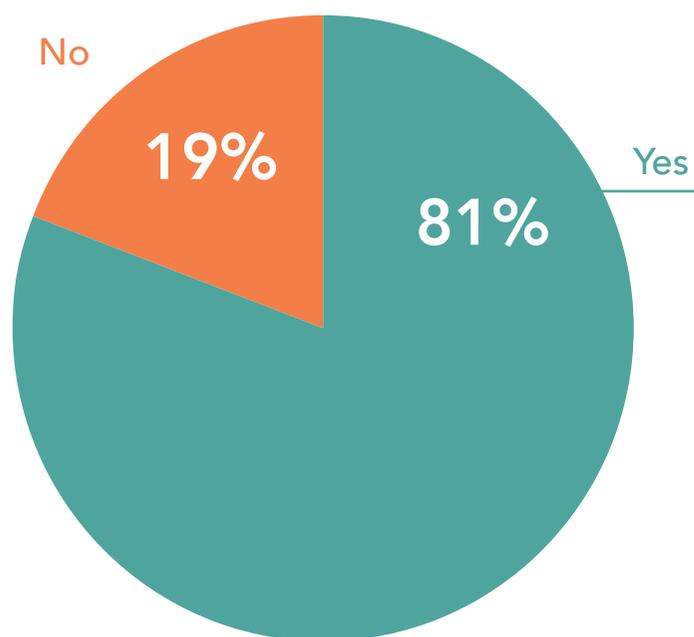


Smallholder farms are roughly divided between those with moderate crop diversity and those that grow only one crop per season. 12% of smallholders grow three crops and another 12% grow four crops for either selling or consumption.

# Most smallholders also raise livestock to consume and sell.

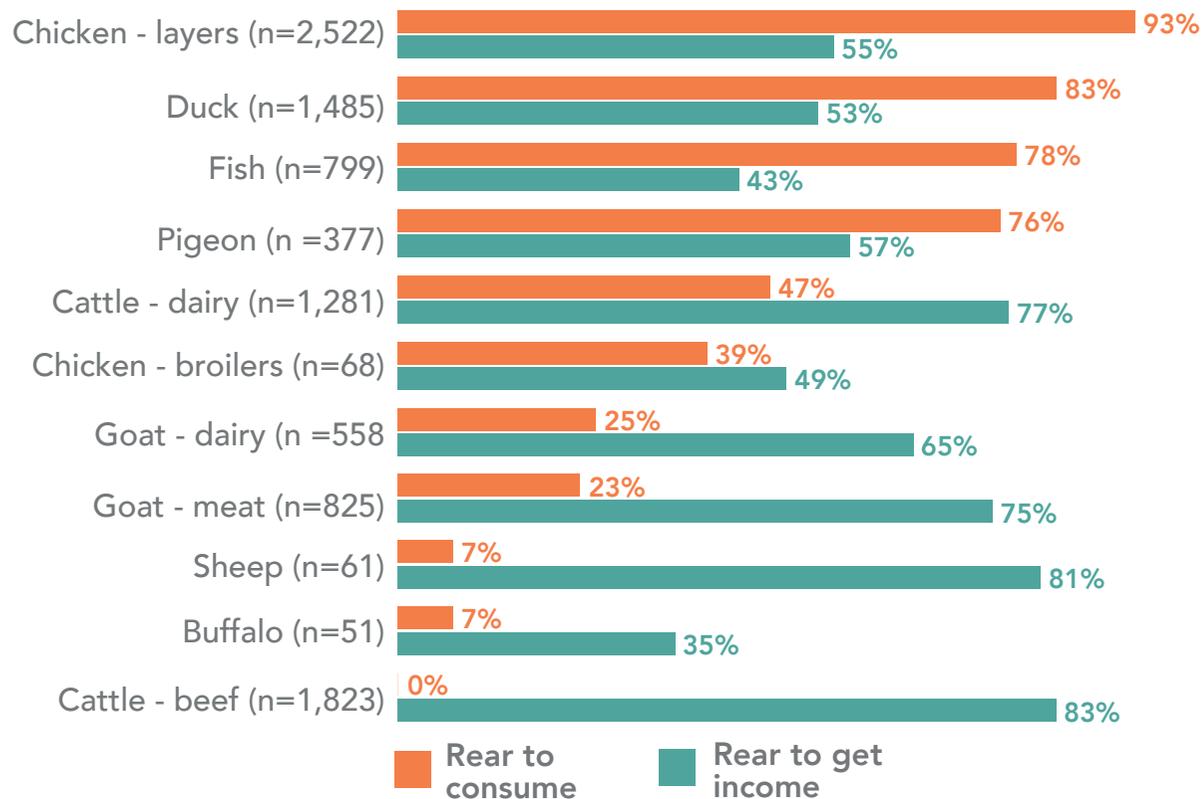
## Do you have any livestock, herds, other farm animals, or poultry?

Sample: Smallholder farmers who participate in agricultural activities, n=4,742.



## Which of the following do you rear and get income/consume?

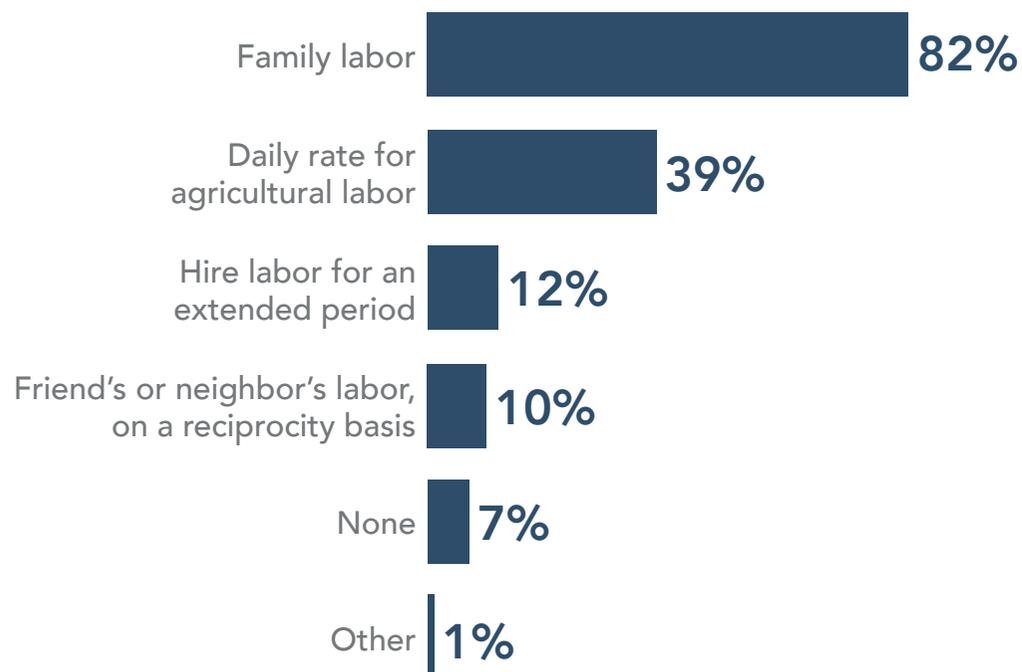
Sample: Smallholder farmers who have any livestock, herds, other farm animals or poultry. Multiple responses allowed.



# Family labor powers the farm.

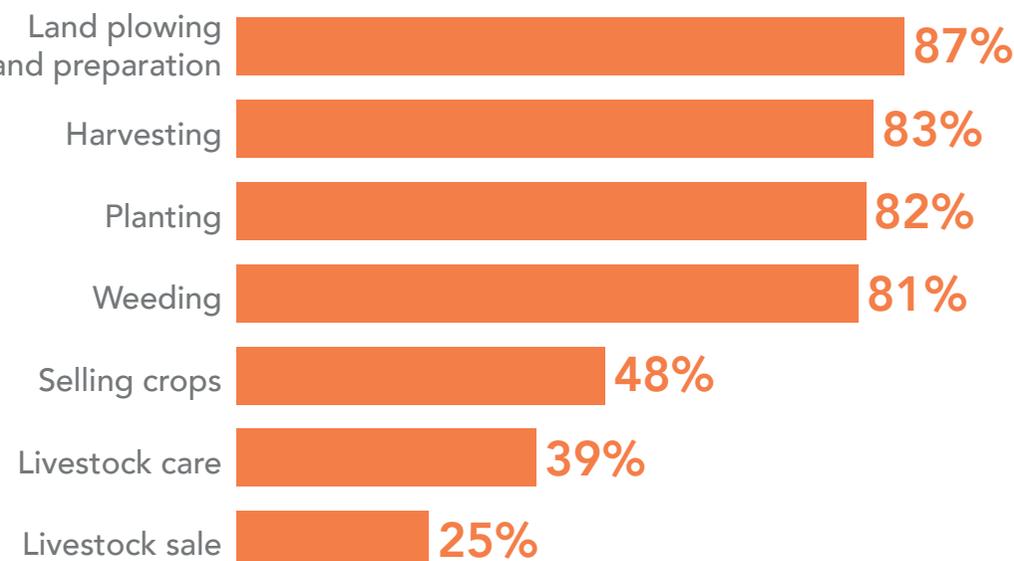
## For managing the land and livestock, what types of labor do you use?

Sample: Smallholder farmers who participate in household's agricultural activities, n=3,951. Multiple responses allowed.



## What do you use the labor for?

Sample: Smallholder farmers who use labor for managing land and livestock n=3,724. Multiple responses allowed.

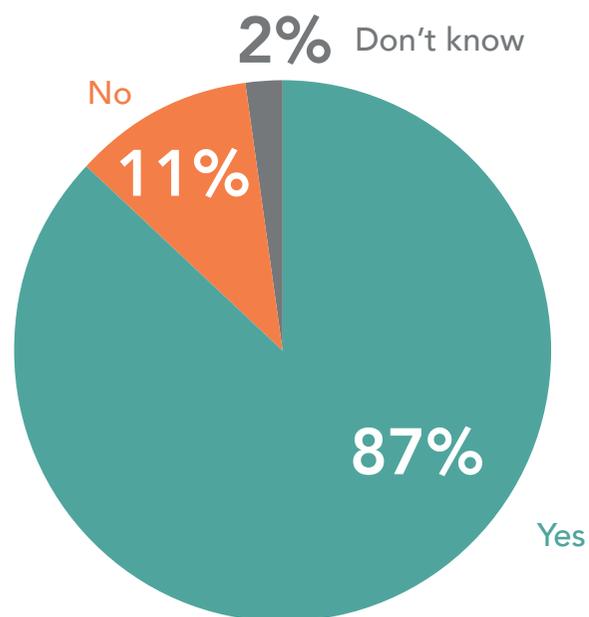


Family labor plays an essential role in smallholder agriculture. Many smallholder households also hire wage labor, either sporadically or regularly.

# Smallholders are committed to agriculture.

## Do you intend to keep working in agriculture?

Sample: Smallholder farmers who participate in household's agricultural activities, n=2,448.



## Do you intend to keep working in agriculture?

**By household's current financial situation (self-assessed)**

Sample: Smallholder farmers who participate in household's agricultural activities.

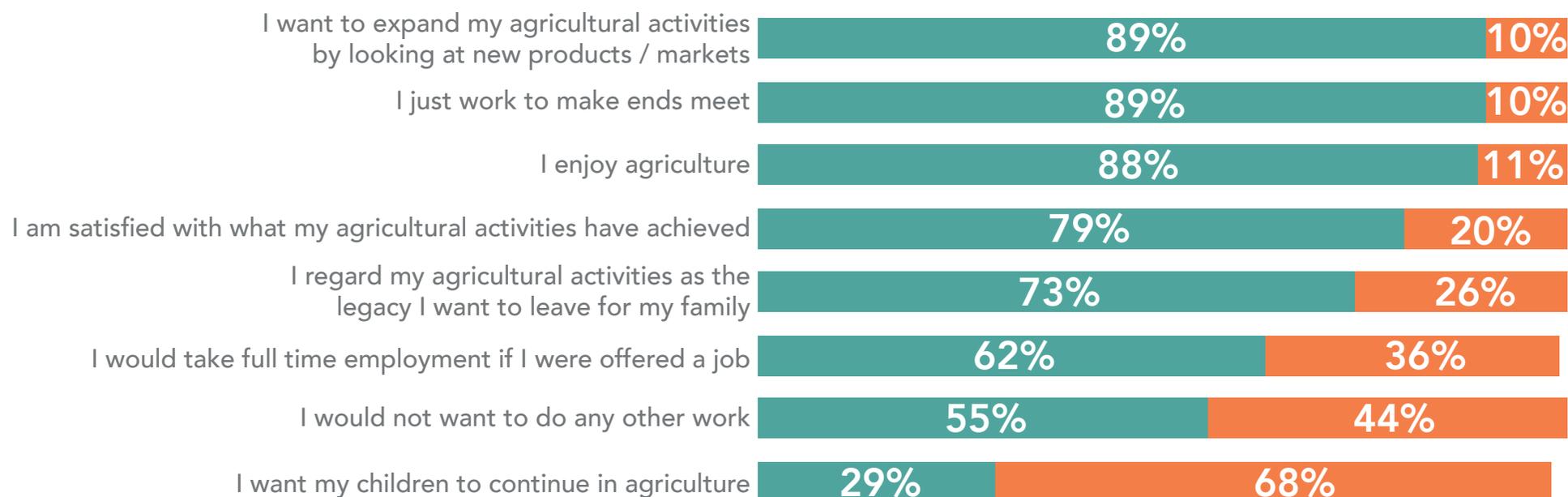


Most smallholders intend to remain in agriculture. One in ten, however, do express an eventual plan to exit.

# Smallholders enjoy agriculture and want to expand these activities.

## Do you agree or disagree with the following statements? ■ Agree ■ Disagree

Sample: Smallholder farmers who participate in household's agricultural activities, n=2,488.



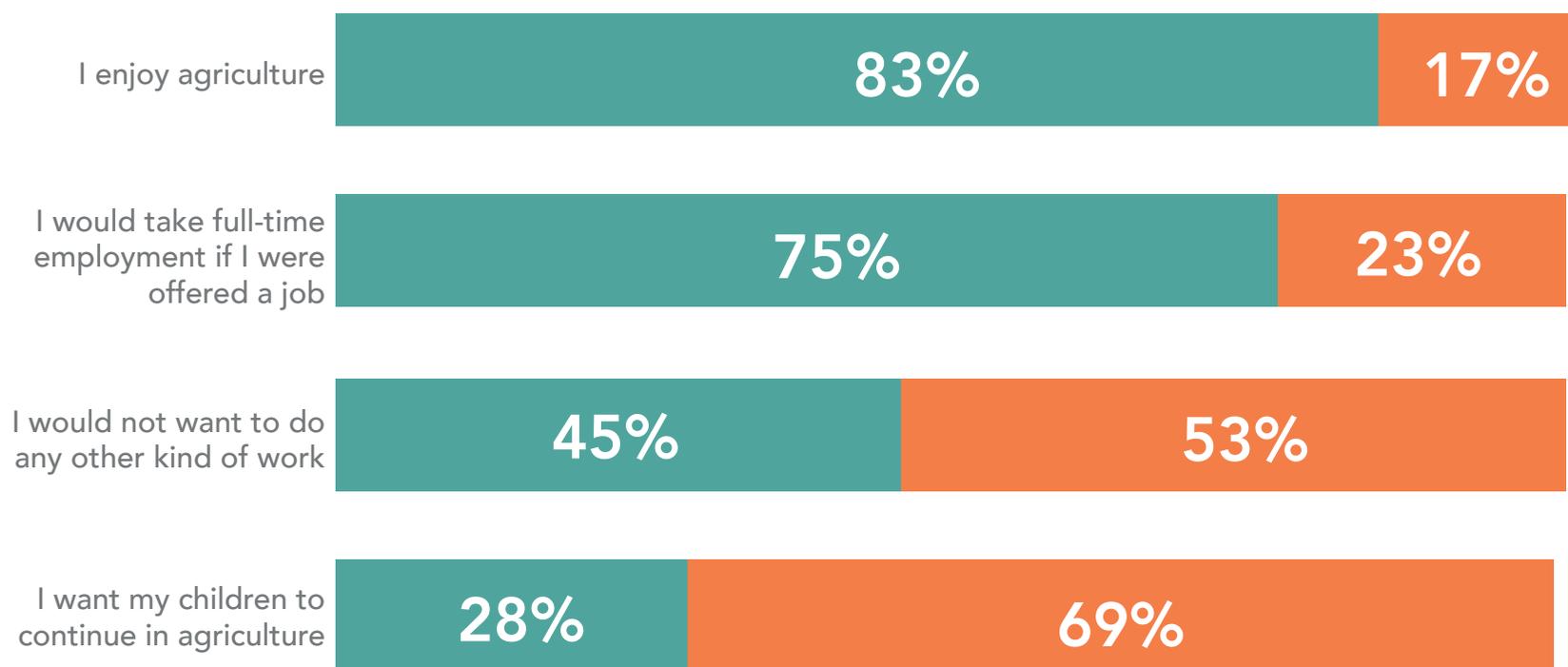
Smallholder farmers enjoy working in agriculture and are satisfied with their agricultural activities. They express a strong desire to expand their agricultural activities, though they may not want their children to continue in agriculture.

# Younger smallholders show more interest in other sectors.

## Do you agree or disagree with the following statements?

■ Agree ■ Disagree

Smallholder farmers aged 15-29 who participate in household's agricultural activities, n=637.



Younger smallholders are more willing to leave agriculture than their older counterparts. Three-quarters would be willing to leave agriculture for a full-time position if given the opportunity.

# What does the data teach us?

## Smallholders in Bangladesh are committed to agriculture and want to expand their agricultural activities.

- Most smallholders own or rent less than one hectare of land and rice is their most important crop. Most also raise livestock, both for their own consumption and sale.
- Agriculture offers a livelihood that smallholders enjoy. They see their future in farming and are looking for opportunities with new products and markets.
- At the same time, smallholders recognize the challenges of agriculture and may be open to work in other sectors too. Younger smallholders also enjoy working in agriculture, but are more willing to leave farming than their older counterparts.



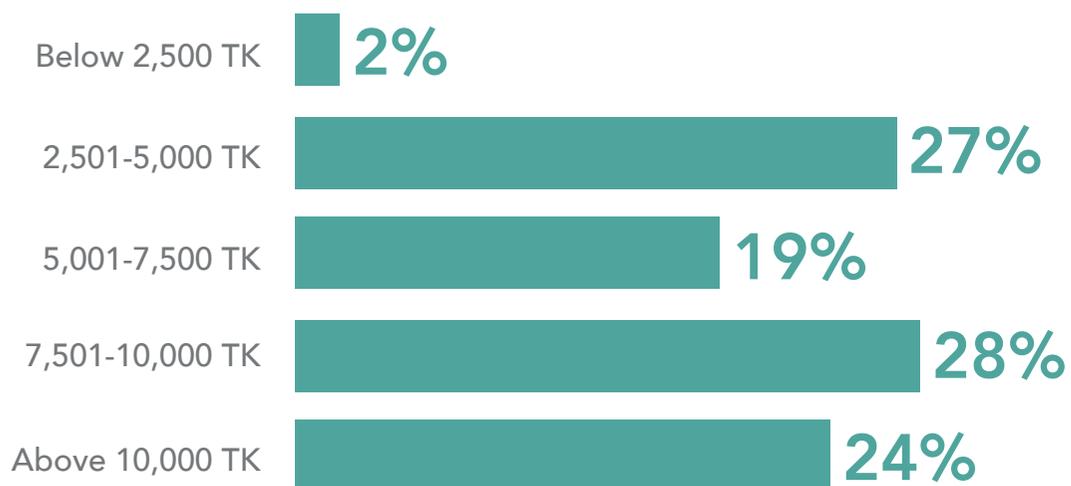
**3**

**Income and  
expenses**

# Income needs vary, but most smallholder households report a surplus.

## What is the minimum amount your household needs to survive per month (for personal expenses)?

Sample: Smallholder households who gave a minimum amount for households' survival n=3,148. Quintile.

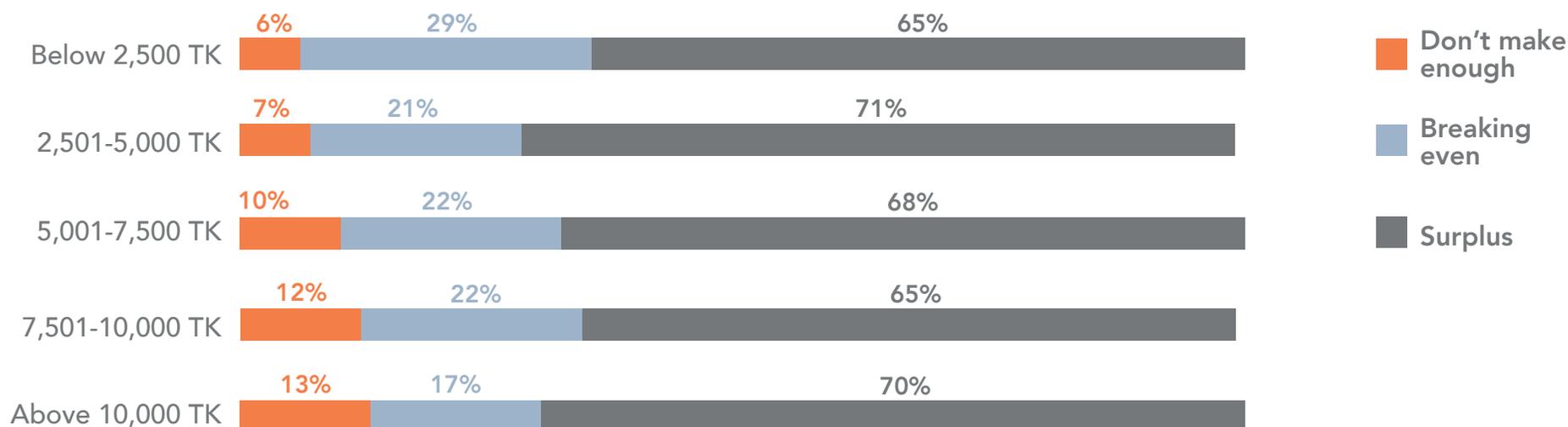


Almost one-third of smallholder households need less than 5,000 TK (\$66) a month to cover expenses, with most requiring 5,000-10,000 TK (\$127). Nearly a quarter of smallholder families need more than 10,000 TK per month.

# Income needs vary, but most smallholder households report a surplus.

## What is the minimum amount your household needs to survive per month (for personal expenses) and is your income sufficient?

Sample: Smallholder households, n=3,137.

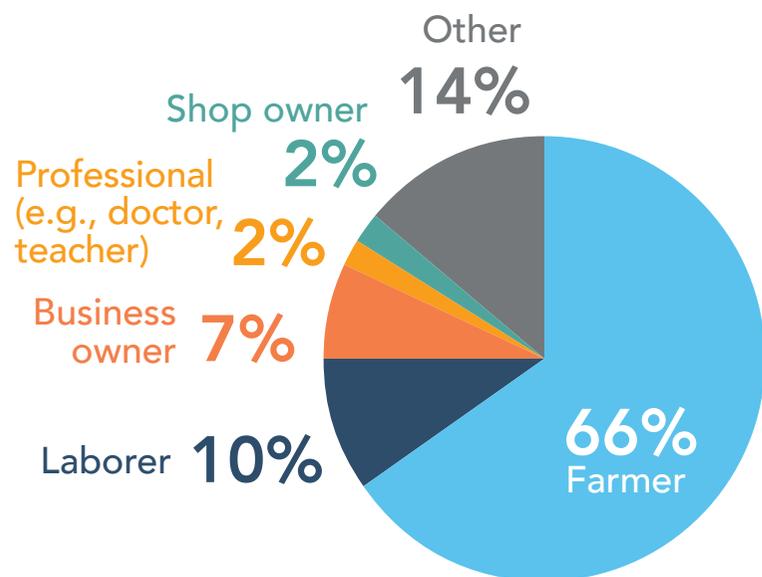


Most smallholders in Bangladesh generate enough income to match or even exceed their expense requirements. Around two-thirds of smallholder households report a surplus at the end of the month. Households with monthly surpluses are prime candidates for a range of financial mechanisms, particularly those related to setting money aside.

# Smallholders generate income from many sources...

## What is your primary job?

Sample: Smallholder farmers, n=5,214.



## Do you generate income from any of the following sources?

Sample: Smallholder farmers, n= 5,214. Multiple responses allowed.

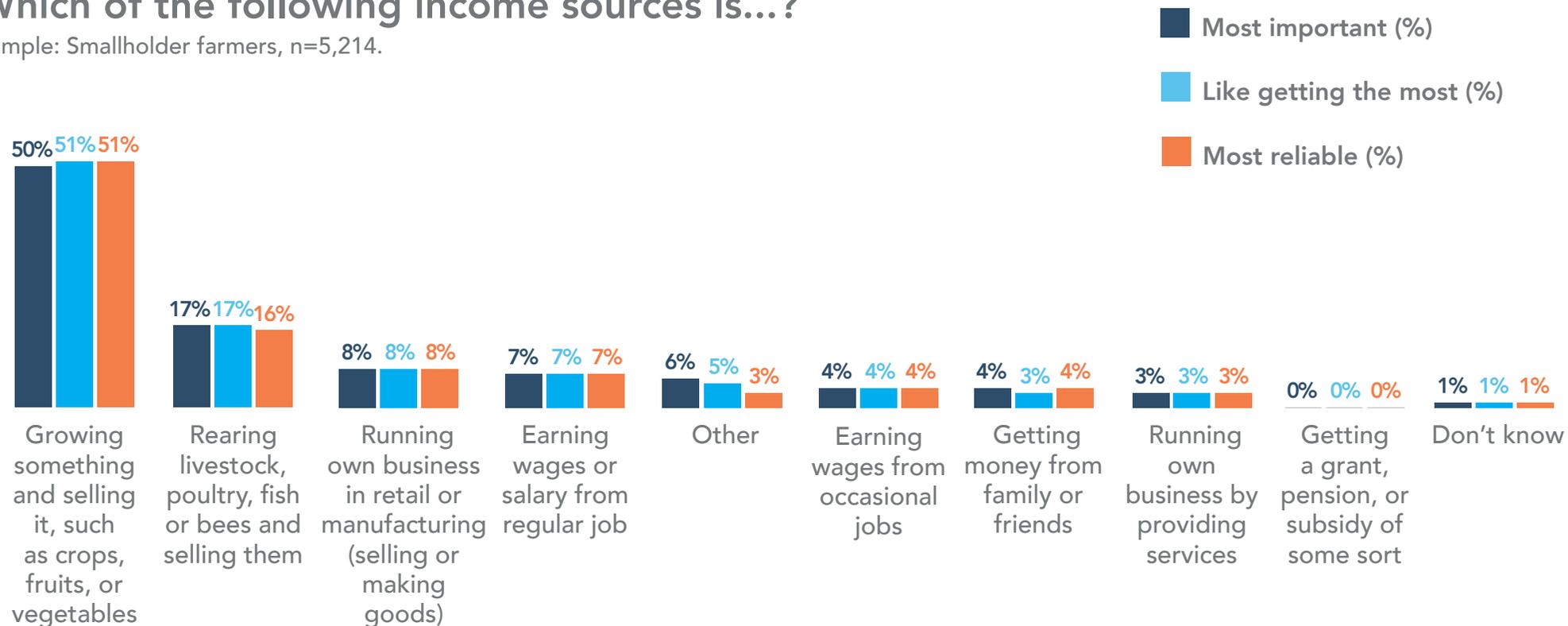


Smallholders generate income from sources both related and unrelated to their agricultural production, though most consider farming their primary job.

# ...though crops and livestock are their most important sources of income.

## Which of the following income sources is...?

Sample: Smallholder farmers, n=5,214.

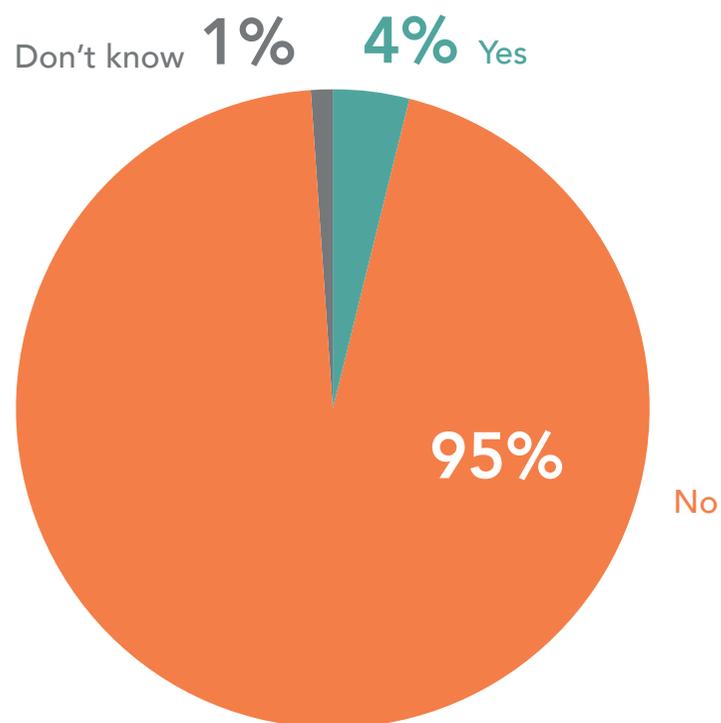


Smallholders consider growing crops and raising livestock their most important, enjoyable, and reliable sources of income.

# Smallholders sell without contracts and get paid in cash.

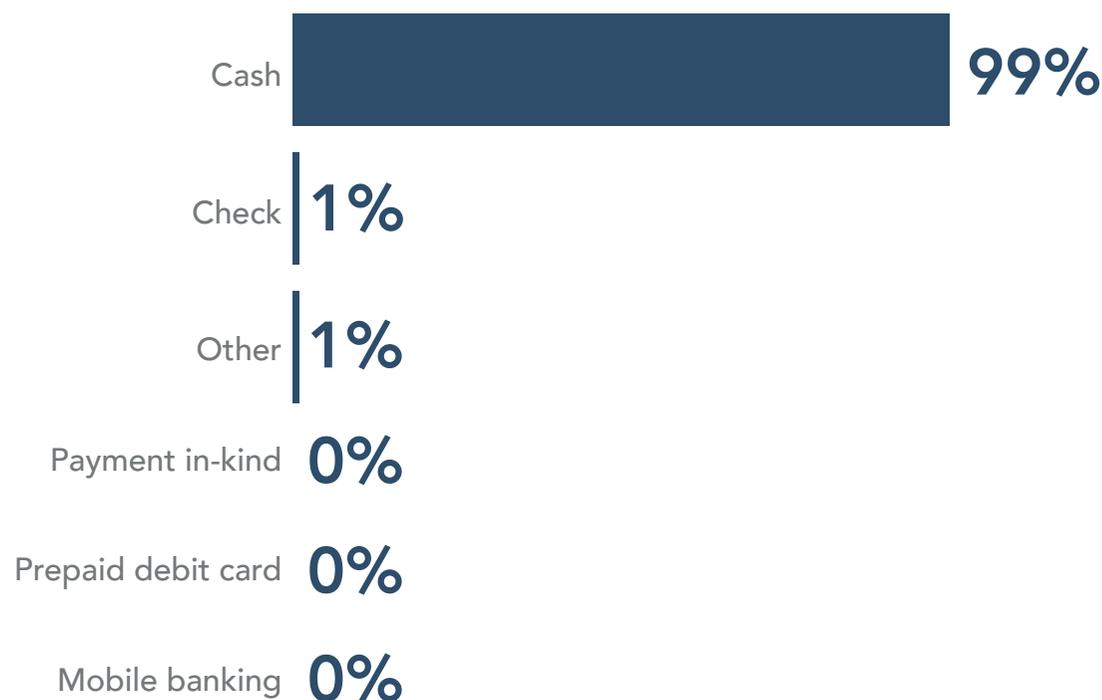
## Do you have a contract to sell any of your crops or livestock?

Sample: Smallholder farmers who grow and sell crops, n=3,430.



## How do you usually get paid for what you sell?

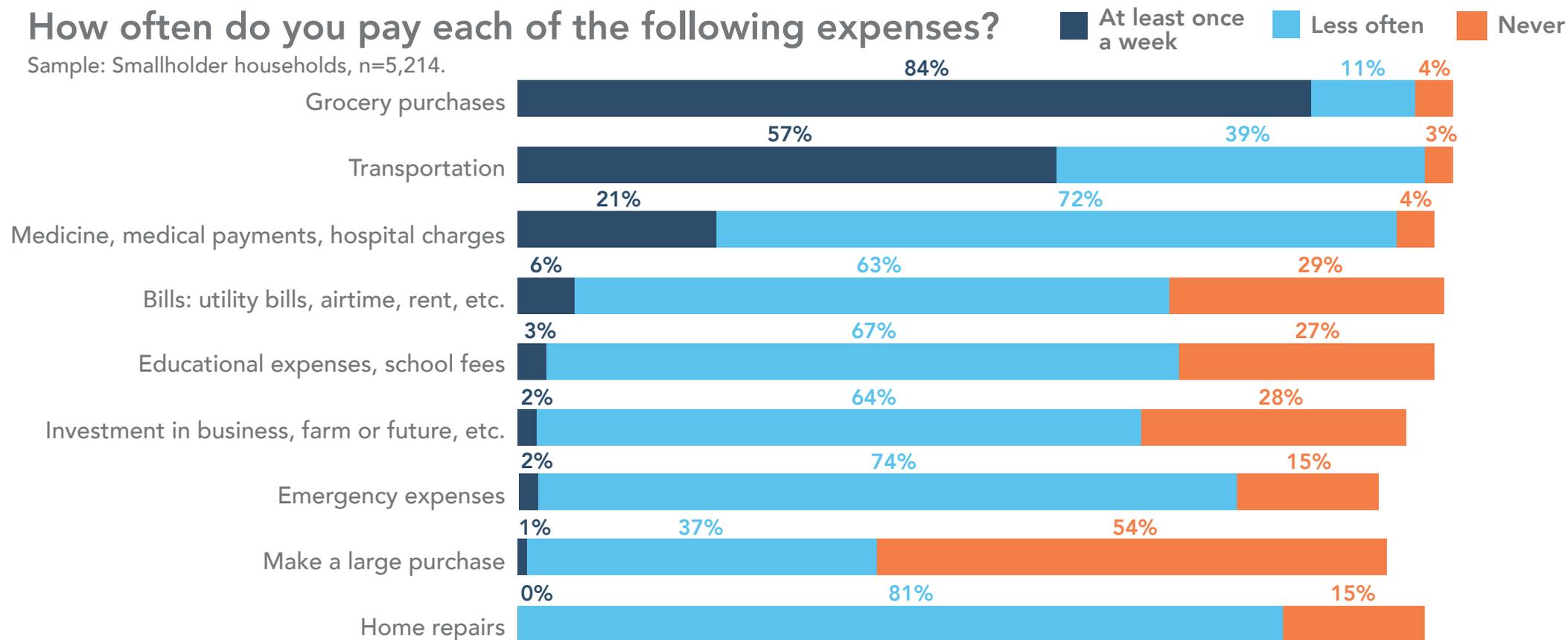
Sample: Smallholder farmers who grow and sell crops, n=3,430. Multiple responses allowed.



# Groceries and transportation are the most frequent expenses.

## How often do you pay each of the following expenses?

Sample: Smallholder households, n=5,214.

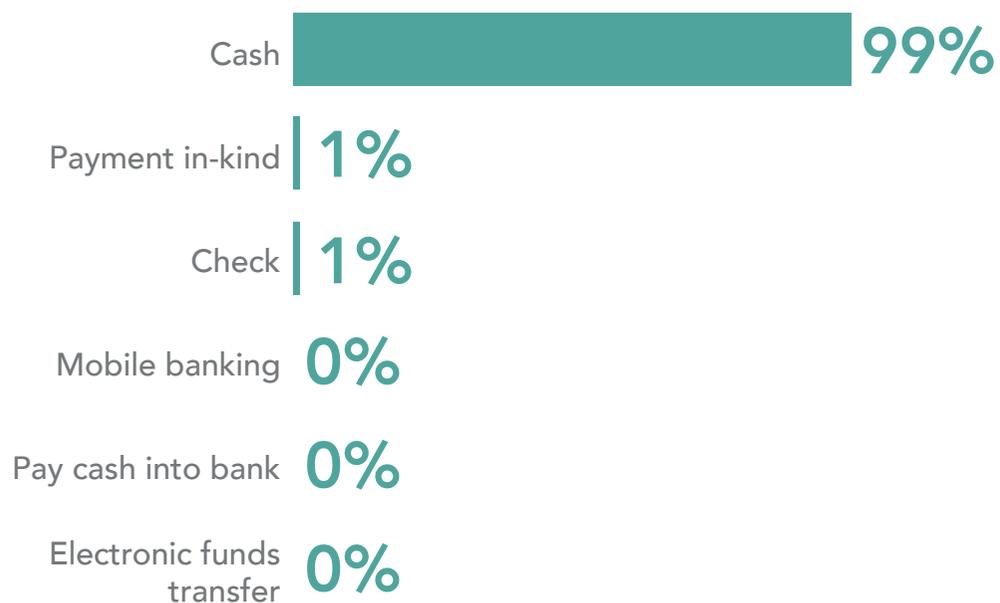


Smallholder households incur smaller expenses more regularly than larger expenses, as is common. Groceries and transportation are the most frequent expenses and offer important channels to expand the digital financial ecosystem. Their value is not in the size of each individual transaction, but in the universality and frequency of these transactions.

# Agricultural inputs are paid for in cash and on the spot.

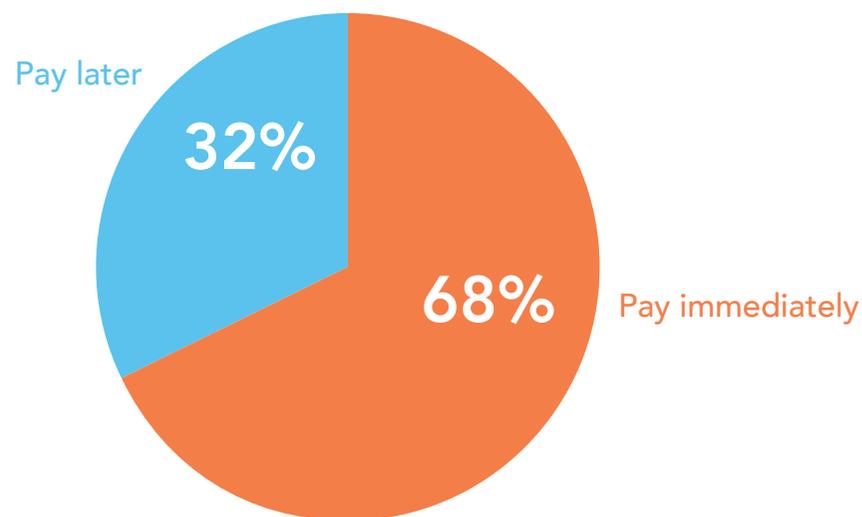
## How do you usually pay your suppliers of inputs?

Sample: Smallholder farmers who purchase main agricultural and livestock inputs, n=3,838. Multiple responses allowed.



## Do your suppliers give you the option to pay them later or do you have to pay immediately?

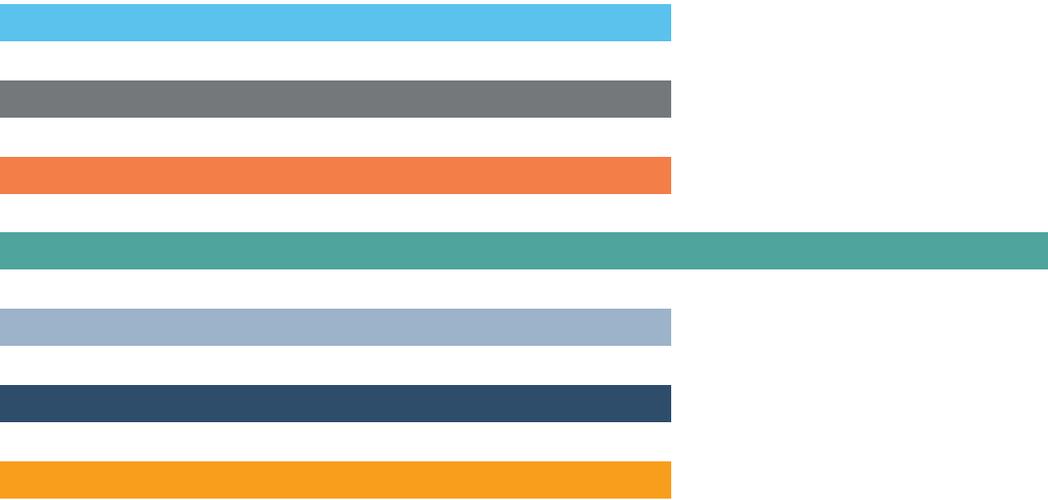
Sample: Smallholder farmers who pay suppliers for inputs, n=3,838.



# What does the data teach us?

**Smallholder households earn income from a range of sources. They consider growing crops and raising livestock their most important, enjoyable, and reliable sources of income.**

- Income needs in smallholder households vary. Most families report a surplus from month to month.
- In addition to income from agricultural activities, smallholder households also make money from running their own businesses, regular employment, and casual labor, among other less important sources.
- The most common expenses in smallholder families are groceries and transportation.
- Smallholders sell their output almost entirely without a contract and for cash. They pay for their inputs in cash, and most pay on the spot.



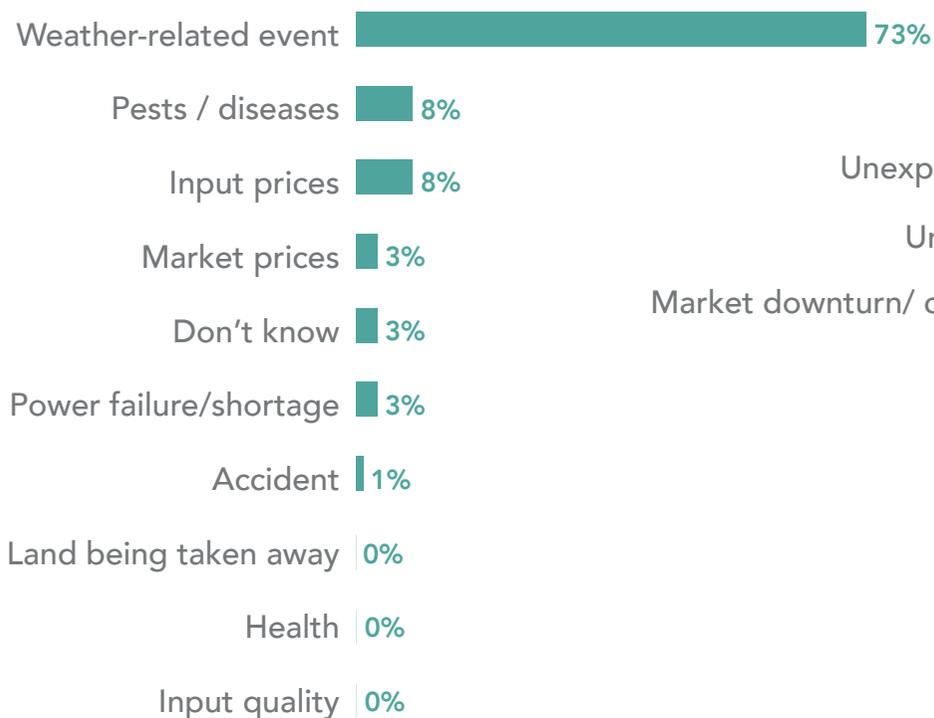
# 4

## Risk management

# Weather is considered the greatest threat to agricultural activities.

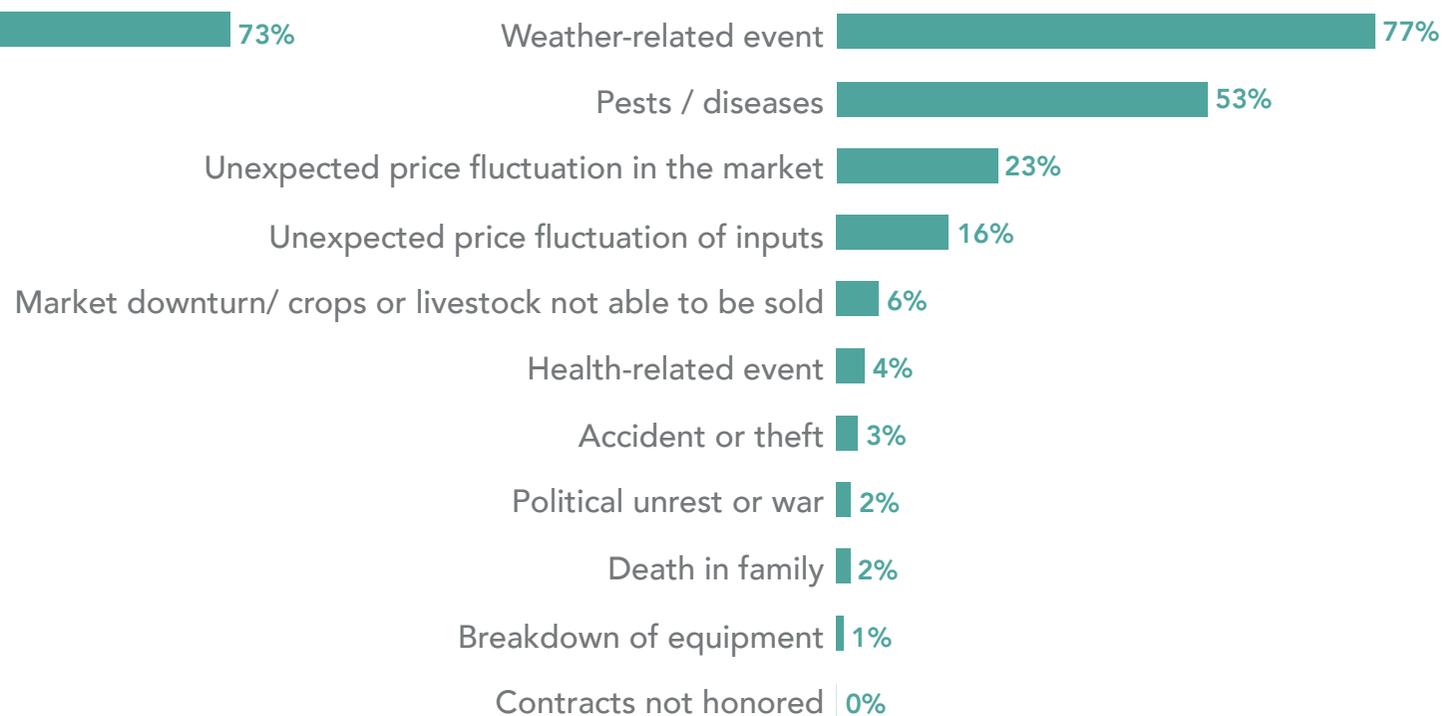
## What poses the most significant risk to your agricultural activities?

Sample: Smallholder farmers who participate in household's agricultural activities, n=2,448.



## Have your agricultural activities been seriously affected by any of the following events in the past three years?

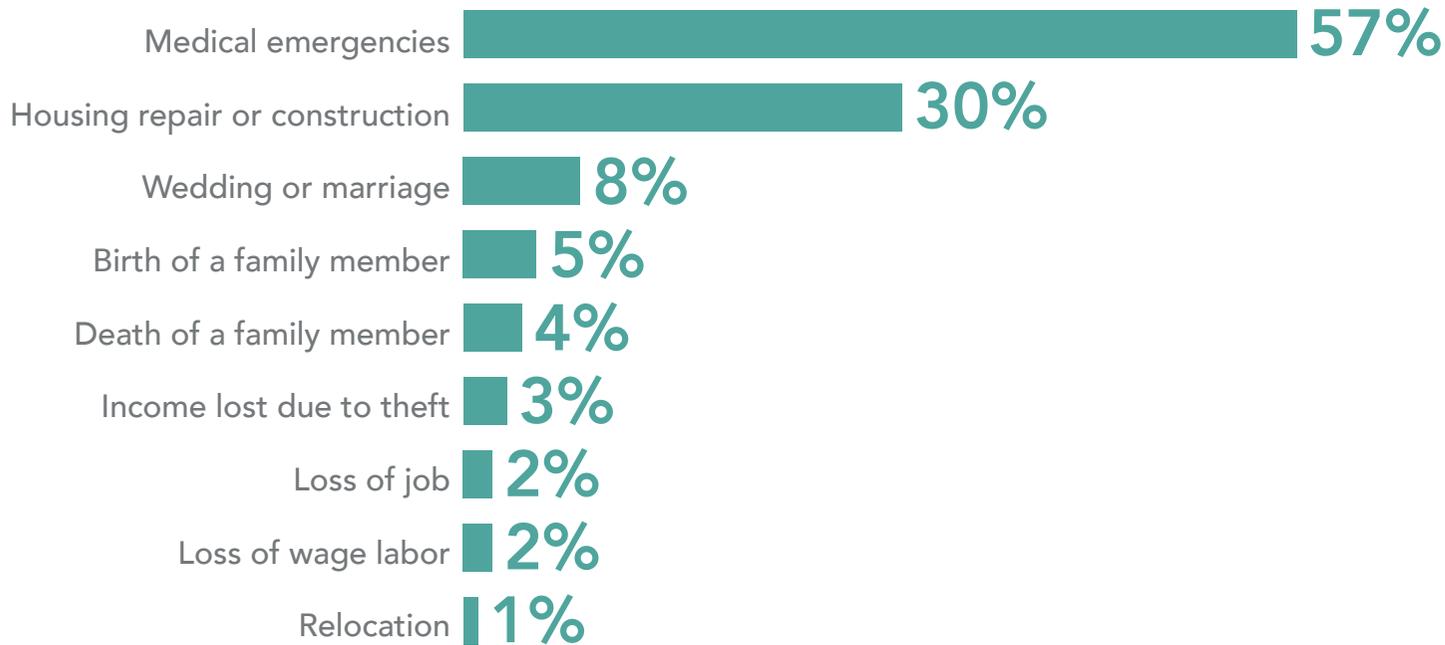
Sample: Smallholder farmers who participate in household's agricultural activities, n=2,448. Multiple responses allowed.



# Medical emergencies have hit hard too.

## In the past 12 months, have you experienced any of these events?

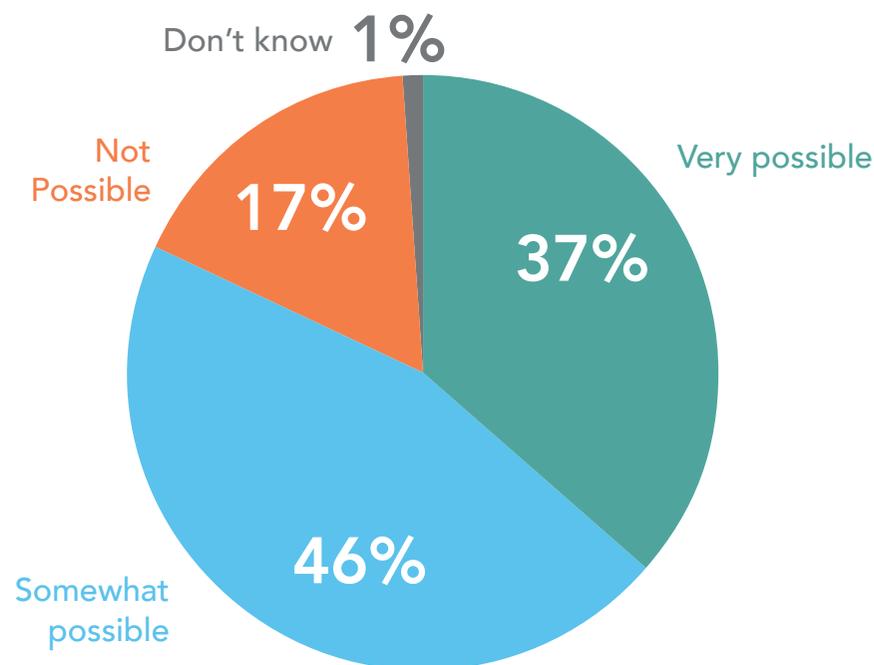
Sample: Smallholder farmers, n=3,095. Multiple responses allowed.



# Coping with emergencies is a struggle.

Imagine that you have an emergency and you need to pay 4,180 TK. How possible is it that you could come up with 4,180 TK within the next month?

Sample: Smallholder farmers, n=3,095.

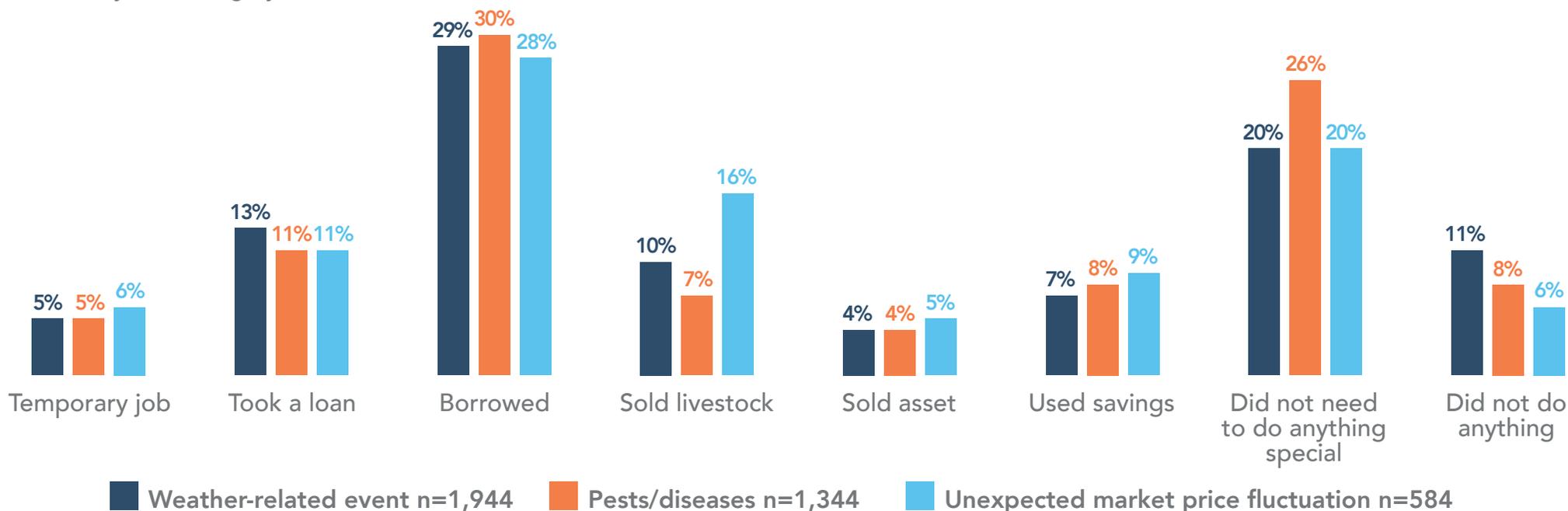


When emergencies happen, coming up with a relatively small amount of money in order to cope is not always possible. Those who consider it "very" or "somewhat possible" would primarily access these funds through family, relatives, or friends (45%).

# Informal borrowing helped them cope with shocks.

## How did you mainly cope when this happened?

Sample: Smallholder farmers who say their agricultural activities have been seriously affected by each category.

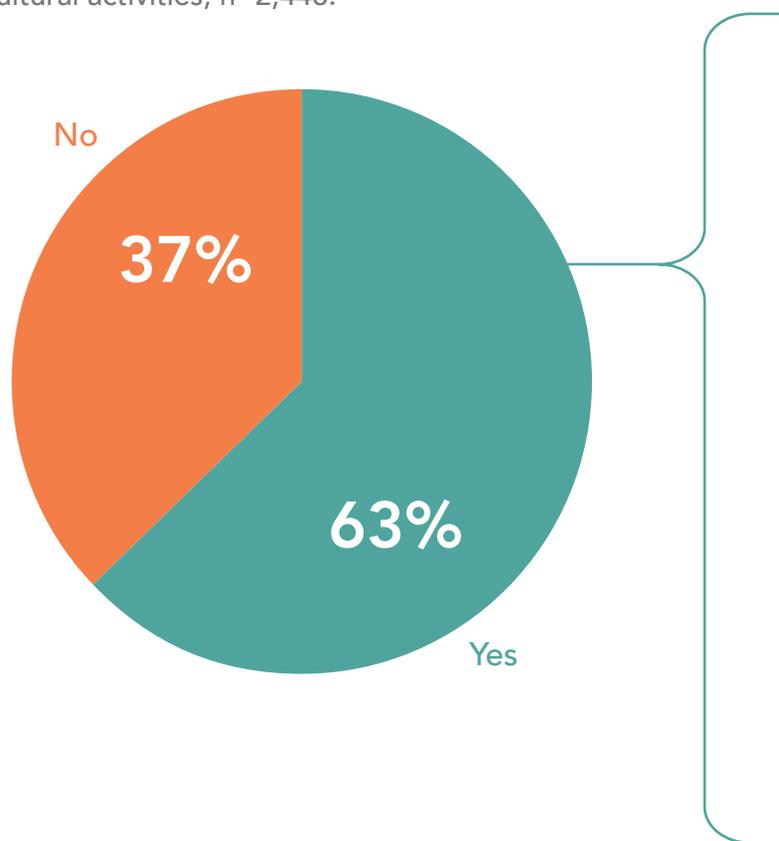


When facing shocks related to weather events, agricultural pests or diseases, or unexpected price fluctuations, about one-third of smallholders mainly coped through informal borrowing. Roughly another third did not have a specific response, in some cases because they did not feel like they needed to do anything.

# As a form of risk mitigation, about two-thirds of smallholders store crops.

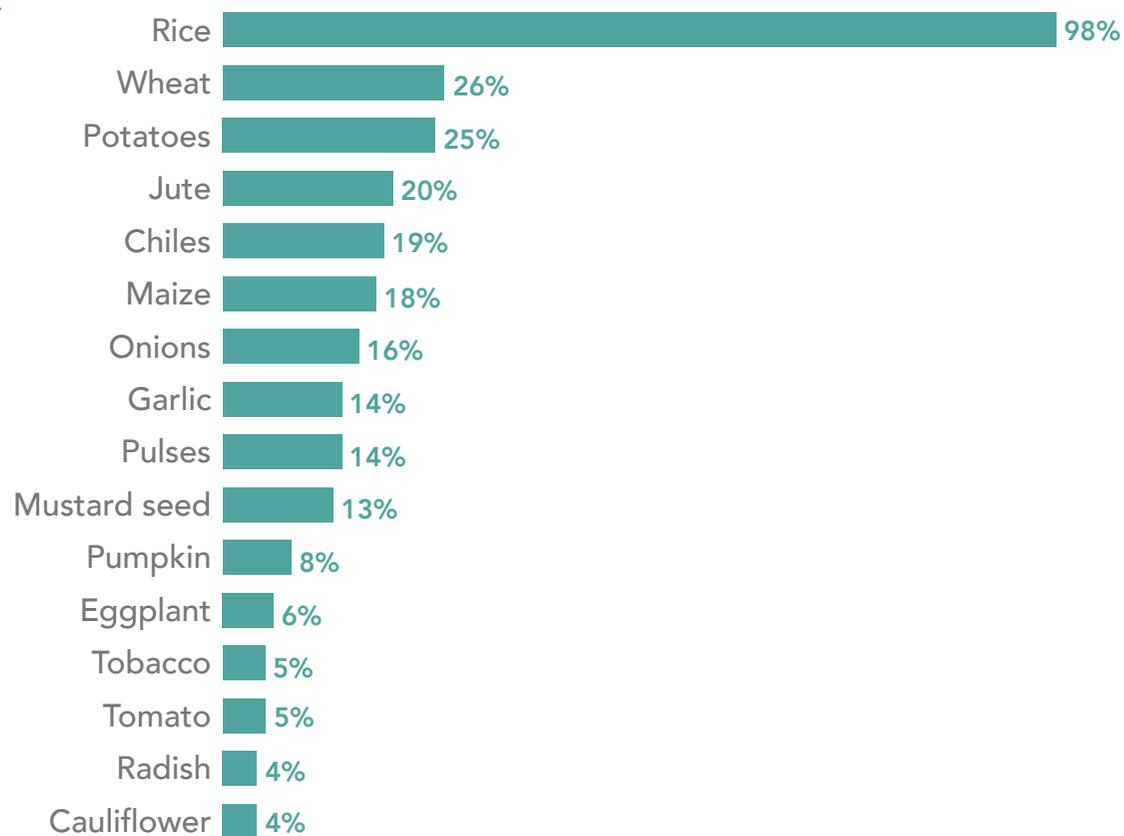
## Do you currently store any of your crops after the harvest?

Sample: Smallholder farmers who participate in household's agricultural activities, n=2,448.



## Which crops do you normally store?

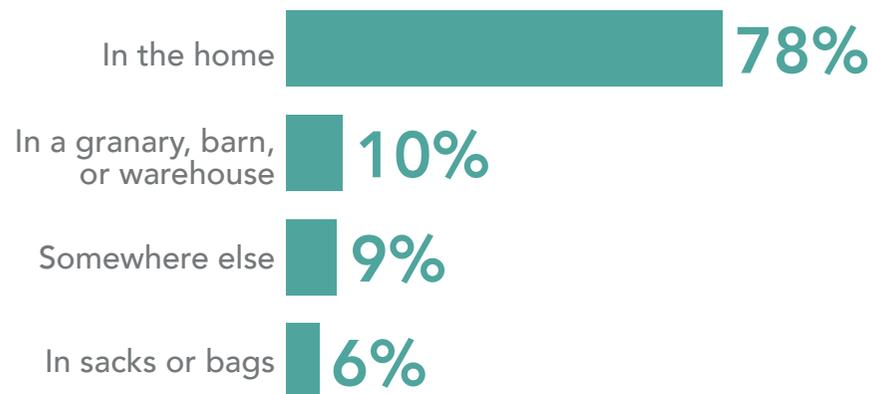
Sample: Smallholder farmers who currently store any crops after harvest, n=1,403.



# Most crop storage is at home, waiting for future consumption and price appreciation.

## Where do you store your crops?

Sample: Smallholder farmers who currently store any crops after harvest, n=1,402. Multiple responses allowed.



## Why do you store your crops?

Sample: Smallholder farmers who currently store any crops after harvest, n=1,403. Multiple responses allowed.

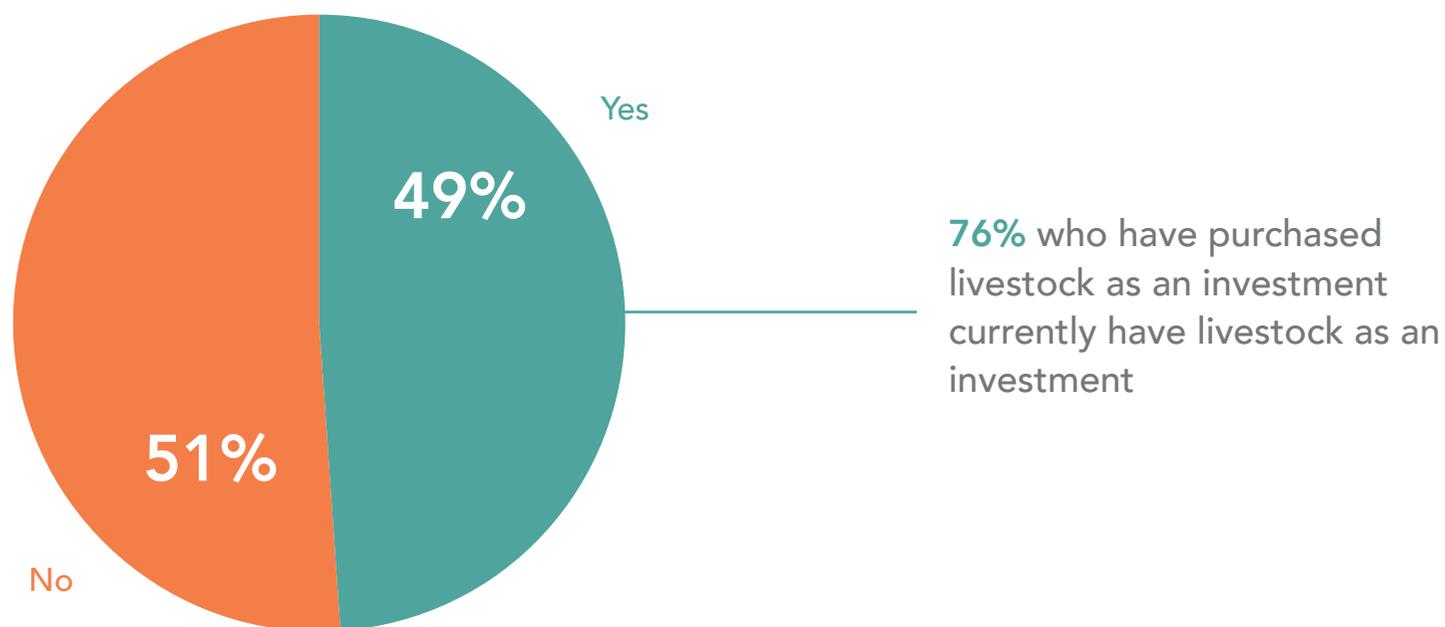


Among smallholders who did not store crops, the most commonly cited reasons were that there is no excess harvest to store or they need to use all the money the crops could generate immediately after harvest.

# Livestock is also purchased as an investment.

## Have you ever purchased livestock as an investment?

Sample: Smallholder farmers who participate in household's agricultural activities, n=2,448.



Investing in livestock also helps smallholder households mitigate risk. Nearly half of smallholders have invested in livestock. Of those who invest in livestock, the majority (76%) currently have a livestock investment.

# What does the data teach us?

## Mitigating risk requires a range of approaches and is a top priority for smallholders.

- To smallholders in Bangladesh, they see weather as posing the greatest risk to their agricultural activities. Weather-related shocks have seriously affected their agricultural activities in the past three years, and over half also coped with medical emergencies in the year prior to the survey.
- Often when facing shocks, smallholders have no specific response, in some part because there are few if any coping tools at hand. Less than a third looked to informal borrowing to cope.
- Smallholders in Bangladesh have few financial tools to help them manage risk. Crop storage and livestock purchases are common methods of savings and risk mitigation.



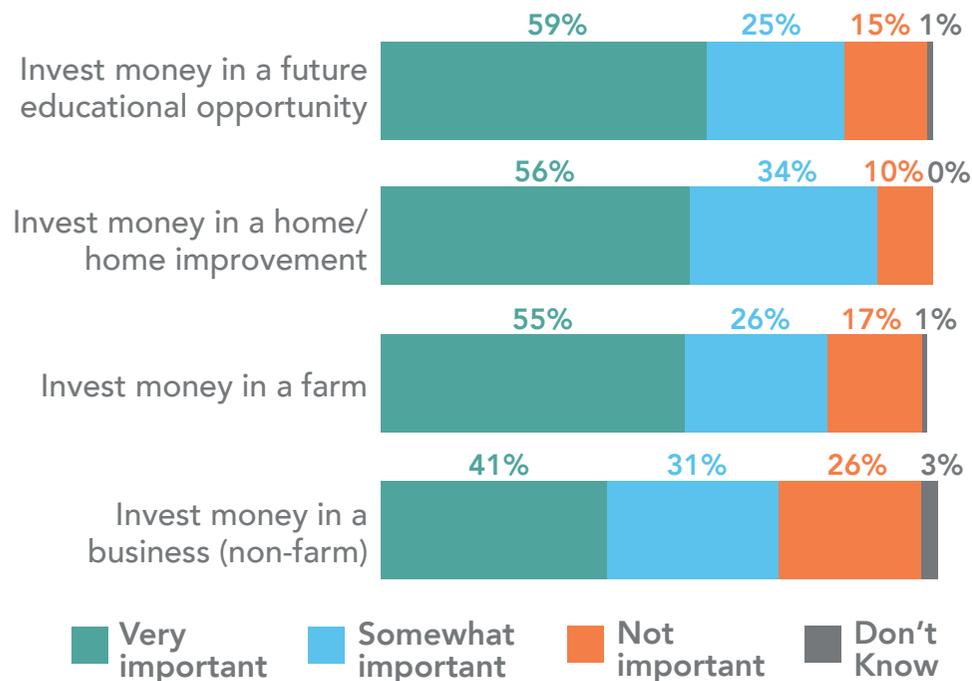
5

## Financial tools

# Smallholders prioritize investment in the family's education, home, and farm.

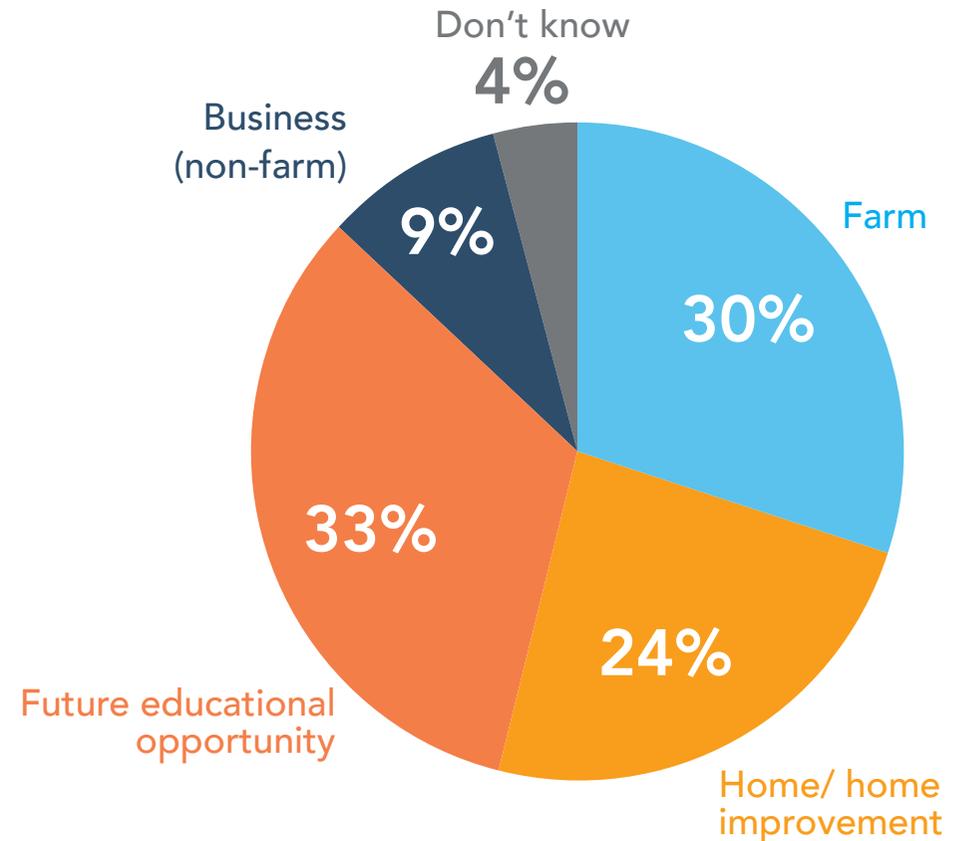
## How important is it for your household to invest in each of the following?

Sample: Smallholder farmers, n=3,095.



## Which of the following do you feel your household needs to do the most?

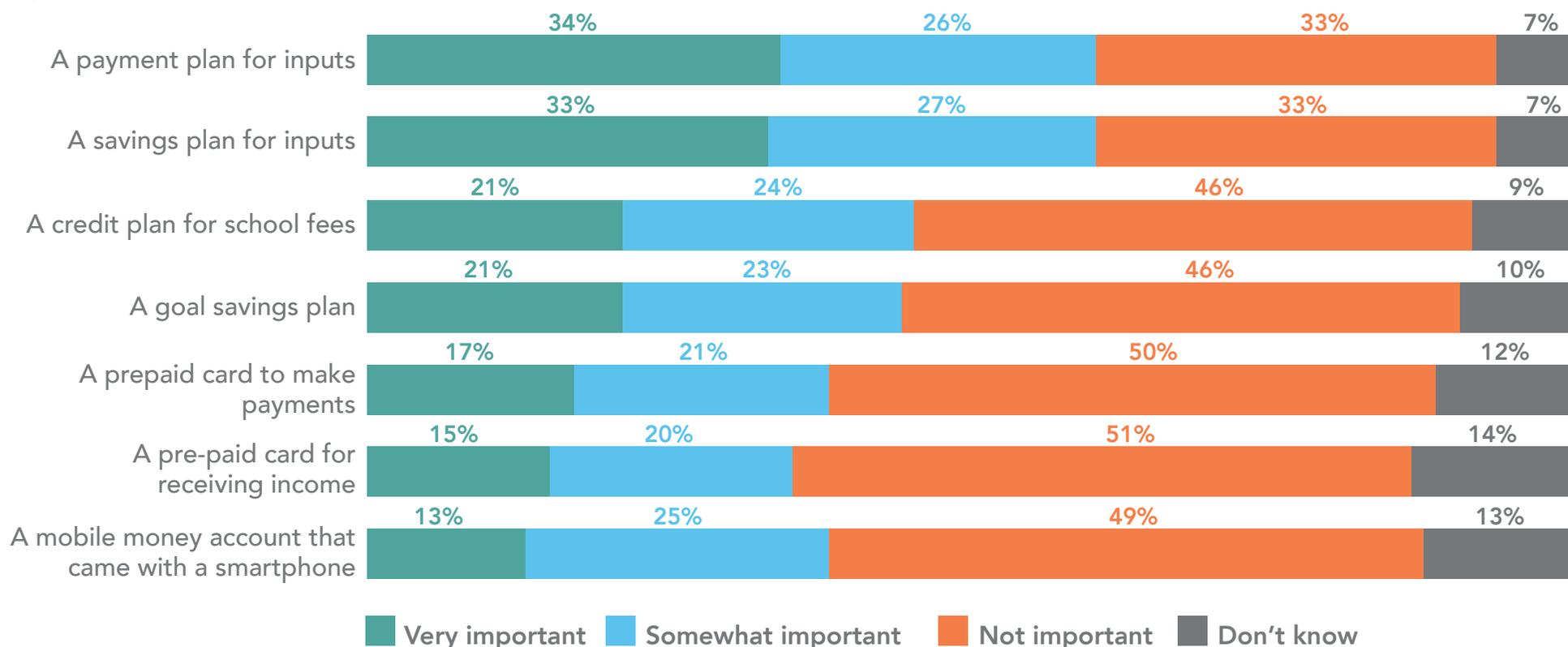
Sample: Smallholder farmers, n=3,095.



# These three priorities drive smallholder interest in financial tools.

## How important is each of the following products to your agricultural activities?

Sample: Smallholder farmers, n=3,095.



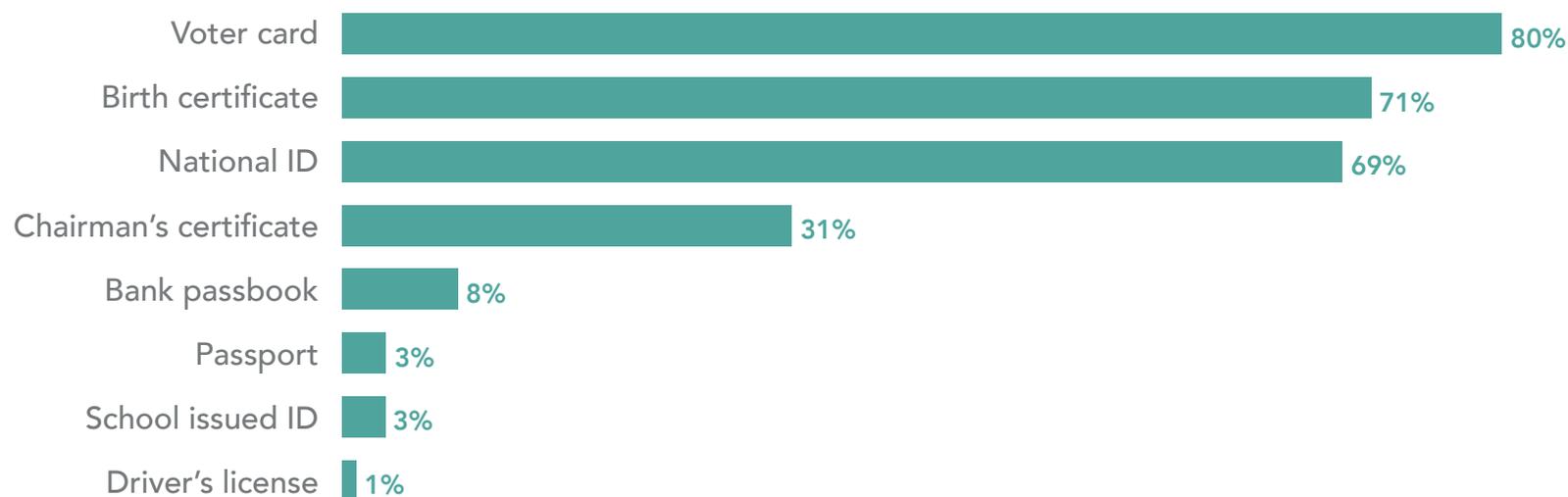
Smallholders emphasize the importance of financial products related to input expenses.

About one-third consider a payment plan or savings plan for inputs to be very important to their agricultural activities.

# Most smallholders have a voter's card.

## Do you have any of the following types of official identification?

Sample: Smallholder farmers, n=5,214. Multiple responses allowed.

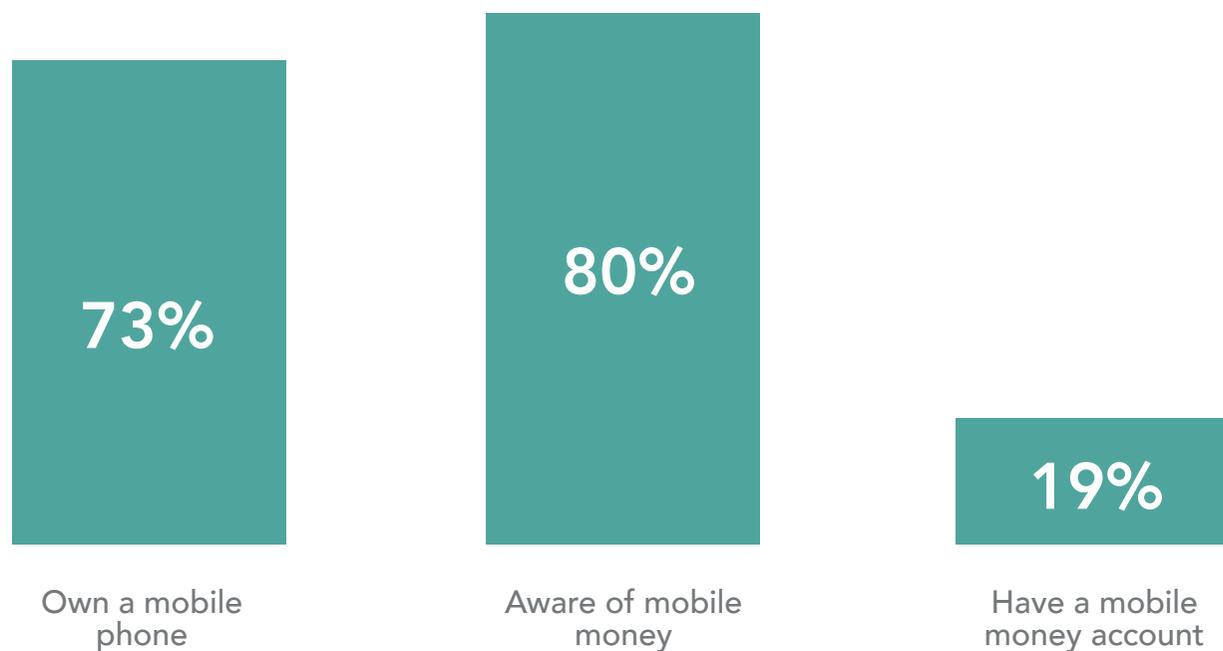


Smallholders have widespread access to various types of formal identification. Most smallholders have a voter card (80%), birth certificate (71%), or national ID (69%).

# Awareness of mobile money is high, but account ownership lags.

## Mobile phone ownership, awareness of mobile money, and possession of a mobile money account among smallholders.

Sample: Smallholder farmers, n=2,795.

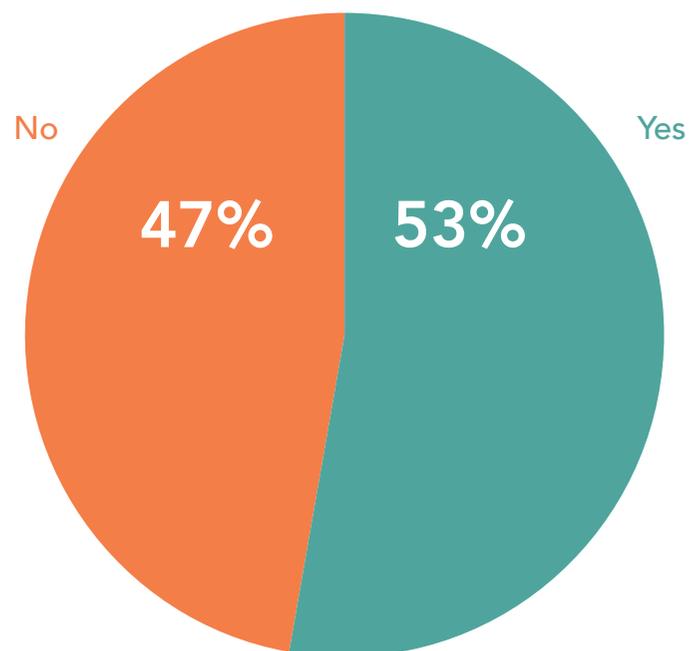


Ownership of mobile phones and awareness of mobile money is high among smallholders in Bangladesh. But the proportion with mobile money accounts has not kept pace.

# About one in five smallholders has a bank account.

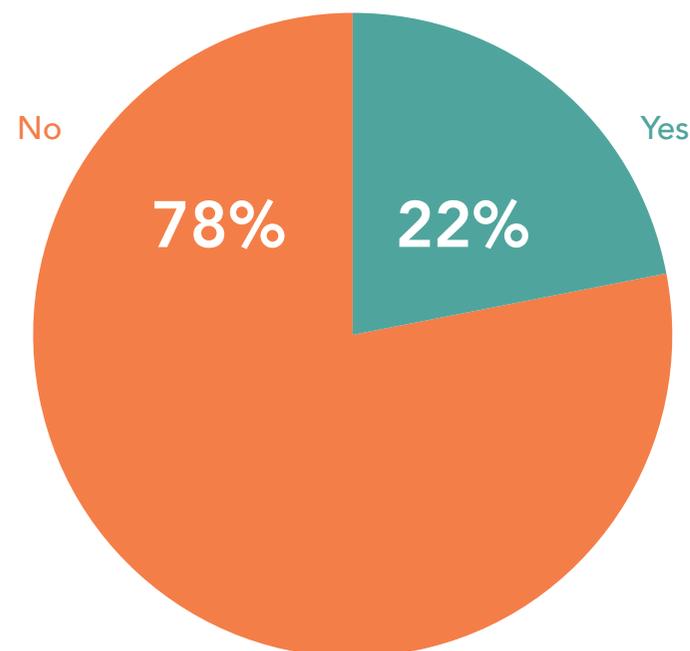
## Have you ever been inside a bank?

Sample: Smallholder farmers, n=3,095.



## Do you personally have a bank account that is registered in your name?

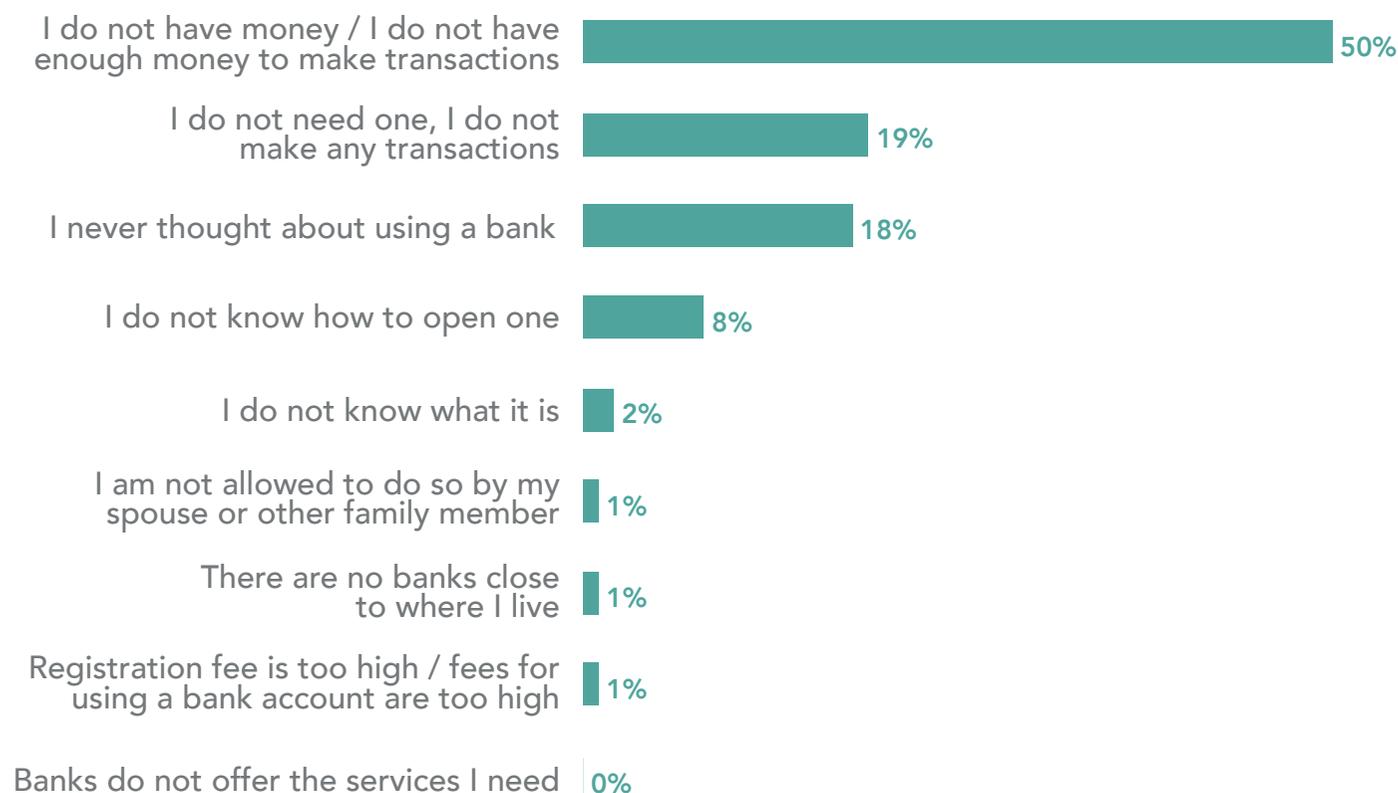
Sample: Smallholder farmers, n=3,095.



# Smallholders without a bank account say they don't have enough money for one.

## What is the main reason you do not have a bank account?

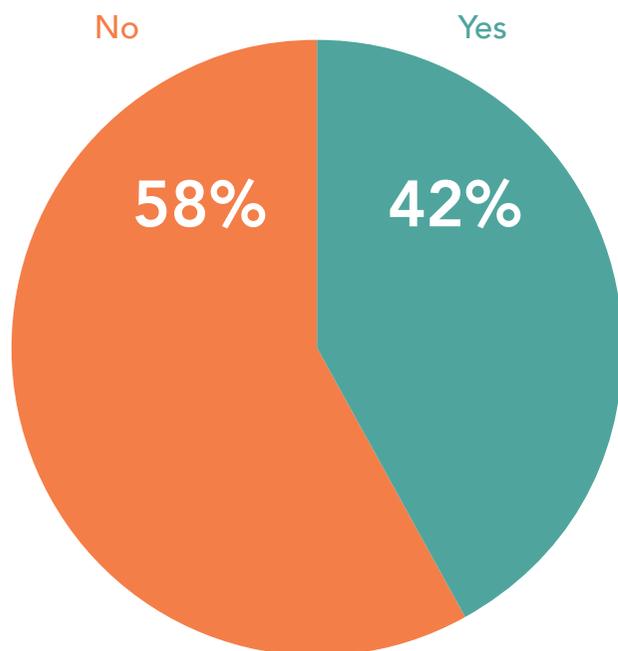
Sample: Smallholder farmers who don't have a bank account, n=2,310.



# About two in five smallholders have outstanding loans.

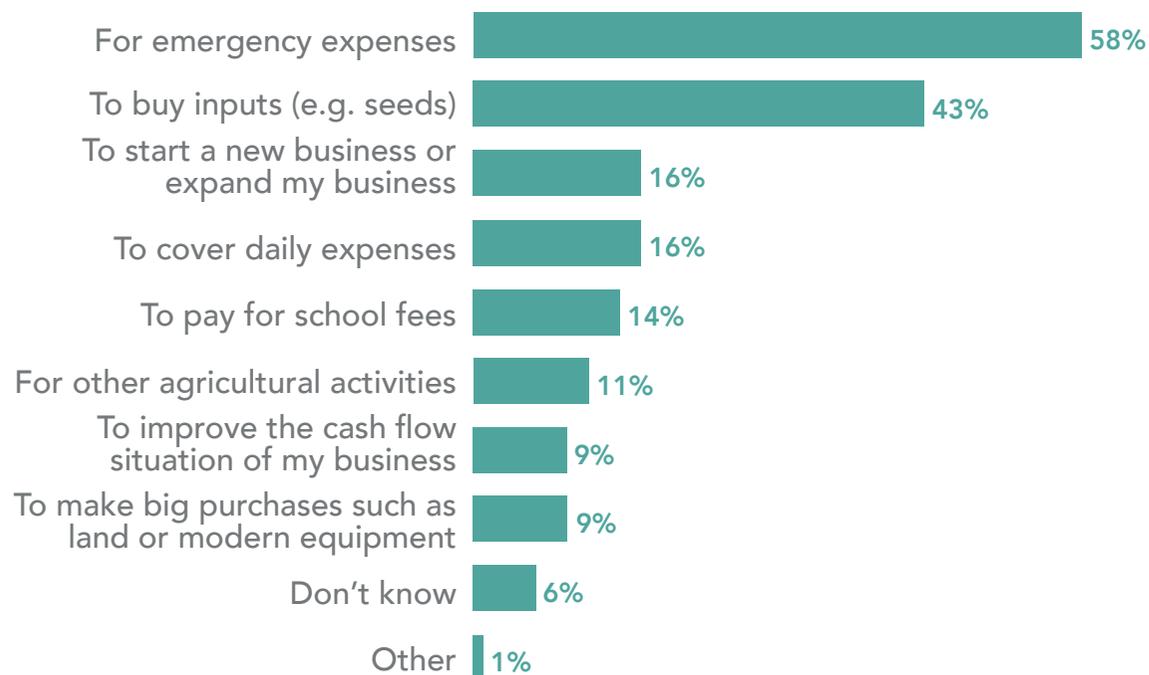
## Do you currently have any loans?

Sample: Smallholder farmers, n=3,095.



## What would be the main reasons for borrowing money?

Sample: Smallholder farmers, n=3,095. Multiple responses allowed.

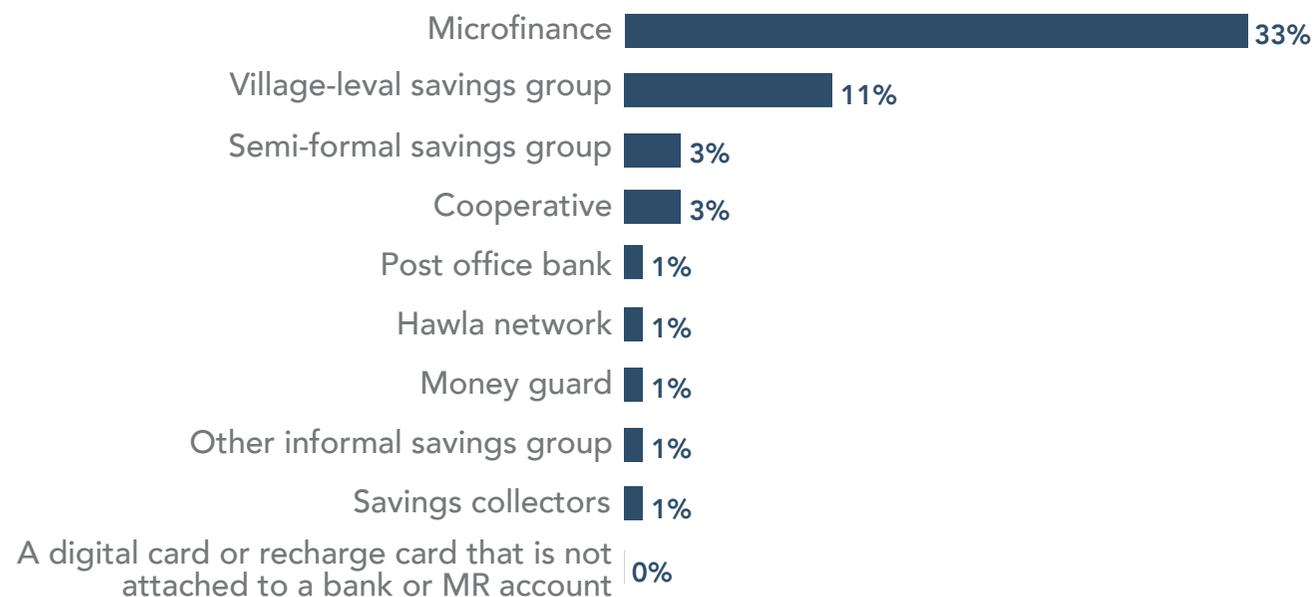


Smallholders are most motivated to borrow money to cope with emergencies or buy inputs.

# Use of non-bank and informal financial providers is limited.

## Have you ever used any of the following?

Sample: Smallholder farmers, n=3,095.

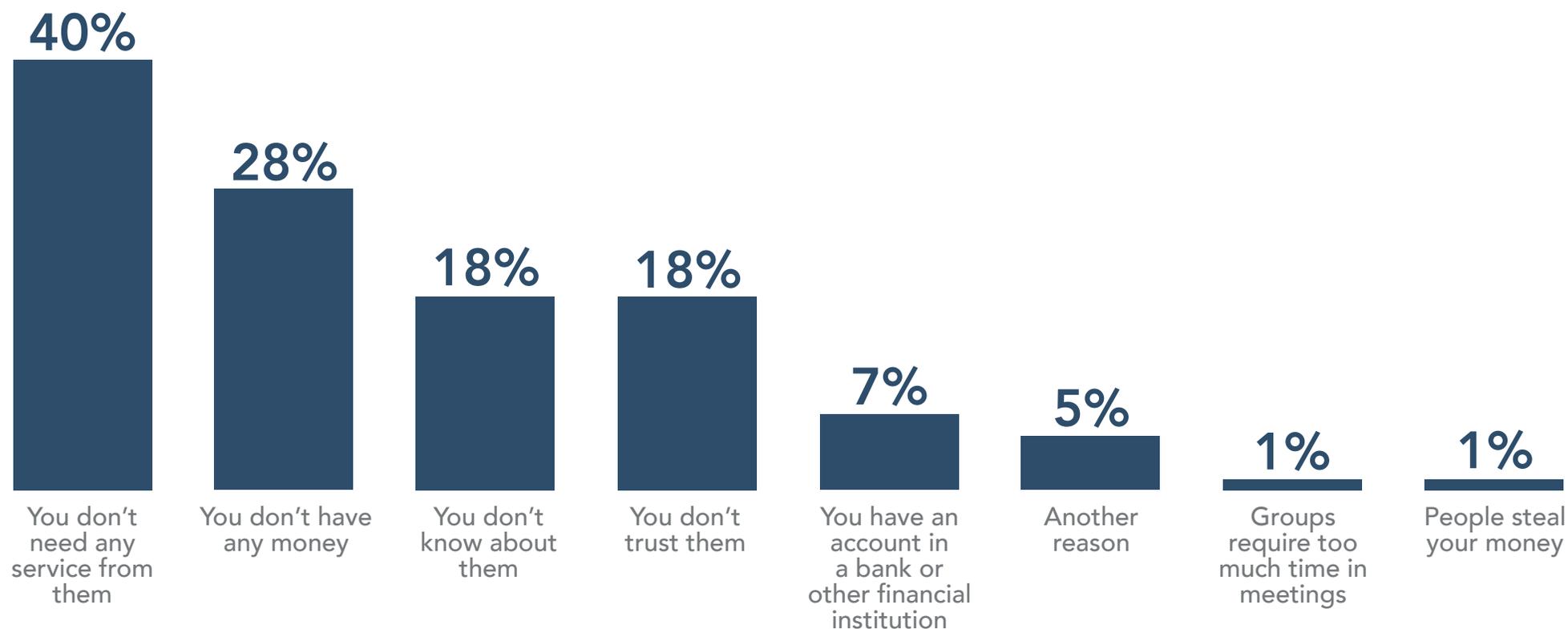


This research recognizes that the Central Bank of Bangladesh does not view MFIs under the broader umbrella of non-bank financial institutions (NBFIs) (see Bangladesh Bank. 2016. "Overview of Financial System of Bangladesh." <https://www.bb.org.bd/fnansys/index.php>). This research, however, reports MFI and NBFIs data together to facilitate comparability across the series of CGAP's national surveys of smallholder households, because Bangladesh is unique with respect to its distinction between MFIs and NBFIs.

# Informal financial service providers are often seen as irrelevant.

## Why do you not have a membership with any of these groups?

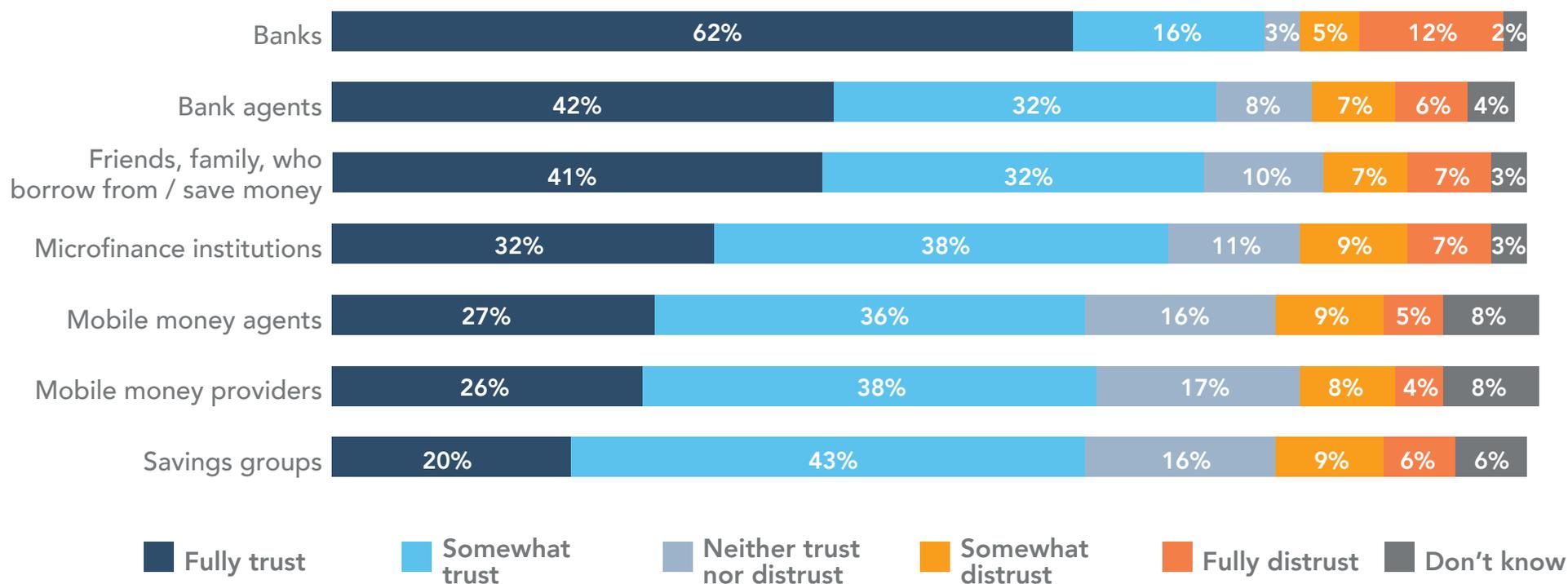
Sample: Smallholder farmers who have never used an informal financial service provider, n=2,660. Multiple responses allowed.



# Trust varies across providers.

## How much do you trust each of the following as financial sources?

Sample: Smallholder farmers, n=3,095.



Smallholders overwhelmingly trust their financial institutions, particularly formal financial institutions such as banks and MFIs.

# What does the data teach us?

## Almost half (45%) of smallholders in Bangladesh are financially included.

- Smallholders prioritize investments in their family's education, home, and farm. They show interest in payment and savings plans for agricultural inputs, a credit plan for school fees, as well as general goal-based savings plans.
- NBFIs and MFIs drive financial inclusion among smallholders in Bangladesh: 31% have an NBFI or MFI account. Mobile money is driving further gains in financial inclusion, and 19% of smallholders have a mobile money account. 22% of smallholders have a bank account.
- Smallholders have relatively high trust in financial service providers, particularly formal financial institutions such as banks and MFIs.



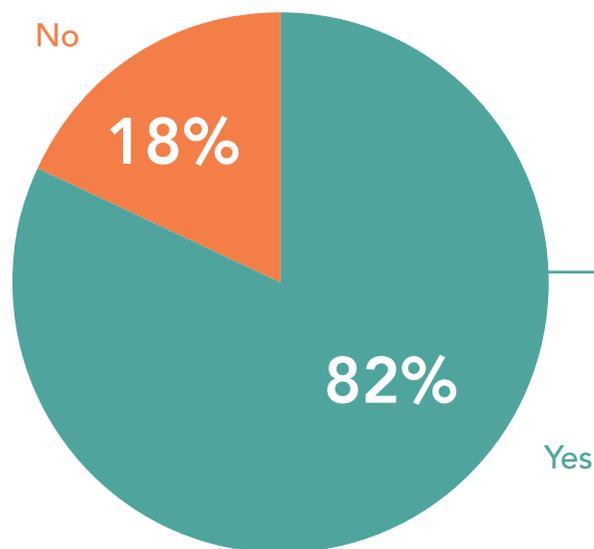
# 6

## Digital financial services

# Most smallholders use basic phones.

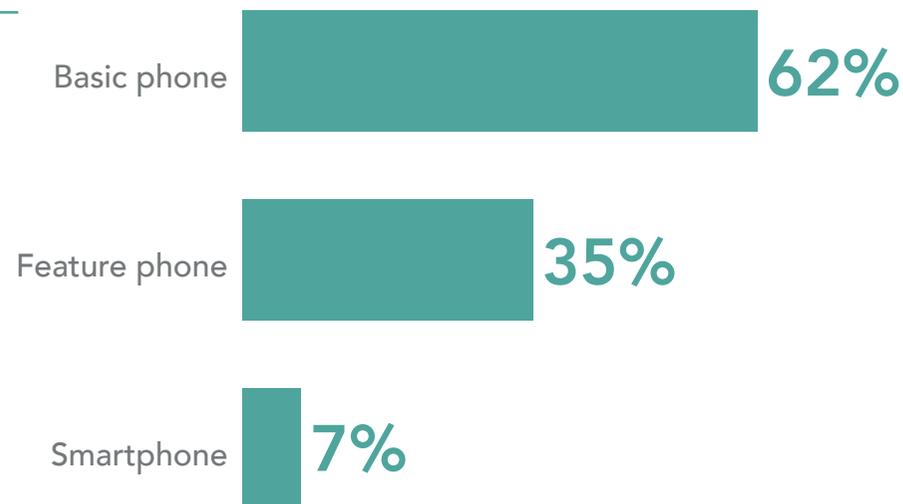
## Have you ever used a mobile phone?

Sample: Smallholder farmers, n=3,095.



## What type of phone have you used?

Sample: Smallholder farmers who have ever used a mobile phone, n=2,593.

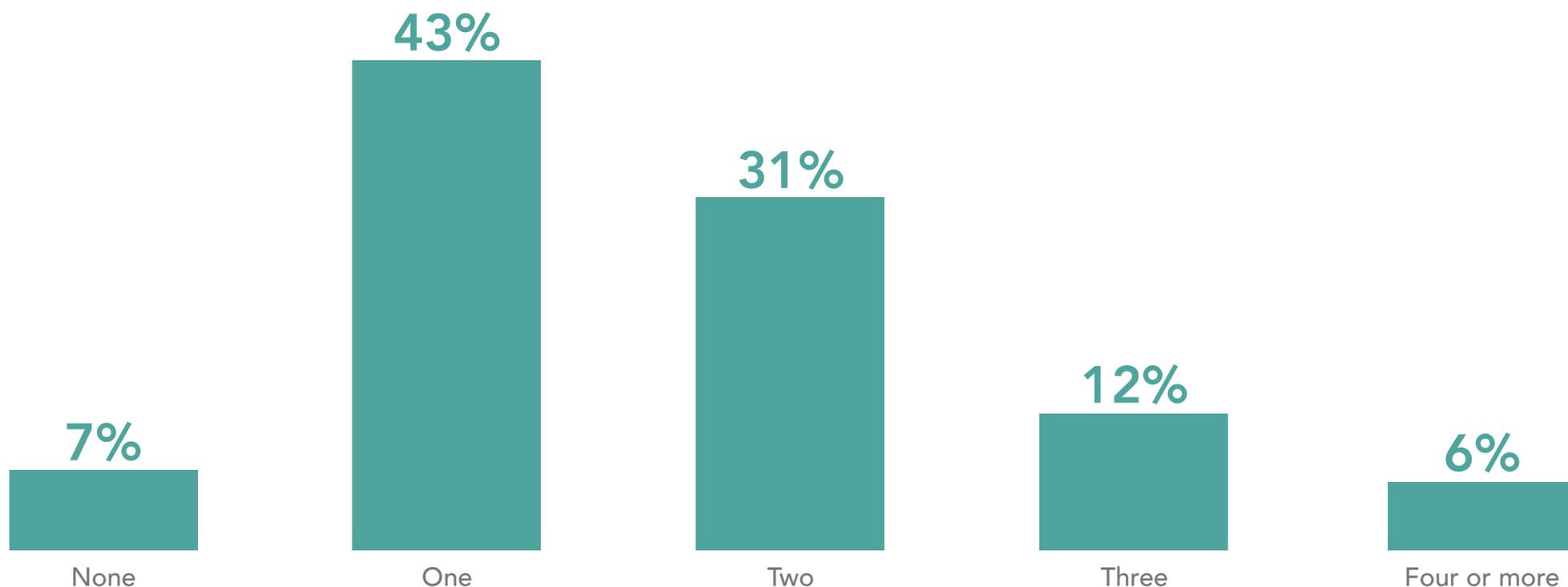


Over four in five of smallholder farmers in Bangladesh have used a mobile phone, and 89% of this group own a mobile phone.

# Most smallholders have at least one mobile phone at home.

## Number of mobile phones owned by household members?

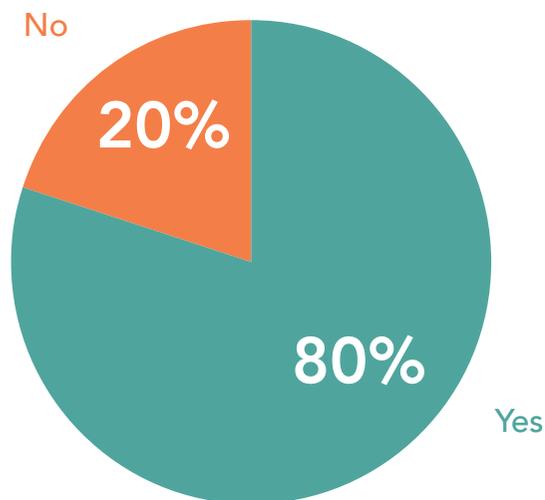
Sample: Smallholder households, n=3,154.



# Awareness and perceived benefits of mobile money are high...

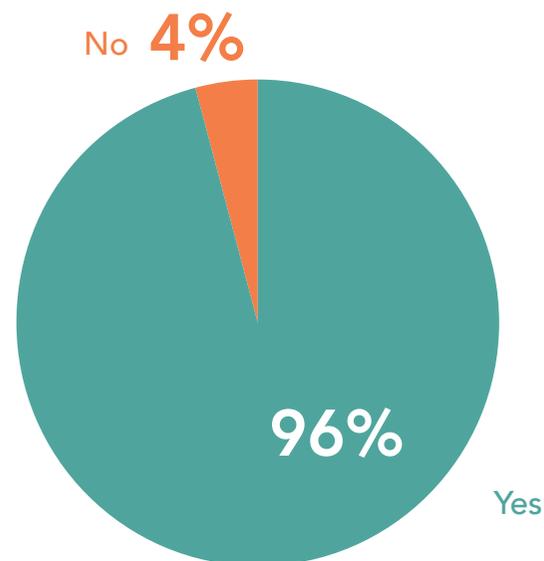
## Have you ever heard of something called mobile money?

Sample: Smallholder farmers, n=2,795.



## Are there benefits to having a mobile money account?

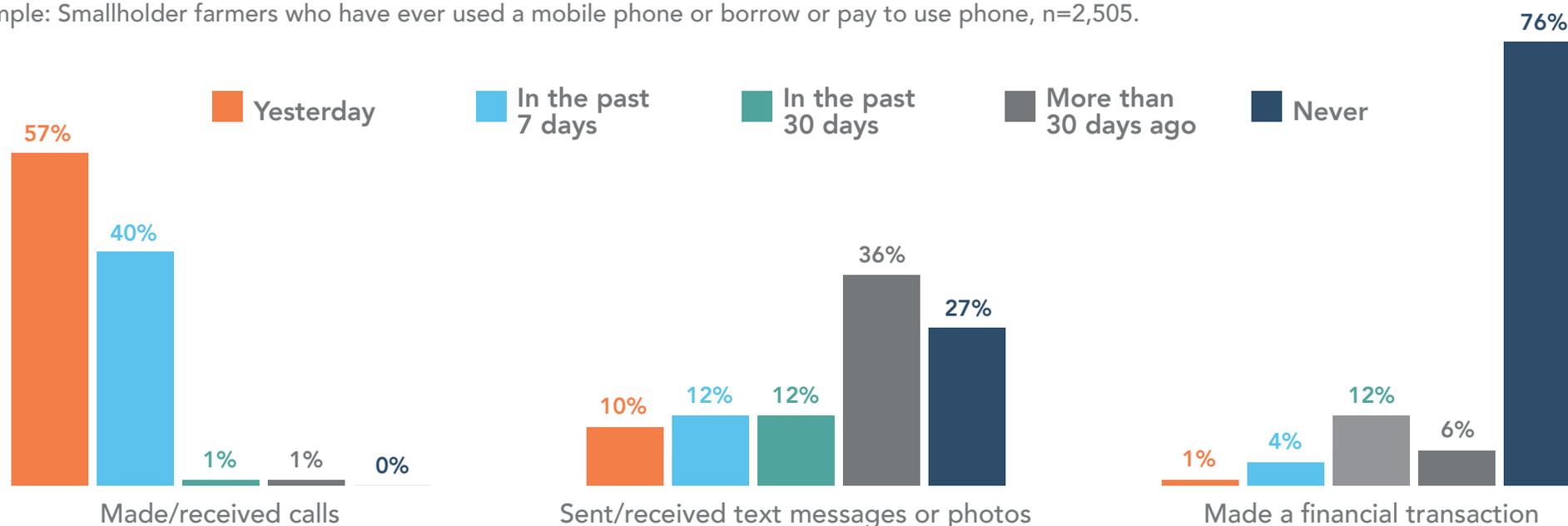
Sample: Smallholder farmers who are aware of mobile money concept, n=2,095.



# ...but mobile phones are used primarily for communications.

## Apart from today, when was the last time you performed the following activities on the mobile phone you use?

Sample: Smallholder farmers who have ever used a mobile phone or borrow or pay to use phone, n=2,505.

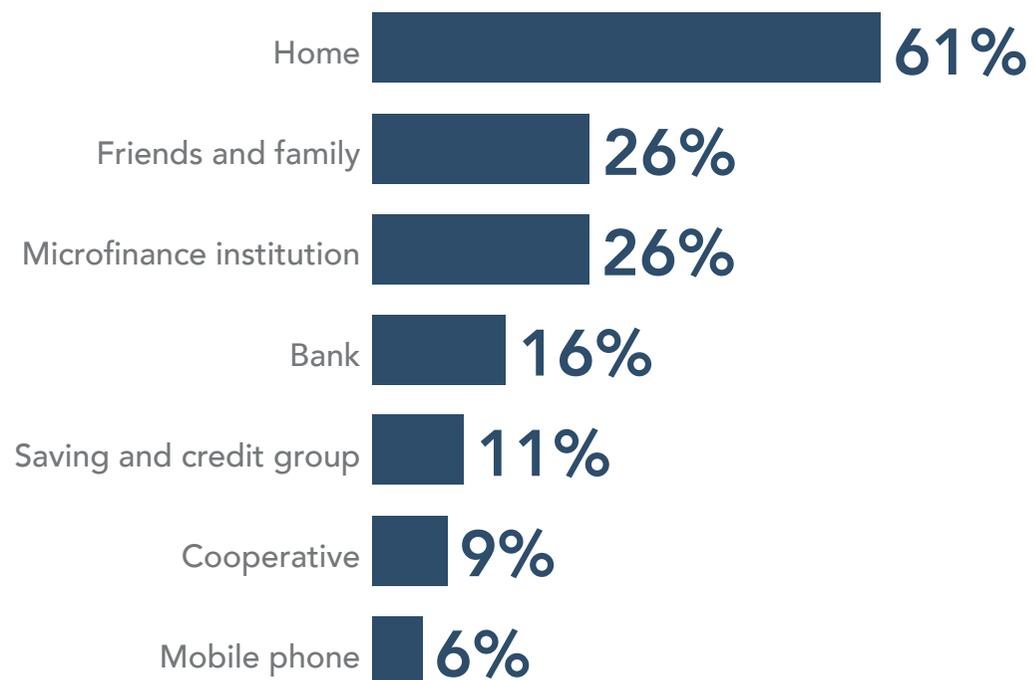


The most frequent uses of mobile phones for smallholders relate to communication. Nearly all smallholders with access to a mobile phone made or received calls within the week before the survey, and 34% texted within a month. Fewer smallholders with mobile phones have used their phones for financial transactions. Only 5% of smallholders used a mobile phone for financial transactions within the week before the survey.

# Smallholders save at home, not on mobile phones.

In the past 12 months, have you saved money with any of the following mechanisms?

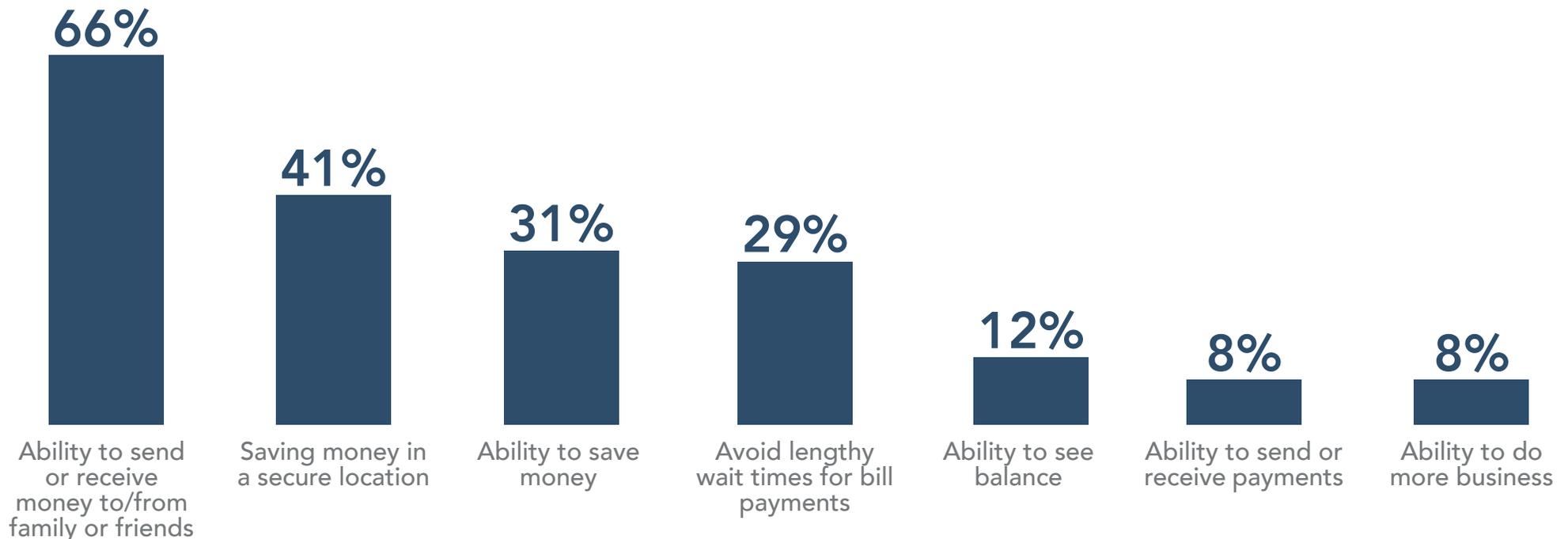
Yes answers. Sample: Smallholder farmers, n=3,095.



# Money transfers are seen as a major benefit of mobile money...

## What are the benefits to having a mobile money account?

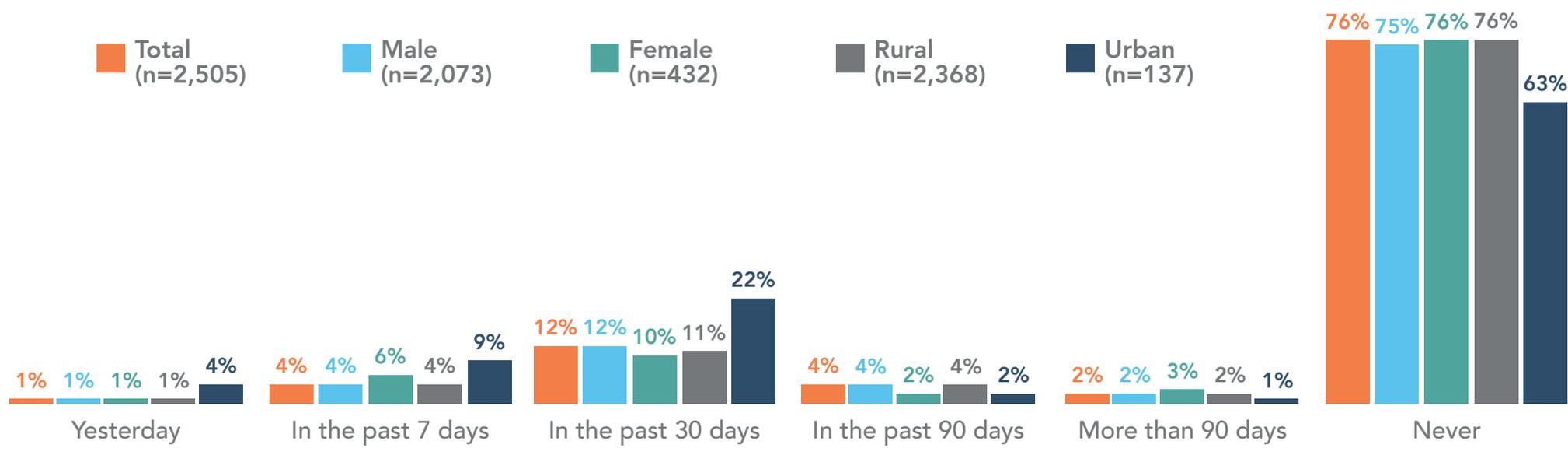
Sample: Smallholder farmers who believe there are benefits to having a mobile money account, n=2,022. Multiple responses allowed.



# ...but few smallholders use mobile money.

When was the last time you made a financial transaction such as send/receive money, pay dept, or made a banking transaction on your mobile phone?

Sample: Smallholder farmers who currently own a phone or can borrow/pay to use phone in each case.



Few smallholders use mobile phones for financial transactions on at least a monthly basis. 17% of smallholders have used their phones for a financial transaction within the past 30 days, while 6% have completed a financial transaction on their phone more than 30 days before the interview.

Time since the last transaction is consistent across genders. Urban smallholders use their phones for financial transactions more frequently, and have used them more recently, than have rural smallholders.

# What does the data teach us?

**Ownership of mobile phones and awareness of mobile money is high among smallholders, but mobile money account ownership is low.**

- Almost all smallholder families have at least one mobile phone in the household. Most are basic phones without internet capability.
- Smallholders see the mobile phone as an important tool for communication. They see some benefit in using it for money transfers, but do not see it as a tool for financial transactions.



# 7 Segmentation

# Smallholder households are not homogeneous.

## Six key variables driving financial inclusion among smallholder households

1. Education

2. Poverty level

3. Access to emergency funds

4. Mobile phone ownership

5. Attitudes

6. Experienced an unexpected event

### EDUCATION

**38%**  
completed primary

**28%**  
secondary or more

### POVERTY LEVEL

**23%**  
above \$2.50 ppi

**77%**  
below \$2.50 ppi

### ACCESS TO EMERGENCY FUNDS

**37%** very possible  
**17%** not possible

**46%** somewhat possible

### MOBILE PHONE OWNERSHIP

**93%**  
have at least one mobile phone in their household

### ATTITUDES

**73%** agree the future will take care of itself  
**25%** disagree the future will take care of itself

### EXPERIENCED AN UNEXPECTED EVENT

**76%** none  
**24%** at least one

# Four segments of smallholder households in Bangladesh

## Farming for sustenance

- Most disadvantaged and vulnerable smallholder segment
- Rely on agricultural activities for their well-being
- Little education and limited access to emergency funds
- Most live in extreme poverty line
- Least financially included

## Battling the elements

- Challenged by limited education, but less poor and exposed to risk than Farming for Sustenance segment
- Near universal mobile phone ownership
- More access to financial tools, particularly mobile money, and more diversity in how they save

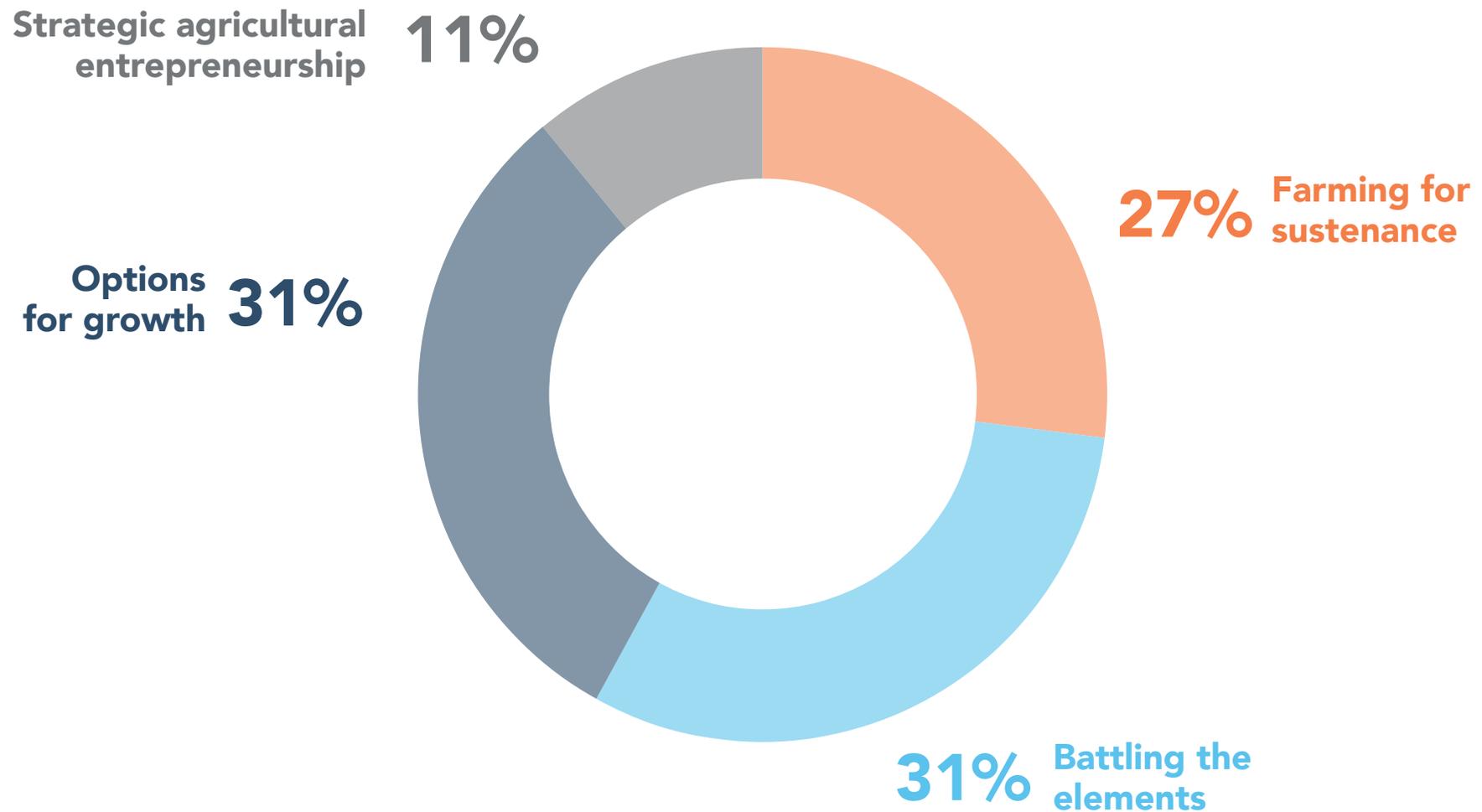
## Options for growth

- Increased stability and insulation from unexpected events, relative to the first two segments.
- More live above the poverty line and have access to emergency funds
- Strong reliance on agricultural income, but could pivot out of agriculture
- Mobile phone ownership is universal

## Strategic agricultural entrepreneurship

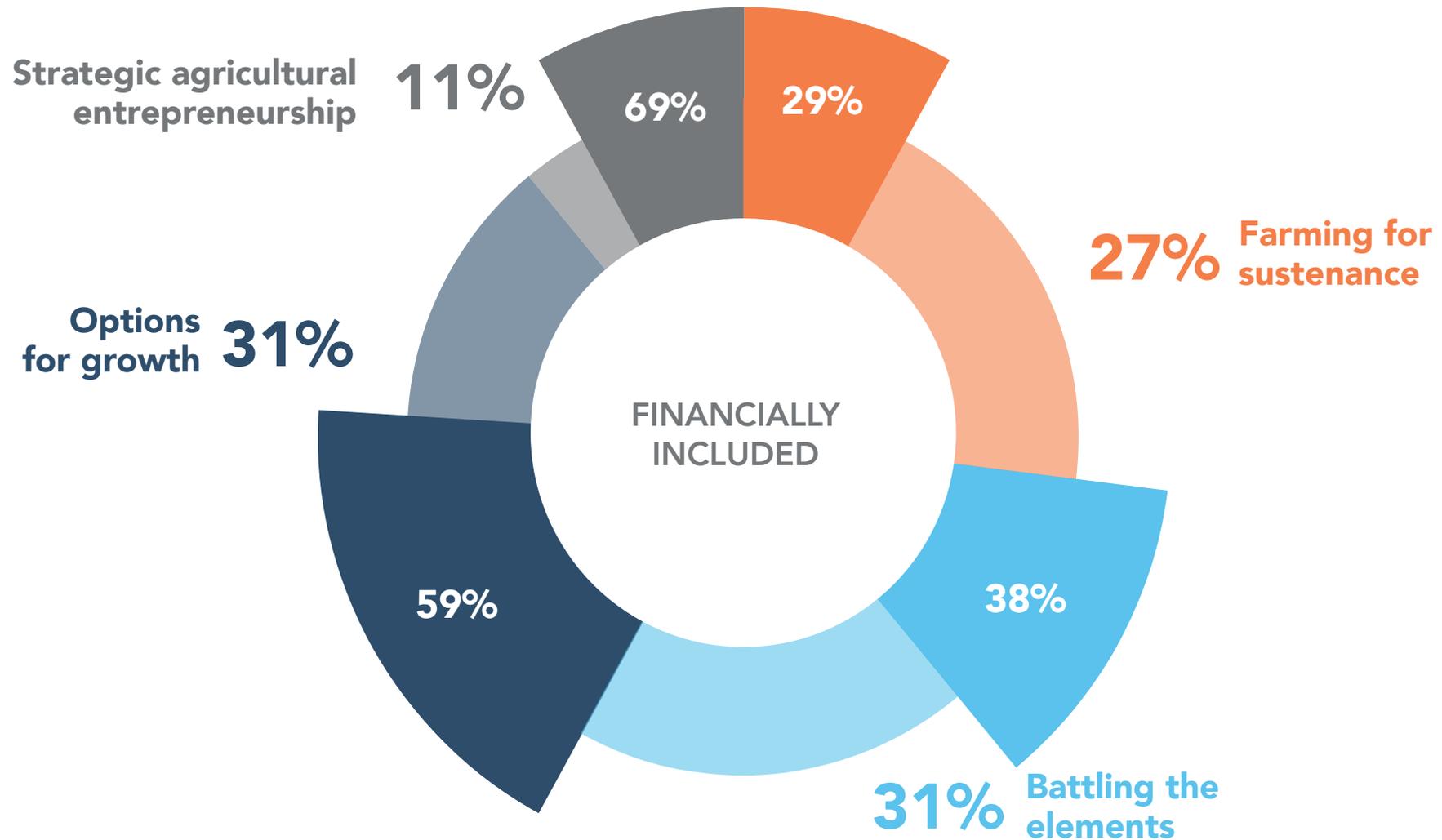
- Engaged in highly diverse, successful agricultural activities
- Most stable and economically well-off segment
- Many income sources and the highest mean income, with none living in extreme poverty
- More financial tools at hand

# Four segments of smallholder households in Bangladesh



# Four segments of smallholder households in Bangladesh

Percentage of segments financially included



# What does the data teach us?

**Smallholder families in Bangladesh can be segmented into a few key profiles that share common characteristics.**

- The agricultural sector in Bangladesh is vast and diverse, and so are smallholder families. Various profiles of smallholder households grow crops and raise livestock, and are more and less connected to the financial sector.
- Looking at the key drivers of financial inclusion, four segments of smallholder households emerge. Their profiles range from low income, highly vulnerable families engaged in subsistence farming and without financial tools, to better-educated smallholder households with multiple income sources and a portfolio of financial and communications tools.
- Understanding the distinct profiles of smallholder households and designing tailored solutions is key to creating customer value and expanding financial inclusion.



## IMPLICATIONS

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# Market implications of the segmentation of smallholder households

- A collection of attitudinal, behavioral, and circumstantial factors defines smallholder farming households in Bangladesh. The segmentation model here offers a nuanced perspective, capturing the unique points within each segment and highlighting where they can be leveraged for positive market interventions.
- Smallholder farmers in Bangladesh are not a monolithic group. Instead, there are four segments that characterize the landscape. These four segments do have some points in common: They have access to mobile technology and some financial services, they already engage in sound financial practices like saving, and they desire a wider range of financial solutions. But there are key differences.
- Fostering greater financial inclusion, agricultural stability, and growth, as well as overall economic well-being, requires a specific approach for each segment.

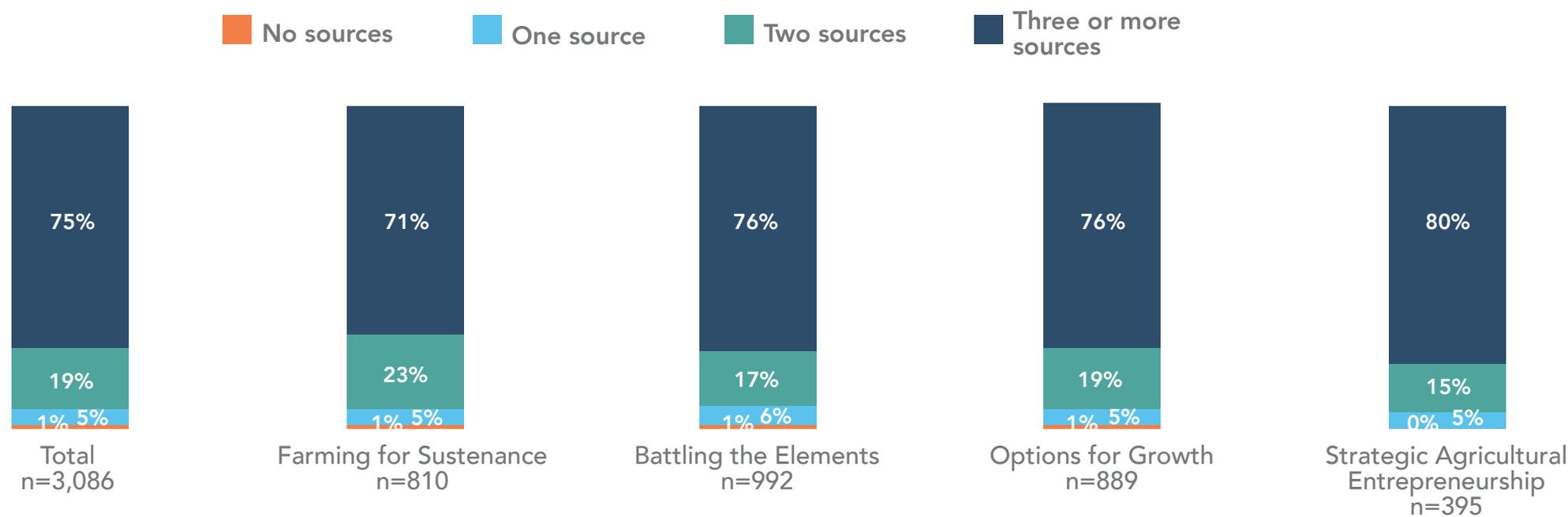
# Segment snapshots

- The **Farming for Sustenance** segment includes the most vulnerable smallholders. 77% of the members of this segment, which comprises 27% of the overall smallholder population, live in extreme poverty—living on under \$1.25 per day. This segment’s members exhibit the lowest rate of financial inclusion, but demonstrate many key components of readiness.
- The **Battling the Elements** segment contains many vulnerable members, albeit to a lesser extent than the Farming for Sustenance segment. 81% live below the poverty line at \$2.50 per day, but only 3% live below the extreme poverty line. Compared to the Farming for Sustenance segment, the Battling the Elements segment has more diversified income sources, more funds allocated to savings, and more use of financial services.
- The **Options for Growth** segment continues the trend of moving toward greater economic well-being, with over a third living above the poverty line. On the path to financial inclusion, this segment marks the first notable transition from NBFIs or MFIs to banks and mobile money providers.
- The **Strategic Agricultural Entrepreneurship** segment is the smallest, comprising just 11% of the population. Over two-thirds of this segment’s members live above the poverty line, and none lives below the extreme poverty line. 69% are financially included, with 41% of the segment’s members possessing a mobile money account.

# Better-off segments have somewhat more income sources.

## Number of income sources for the smallholder household

Sample: Smallholder farming households by segment, n=3,095.

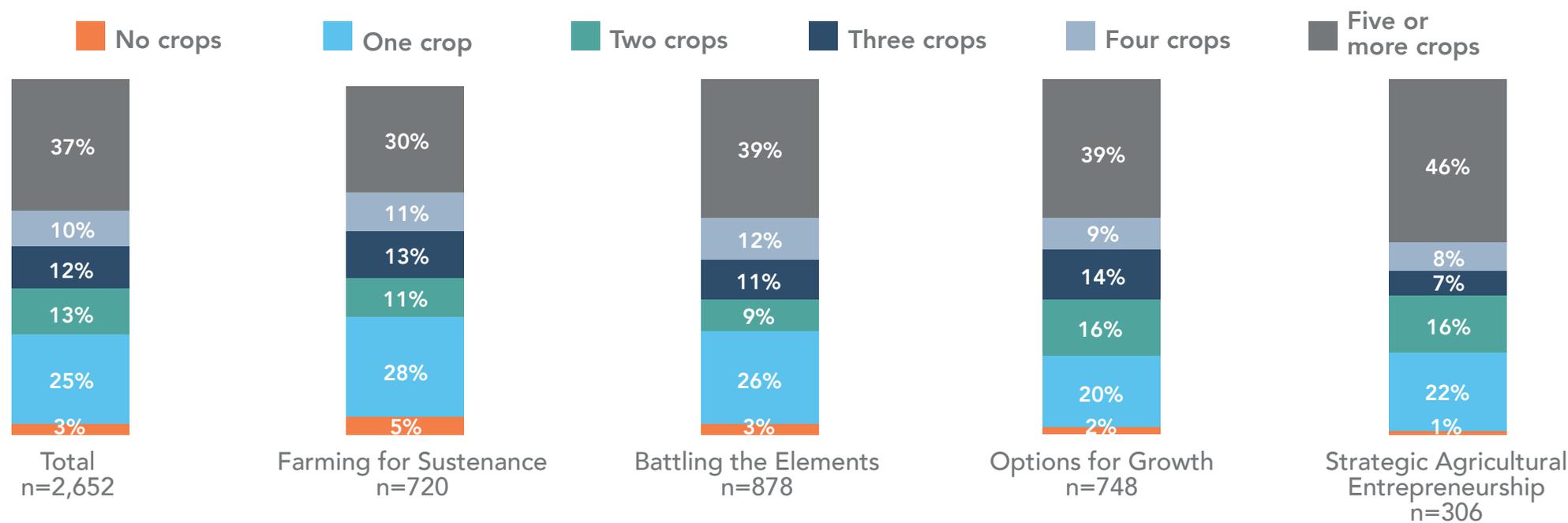


Better-off segments, **Options for Growth** and **Strategic Agricultural Entrepreneurship**, show somewhat more income-source diversity than lower-income, more vulnerable segments, **Farming for Sustenance** and **Battling the Elements**. That said, all segments do exhibit large degrees of income source diversity. Each segment has an average of over three income sources.

# Better-off segments also show more crop diversity.

## Number of crops grown for the smallholder household

Sample: Smallholder farming households growing crops by segment, n=2,652.

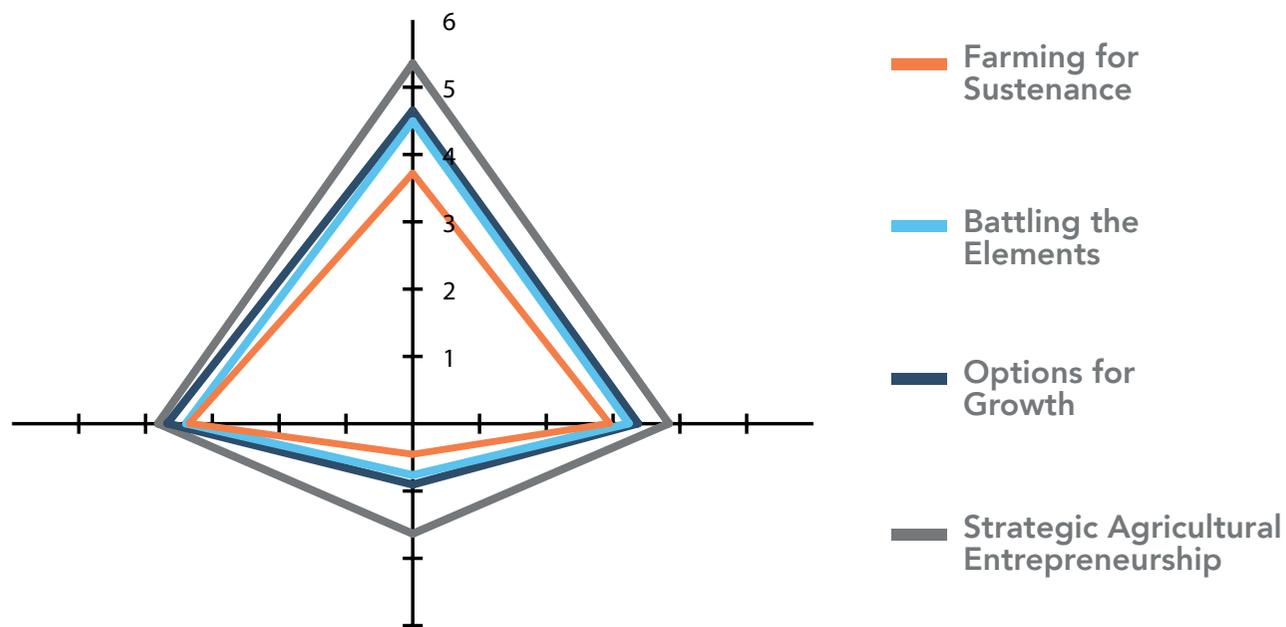


The four segments differ in the number of crops grown (for either consumption or sale). More vulnerable households that grow crops rely largely on one or two crops. As a result, they are less insulated against disruptive agricultural events, such as pests, natural weather events, or price fluctuations. On the other end of the spectrum, better-off segments that grow crops show more crop diversity, buffering them from disruptive events.

# Differences in available land are notable.

## Perceptual map of crops grown, income and land size

Sample: Smallholder farming households by segment. Note: A radar graph shows multiple dimensions on one plane to spatially depict the relationship between the different dimensions. This radar graph plots the following four dimensions: number of crops grown, number of crops grown for selling, number of income sources and maximum self-reported land size in hectares.

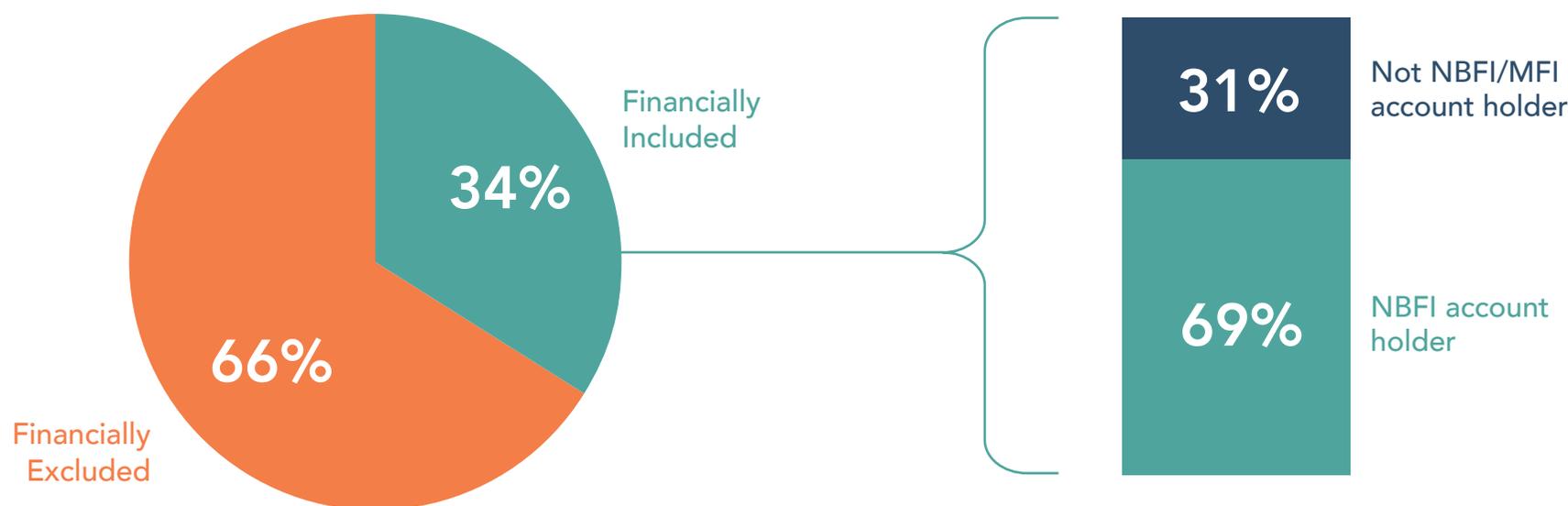


Increases in crop diversity across the four segments may be facilitated by stark differences in land availability. The maximum available land size reported by the **Strategic Agricultural Entrepreneurship** households is nearly four times that of for **Farming for Sustenance** households.

# NBFI and MFI accounts are key inroads for low-income segments.

## NBFI/MFI account ownership for financially included vulnerable segment members

Sample: Smallholder farmers belonging to Farming for Sustenance and Battling the Elements segments, n=1,803.



Facilitating smallholder strength must include inroads into vulnerable segments, which are primed for further financial service adoption. NBFI and MFI account ownership drive financial inclusion for the most vulnerable smallholders in the **Farming for Sustenance** and **Battling the Elements** segments. 34% of the smallholders in these two segments are financially included. Of those included smallholders, 69% have an account at an NBFI or MFI. Comparatively, these two segments have a bank account and mobile money account ownership rate of 33% and 26%, respectively.

# Low-income segments are excluded, but present opportunity.

- The use of NBFIs and MFIs is high relative to other formal financial institutions in the **Farming for Sustenance** and **Battling the Elements** segments. It is thus important that agricultural and financial service providers develop products and solutions that can be integrated with these NBFIs or MFI accounts.
- Though NBFIs and MFIs have made inroads with these vulnerable populations, there is much work to be done. Two-thirds of the **Farming for Sustenance** and **Battling the Elements** members are financially excluded. Overall changes in financial inclusion in Bangladesh will not go far unless these vulnerable smallholders are specifically targeted and served.
- The excluded members of these segments are not unreachable. In fact they show factors that makes them seem poised for inclusion. Of the financially-excluded members of the **Farming for Sustenance** and **Battling the Elements** segments:

**52%**

owns a mobile phone

**16%**

have used a mobile phone, though they do not own one

**40%**

have used financial services in the past

**48%**

who own their own phones, have previously used financial services

- Therefore a substantial portion of the **Farming for Sustenance** and **Battling the Elements** segments, and thus the smallholder population, has financial experience and owns a channel to use financial services.

# Financial inclusion differs among less vulnerable segments.

## Multiple institution account ownership by segment type

Each cell is the proportion of the segment grouping population

SEGMENT	BANK + MM	BANK + NBF/MFI	MM + NBF/MFI
<b>VULNERABLE</b> <ul style="list-style-type: none"> <li>Farming for Sustenance</li> <li>Battling the Elements</li> </ul>	6%	16%	10%
<b>LESS VULNERABLE</b> <ul style="list-style-type: none"> <li>Options for Growth</li> <li>Strategic Agricultural Entrepreneurship</li> </ul>	27%	18%	19%

The less vulnerable segments, **Options for Growth** and **Strategic Agricultural Entrepreneurship**, are characterized both by a greater rate of financial inclusion and a different nature of that inclusion relative to the **Farming for Sustenance** and **Battling the Elements** segments.

In the **Options for Growth** and **Strategic Agricultural Entrepreneurship** segments, 62% of members are financially included. But there is no dominant driver of inclusion: 43% of the segments' members have an account at an NBF/MFI and 59% have a bank account, and 52% have a mobile money account. A substantial portion have accounts at multiple institution types: Over a quarter have both a bank account and a mobile money account.

# Better-off segments make more advanced and business transactions.

- A substantial portion of the **Options for Growth** and **Strategic Agricultural Entrepreneurship** segment members use their accounts to conduct advanced, business-related transactions.

**83%** of these mobile money account holders paid employees, bought inputs, and received payments for their agricultural activities using their mobile money accounts.

- These high rates of bundled account use, on top of a meaningful portion of the **Options for Growth** and **Strategic Agricultural Entrepreneurship** population engaging in digital financial service-based business transactions, shows room for financial services and product providers to target an economically empowered, technically savvy, and financially equipped market share.
- **Options for Growth** and **Strategic Agricultural Entrepreneurship** members offer a new market, as well as a vehicle to build a wider ecosystem.

**80%** With over 80% using their mobile money account for advanced business transactions, the foundation for an expanded advanced, digital financial-services-based product infrastructure exists.

- Targeting the **Options for Growth** and **Strategic Agricultural Entrepreneurship** members could provide immediate returns and leverage more downstream markets.



## RESOURCES

Photo by Pinu Rahman / World Bank

# Resources

## National Surveys and Segmentations of Smallholder Households:

Bangladesh:

[Paper](#) | [User Guide](#) | [Data](#)

Nigeria:

[Paper](#) | [User Guide](#) | [Data](#)

Uganda:

[Paper](#) | [User Guide](#) | [Data](#)

Tanzania:

[Paper](#) | [User Guide](#) | [Data](#)

Mozambique:

Paper: [Pt](#) [En](#) | User Guide: [Pt](#) [En](#) | [Data](#)

Côte d'Ivoire:

Paper: [Fr](#) [En](#) | User Guide: [Fr](#) [En](#) | [Data](#)

## Financial Diaries with Smallholder Households

[Executive summary](#)

[Full paper](#)

[User Guide](#)

[Video](#)

[Data](#)

Tanzania: [Data](#)

Mozambique: [Data](#)

Pakistan: [Data](#)

[Designing Digital Financial Services for Smallholder Families: Lessons from Zimbabwe, Senegal, Rwanda, and Cambodia](#)

[Segmentation of Smallholder Households:](#)

[Meeting the Range of Financial Needs in Agricultural Families](#)

[Serving Smallholder Farmers: Recent Developments in Digital Finance](#)

[Digitizing Value Chain Finance for Smallholder Farmers](#)

[Smallholder Households: Understanding Demand, Driving Innovation](#)

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