

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

Insights from the Financial Diaries and Household Survey in Tanzania



OCTOBER 2017

TANZANIA

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Photo by Hailey Tucker

## BACKGROUND

3

# 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

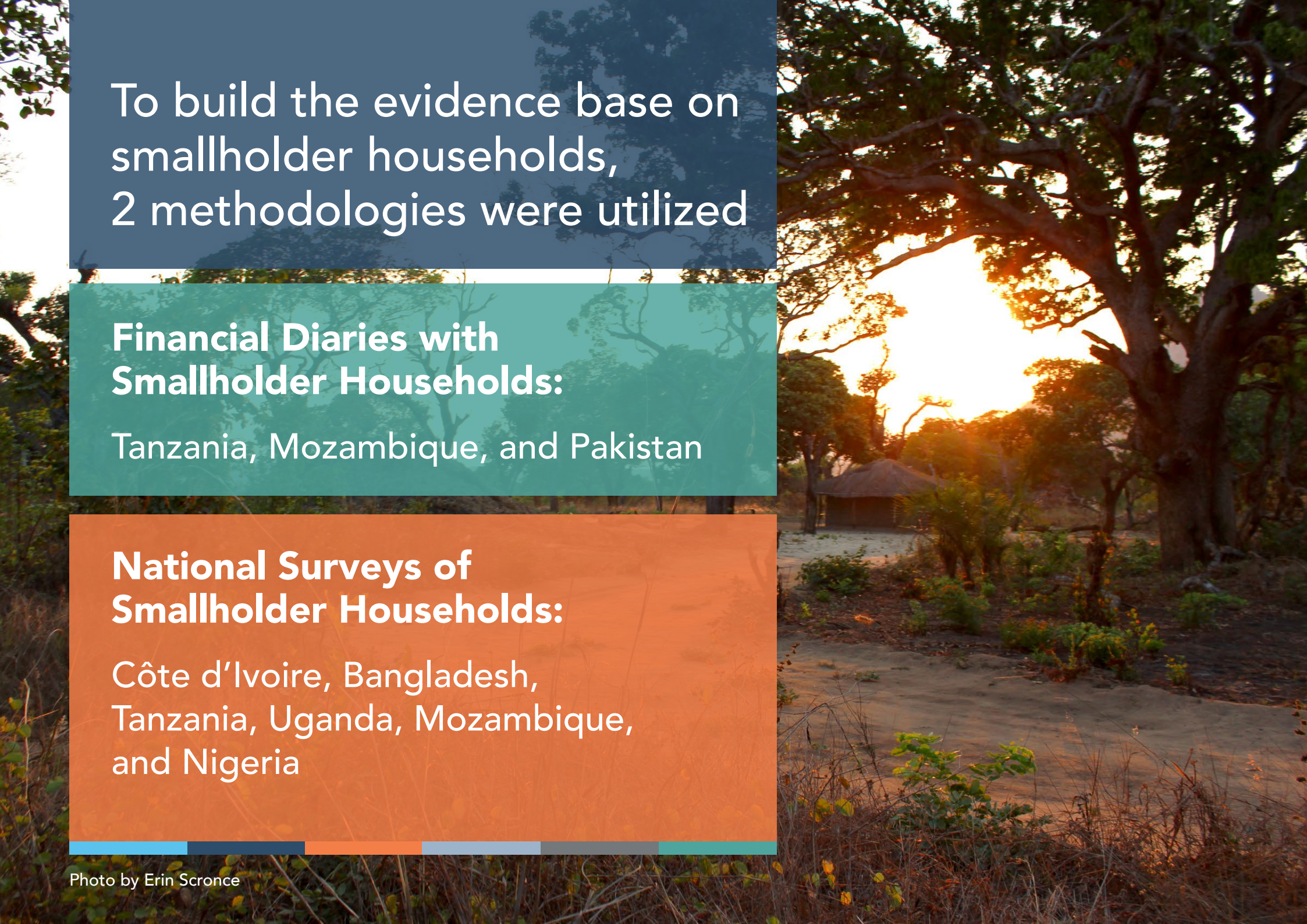


TANZANIA



PAKISTAN





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

**Financial Diaries with  
Smallholder Households:**

Tanzania, Mozambique, and Pakistan

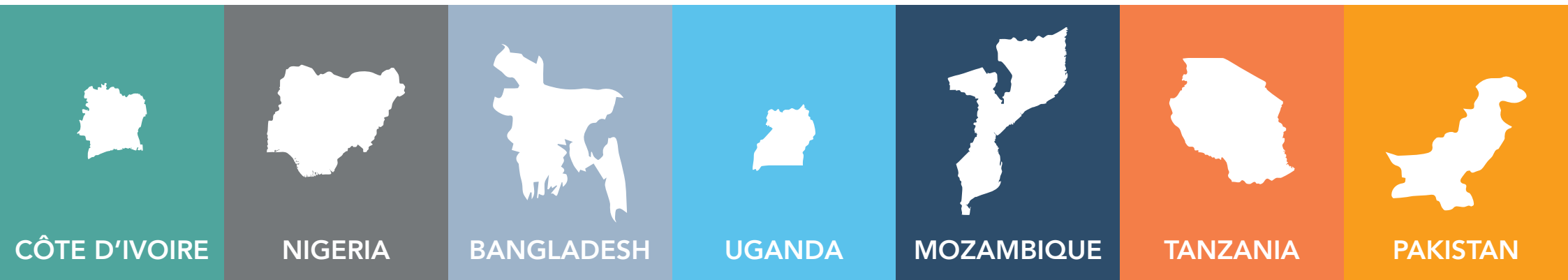
**National Surveys of  
Smallholder Households:**

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



# Data sources

Six countries have data from  
National Surveys of Smallholder Households



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



Agriculture is a pillar of the economy in Tanzania. It contributes over one-quarter of the GDP and employs four-fifths of the labor force.\*

Many smallholder farmers in Tanzania rely on income from their agricultural activities, as well as income from off-farm sources such as casual labor on other farms, trading, and remittances from relatives.

A range of challenges confront smallholder farmers in Tanzania, including obtaining and paying for quality seeds, fertilizer, and pesticides; transporting their goods to market on straining road networks; and limited post-harvest storage.

While the public and private sector have made significant investments in the financial infrastructure, still smallholders use very few financial tools.

To explore their financial needs and behaviors, in 2015 CGAP and the Financial Sector Deepening Trust (FSDT) in Tanzania, working closely with the Tanzania Bureau of Statistics, conducted a nationally representative survey of smallholder households.

In 2014-2015 CGAP also conducted financial diaries with a group of smallholder households near Mbeya.

This presentation highlights key insights from both the national survey and the financial diaries.

\*Source: USAID, Economic Growth and Trade. [www.usaid.gov/tanzania/economic-growth-and-trade](http://www.usaid.gov/tanzania/economic-growth-and-trade)



# National Survey of Smallholder Households

## Sample Design

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

## Sampling Frame

Working closely with the Tanzania Bureau of Statistics, InterMedia conducted a household listing operation in randomly selected enumeration areas (EAs) between 7 December 2015 and 20 January 2016 to construct a reliable sampling frame. The listing operation was implemented by Ipsos Tanzania, 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

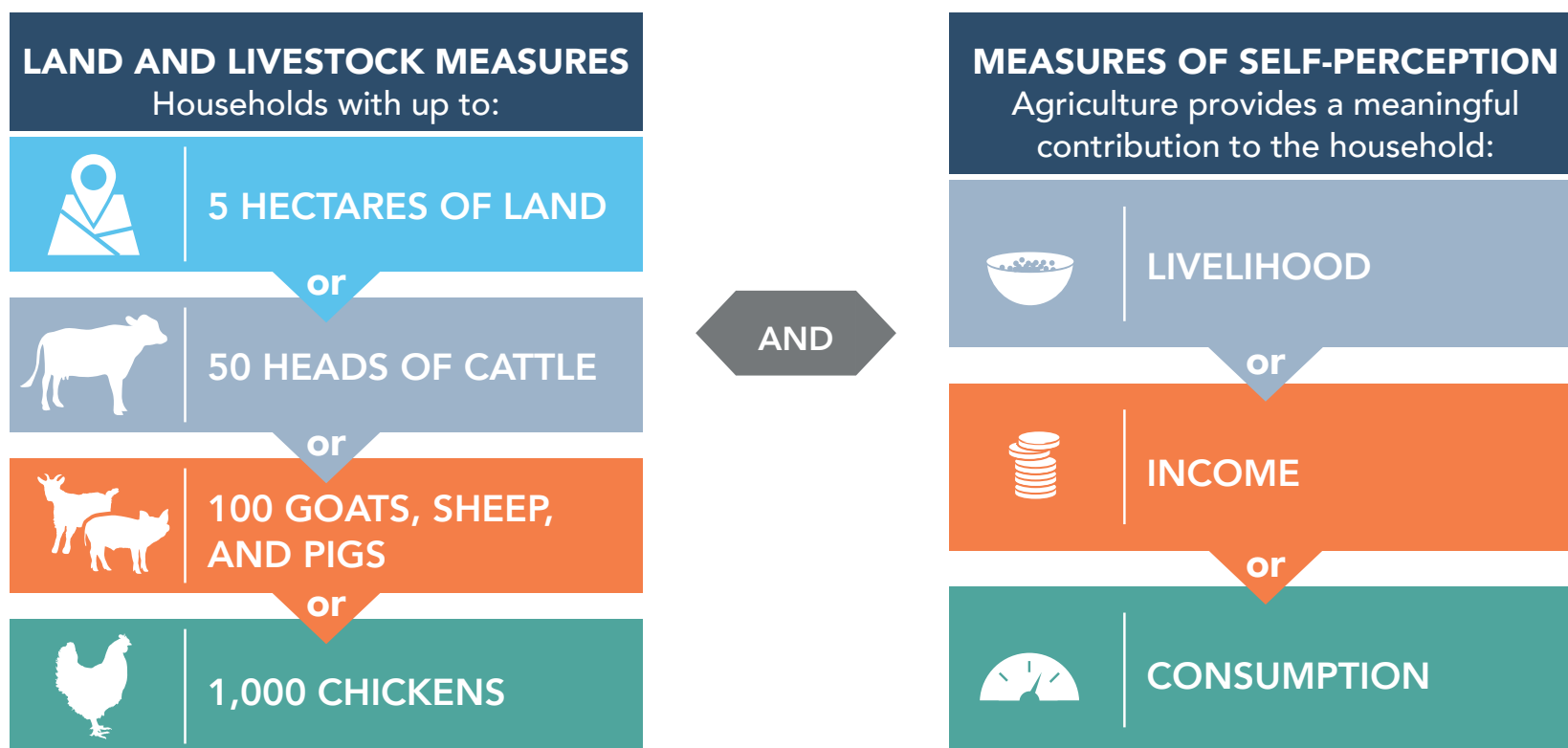
The questionnaire was translated into Kiswahili and then pretested and validated to ensure the integrity of the questions and that they were in line with social and cultural customs. Data collection took place from 6 February to 8 March 2016, using computer-assisted data collection tools that regularly yielded data for analysis and quality control to provide timely feedback to field staff. The survey was implemented by Ipsos Tanzania, InterMedia's local field partner.



# National Survey of Smallholder Households

*Identification of relevant smallholder households to sample*

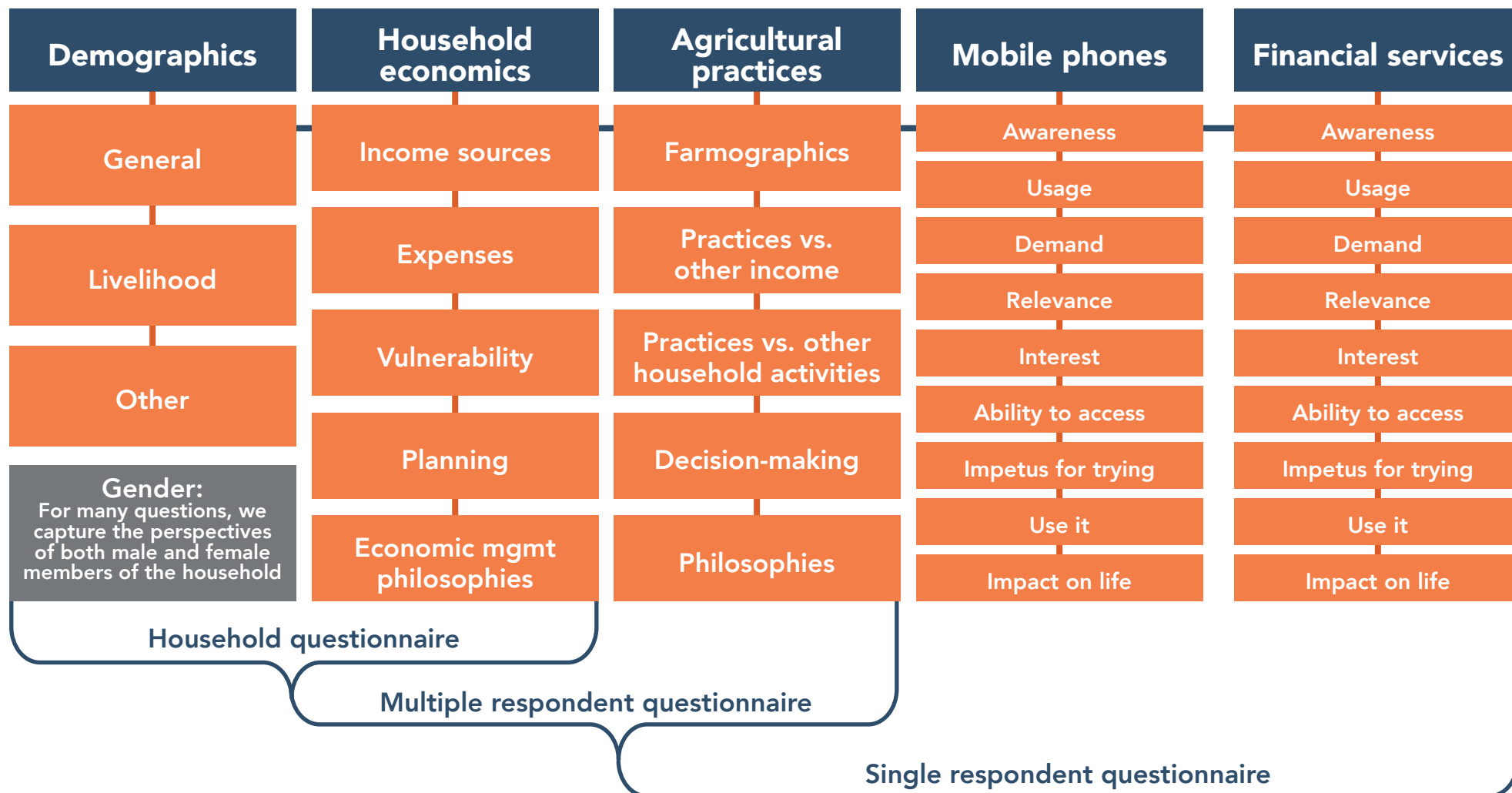
Listing criteria for the national surveys of smallholder households



CGAP conducted national surveys of smallholder households in Tanzania, Uganda, Mozambique, Côte d'Ivoire, Nigeria, and Bangladesh. 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*



**MOZAMBIQUE**

Sample households:  
**93**

Monthly p.c. net income:  
**\$5.50**

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



**TANZANIA**

Sample households:  
**86**

Monthly p.c. net income:  
**\$10**

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



**PAKISTAN**

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*

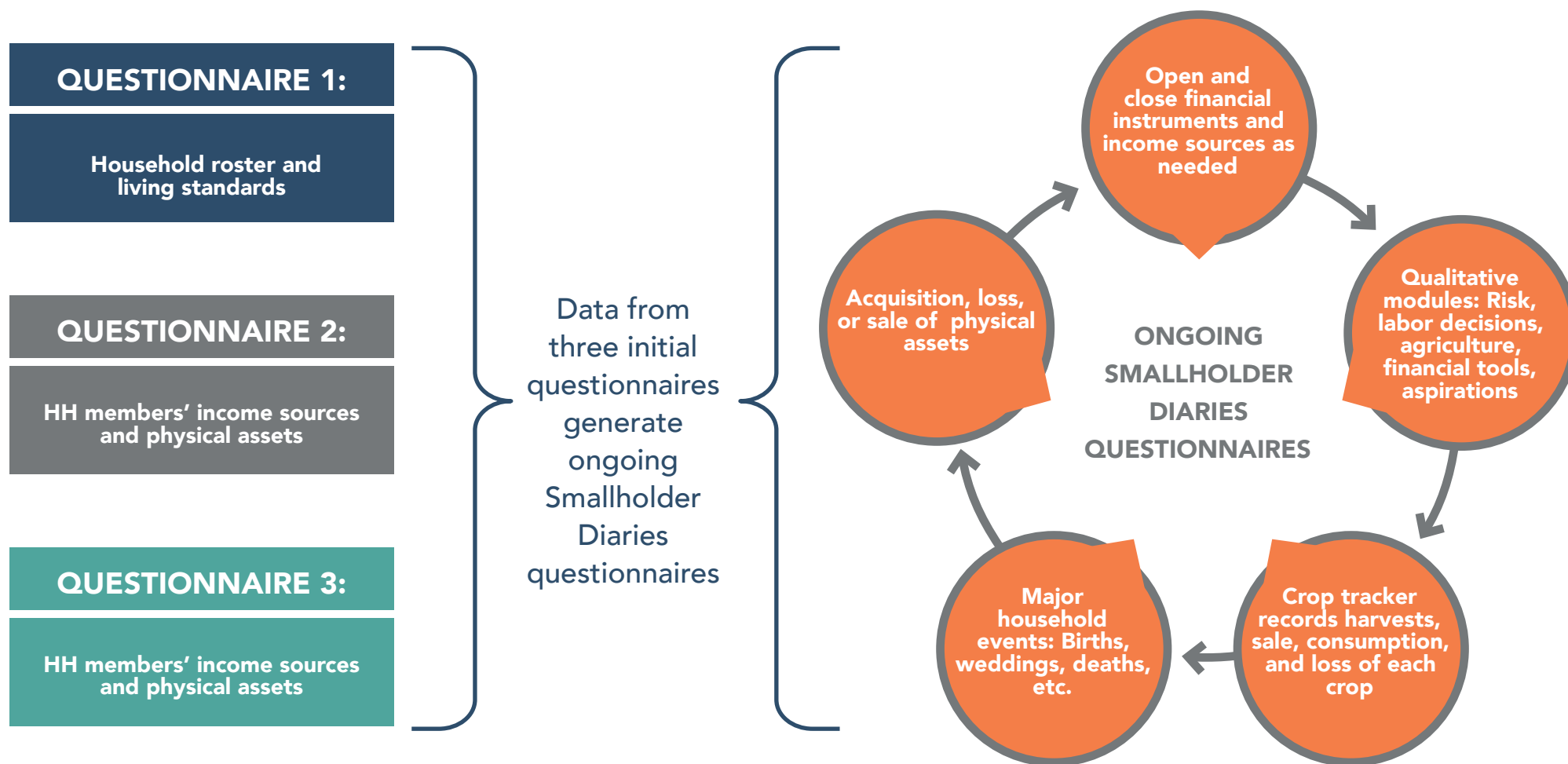




Photo by Erin Scronce

WHY IT MATTERS

14



# Smallholder agriculture is important to Tanzania...

Agriculture in Tanzania represents\*:

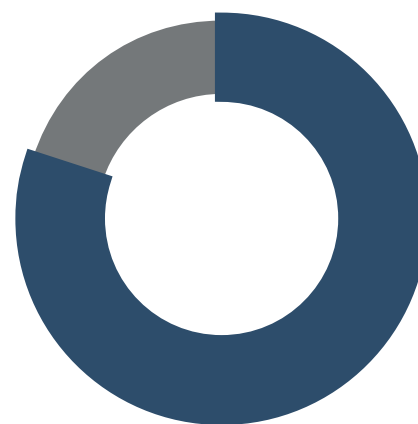
**80%**  
Population



**25%**  
GDP



**27%**  
export earnings



Over  
**80%**  
of cultivated land (by area) in Tanzania  
is worked by smallholder farmers

\*Source: "Contract Farming Schemes in Tanzania: Benefits and Challenges" Lucas Mwimo, Wilfred Mbowe, Camillus Kombe, Bernard Kibesse, Mussa Mziya, Maduhu Kazi, James Machemba, Sungura Mashini, Zegezze Mpemba, Moto Lugobi, Nicas Yabu, Ernest Ndunguru. Bank of Tanzania. Bank of Tanzania WP No. 8, January 2016

# ...but smallholder families are struggling.

In Tanzania, agriculture is a pillar of the economy and national identity. Agriculture employs over three-quarters of the population, and most are in smallholder households.



But approximately

## 85%

of rural households live in poverty, nearly **double** the national figure

And over half of smallholder households live in extreme poverty, on less than

## \$1.25

per day

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

**85%**

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

**96%**

of smallholders sell their crops and livestock without a contract

**92%**

of smallholders have a voter's card for identification

**47%**

of smallholder households own less than one hectare of agricultural land

**89%**

of smallholders own a basic phone without internet capability

**71%**

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

**99%**

of payments for the sale of agricultural outputs are in cash

**23%**

of smallholders have ever entered a bank, and only 10% have a bank account in their name

**97%**

of smallholders intend to keep working in agriculture

**77%**

of smallholders store crops after harvest, **58%** in the home

**76%**

of smallholders have heard of mobile money, but only 49% have a mobile money account





Photo by Erin Scronce

## INSIGHTS

# 18

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

# 7 insights



1

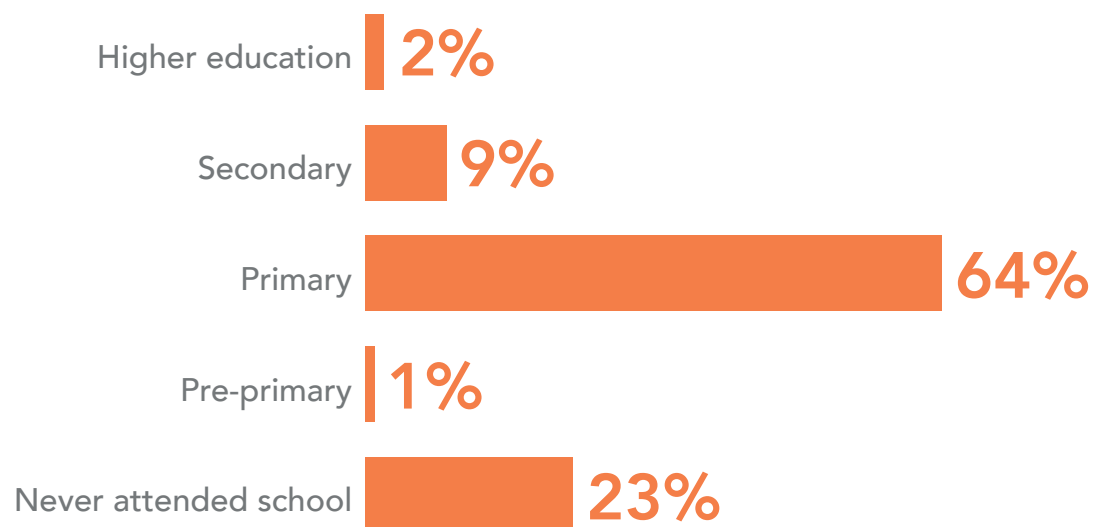
# Demographics



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

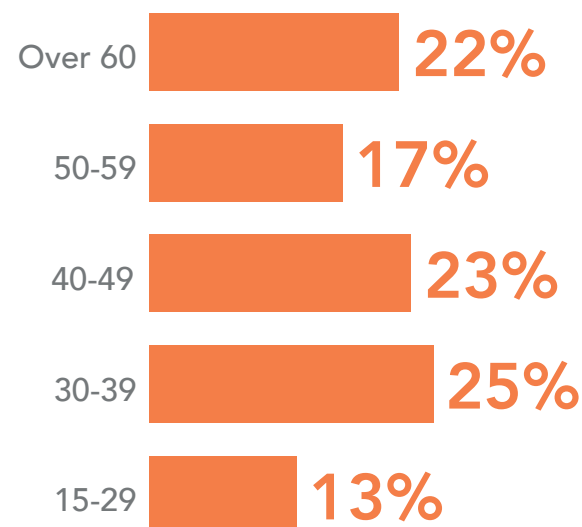
## Highest education attended by head of household

Sample: Smallholder households, n=2,993.



## Age of head of household

Sample: Smallholder households, n=2,993.

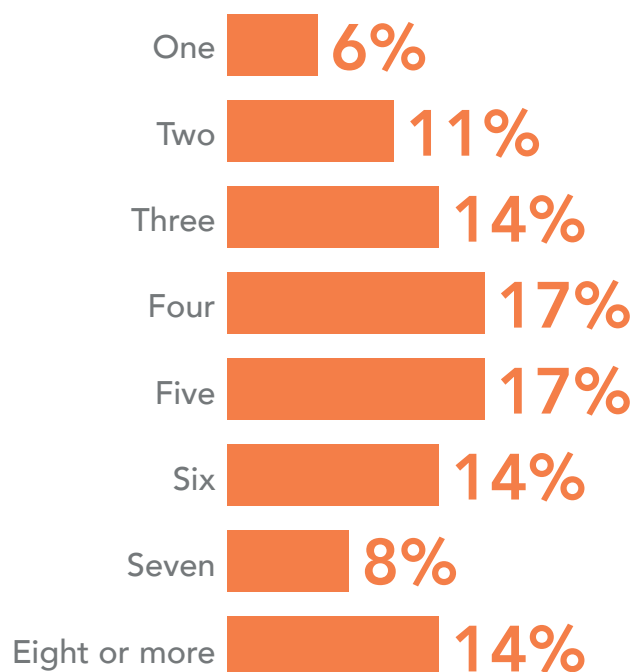


Among smallholder families in Tanzania, 39% of the household heads are at least 50 years old. Most have completed primary education (64%), but over one-fifth never attended school.

# The size of smallholder households varies, but few live above the poverty line.

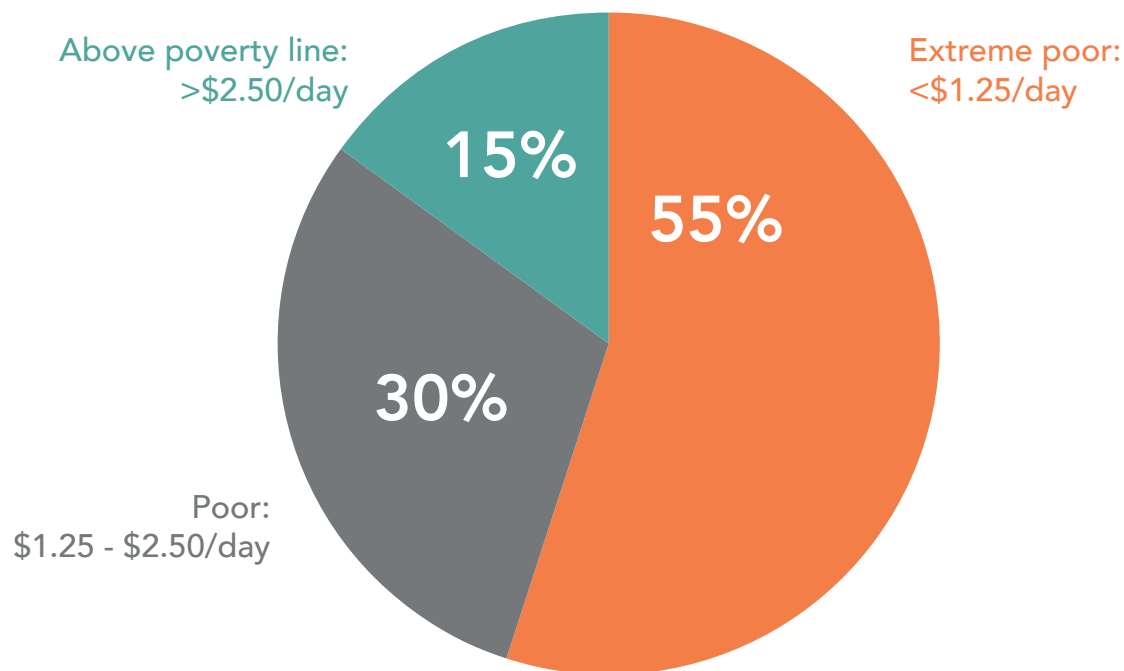
## Number of people in household

Sample: Smallholder households, n=2,993.



## Extreme poverty status of household

Sample: Smallholder households, n=2,993.

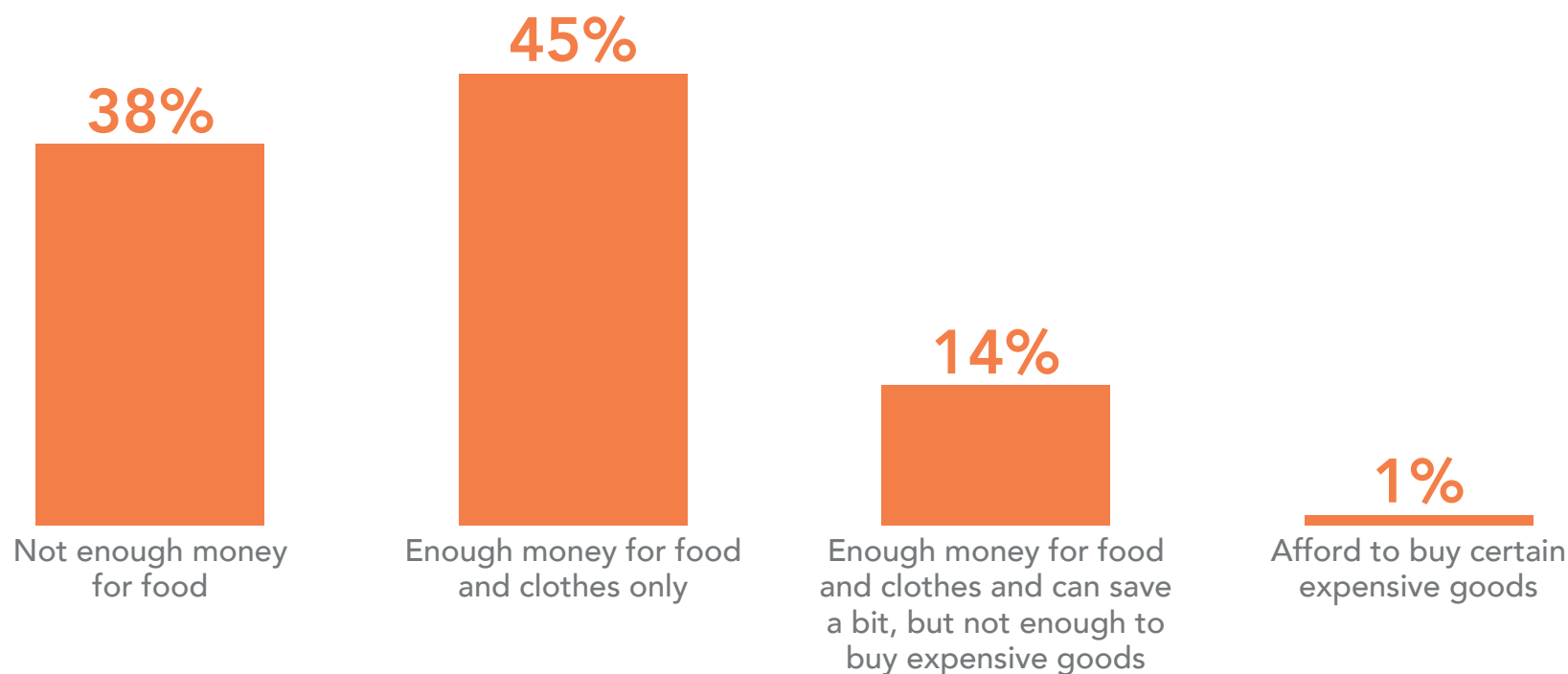


Six or more people live in roughly one-third of smallholder households in Tanzania.  
Over half of smallholder families live in extreme poverty.

# Almost 2 in 5 smallholder households do not have enough money for food.

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

Sample: Smallholder households, n=2,993.

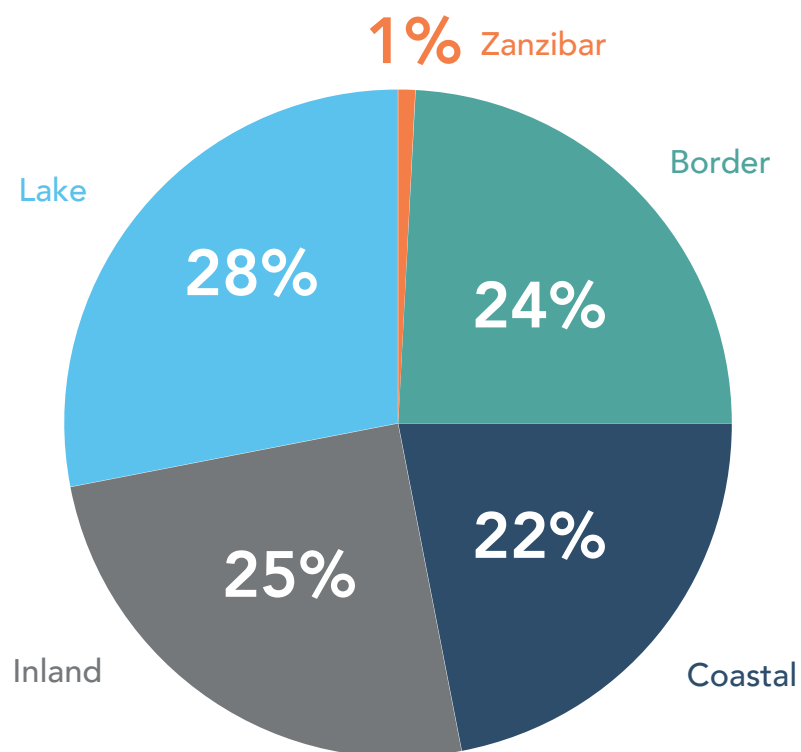




# Smallholder households are found throughout Tanzania, and are largely headed by men...

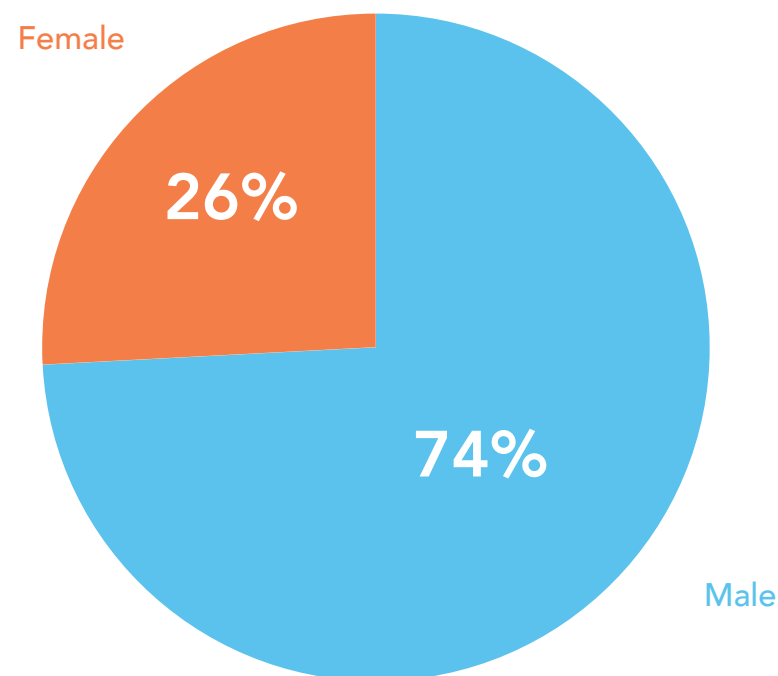
## Regional zone

Sample: Smallholder households, n=2,993.



## Gender of head of household

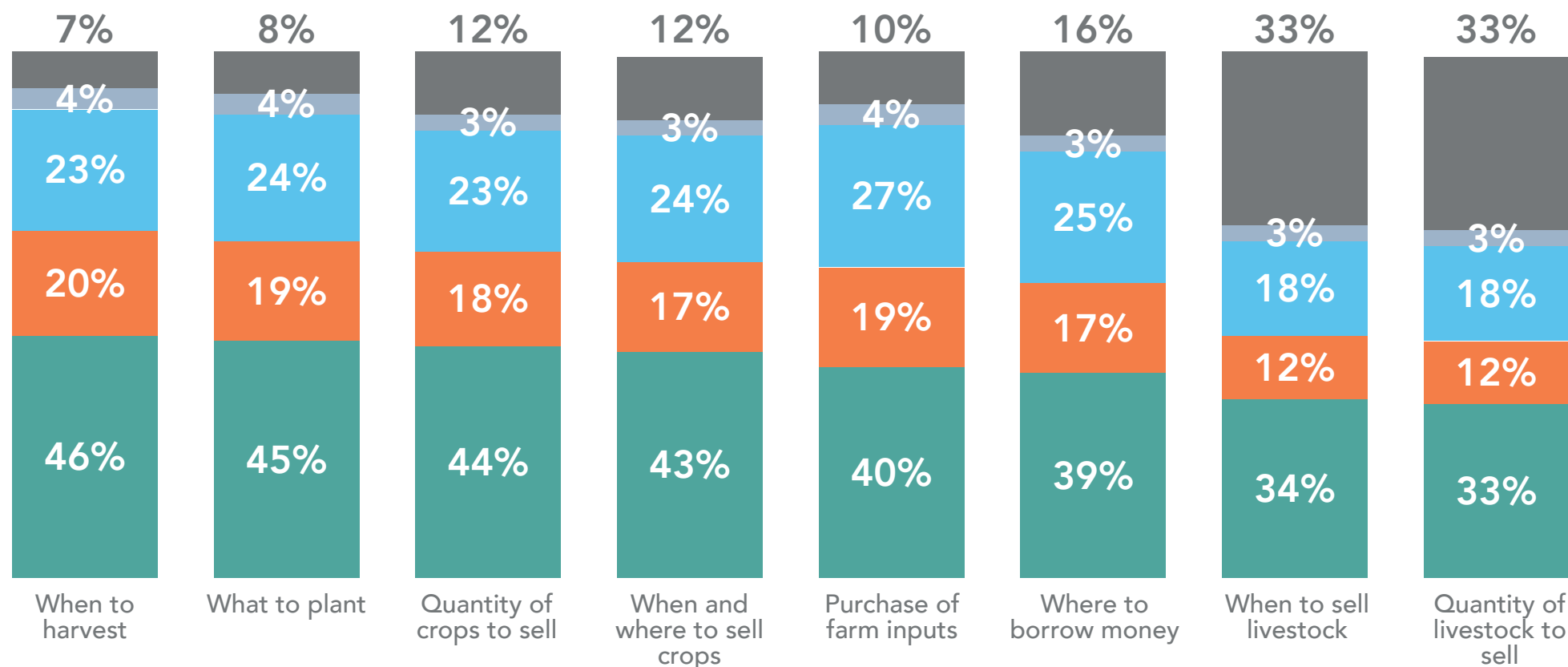
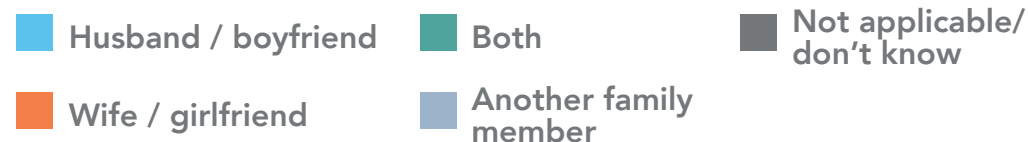
Sample: Smallholder households, n=2,993.



# ...though women play an important role in decision-making.

## Agricultural decision making

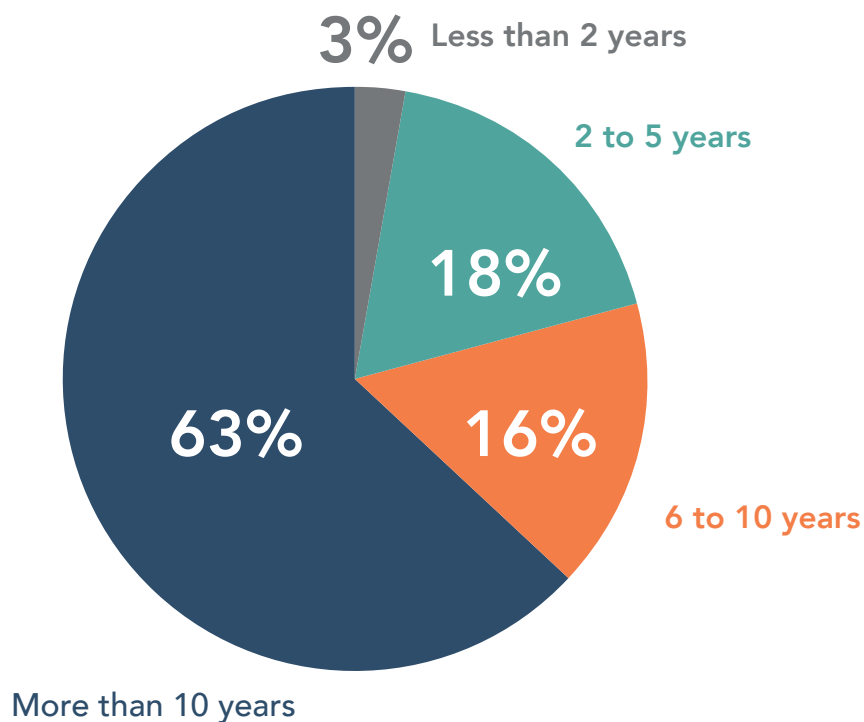
Sample: Smallholder households, n=2,993.



# Most smallholders have been farming for several years, though a new generation may be emerging.

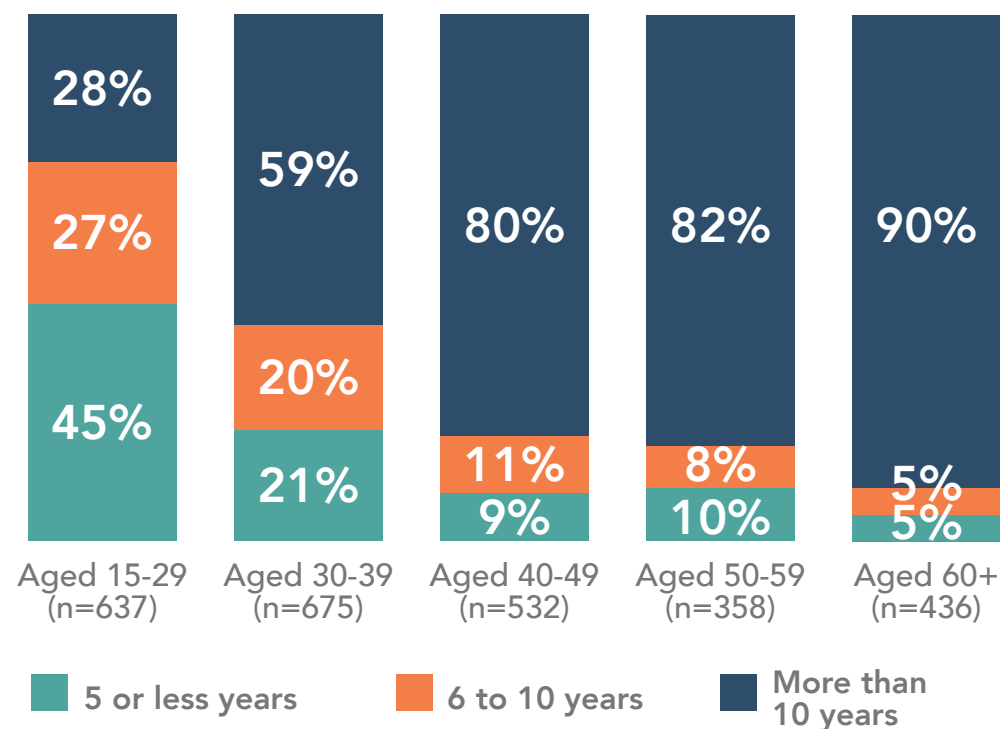
## How many years have you been farming?

Sample: Smallholder farmers who participate in household's agricultural activities, n=2,638.



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

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





# What does the data teach us?

**Smallholders households struggle with limited education and incomes, and high rates of poverty.**

- Smallholder farmer households span the country, are mostly led by men, and reflect an aging population.
- The head of the household in smallholder families typically has a primary education.
- Roughly two-fifths of all smallholder households indicate that they typically do not have enough money for food; another two-fifths have money only for food and clothes.
- Most smallholders have been farming for several years, though a new generation may be emerging.



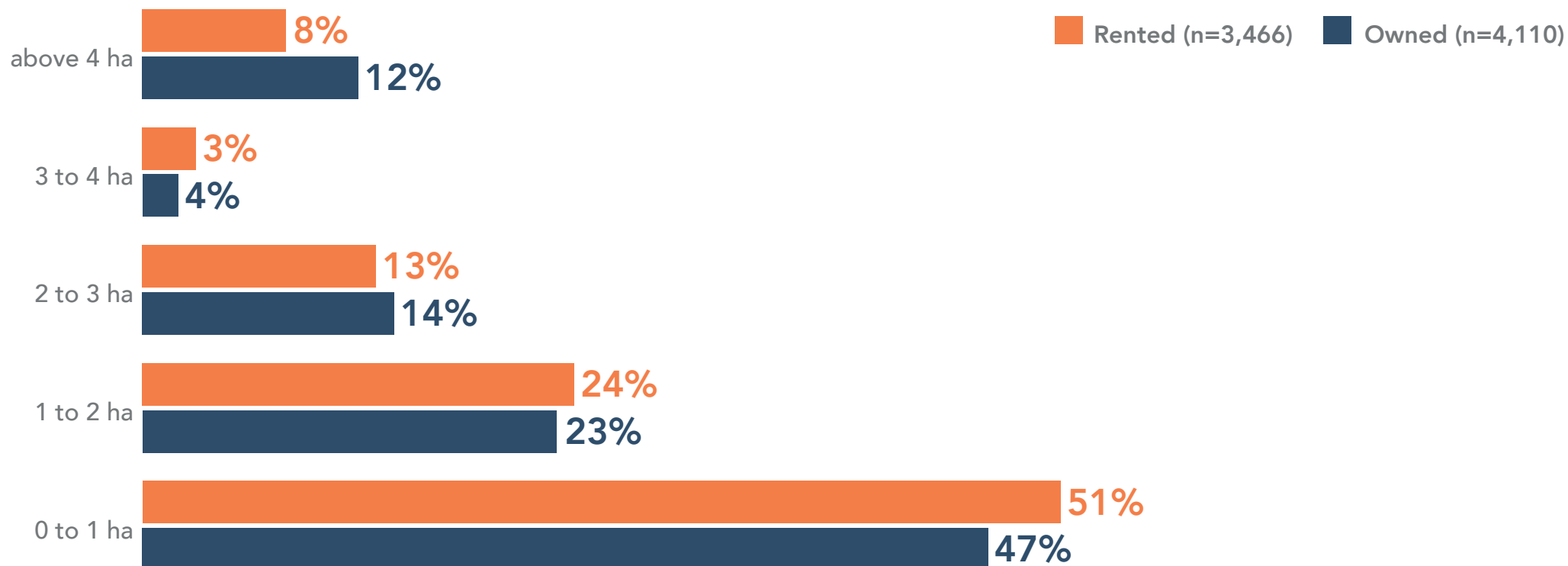
# 2

## Agriculture

# Half of smallholder households own less than one hectare.

## How many hectares (ha) of agricultural land do you own?

Sample: Smallholder households reported land n=4,742.

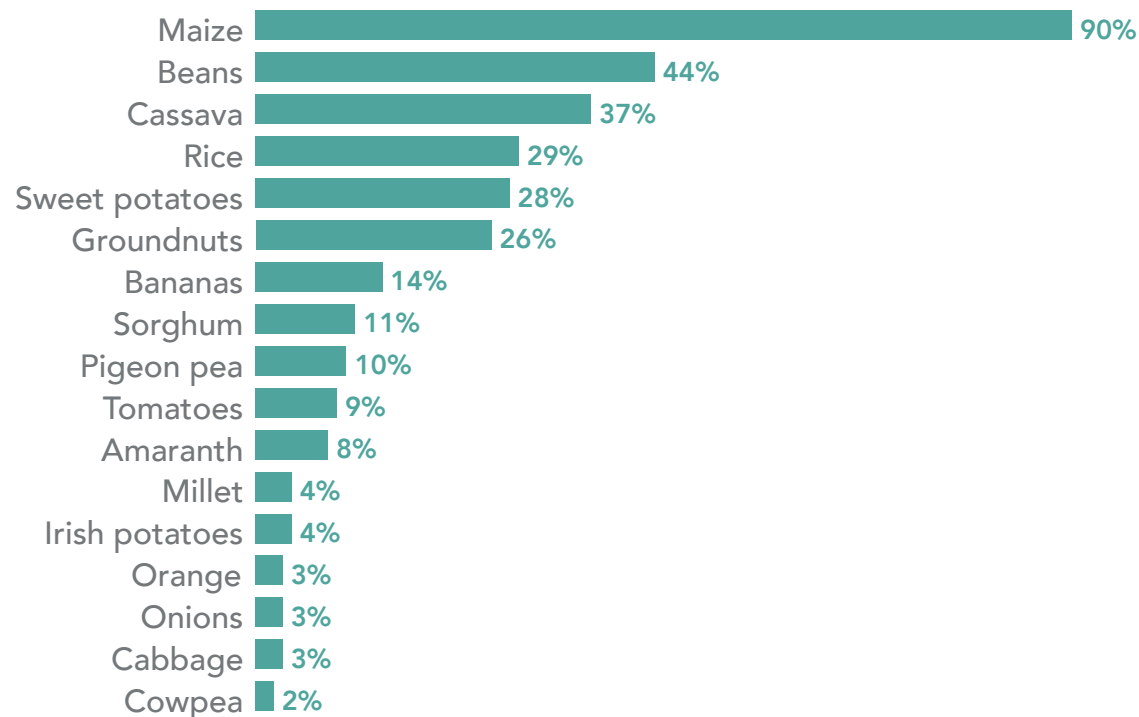


# Growing staple crops and some cash crops...

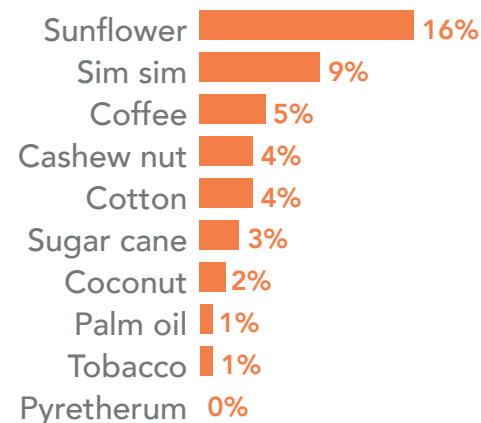
## Which of the following crops do you grow?

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

### FOOD AND STAPLE CROPS



### CASH CROPS



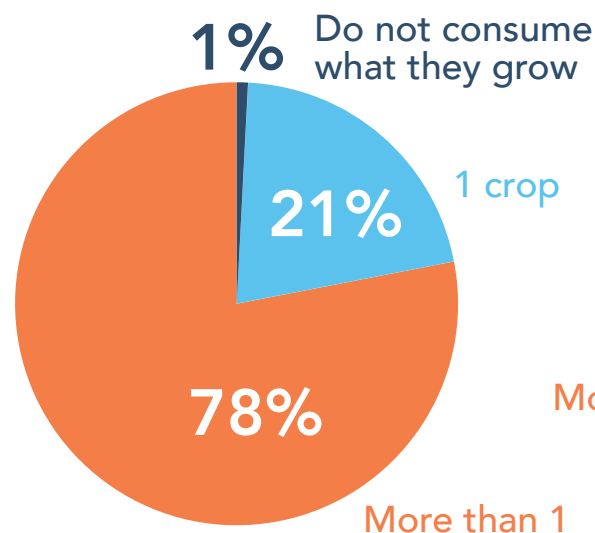
Smallholder families in Tanzania primarily grow food and staple crops. 63% of smallholders grow only staple crops, while only 1% grow only cash crops. 37% of smallholders grow both types.



# ...smallholder families consume, sell, and trade their output.

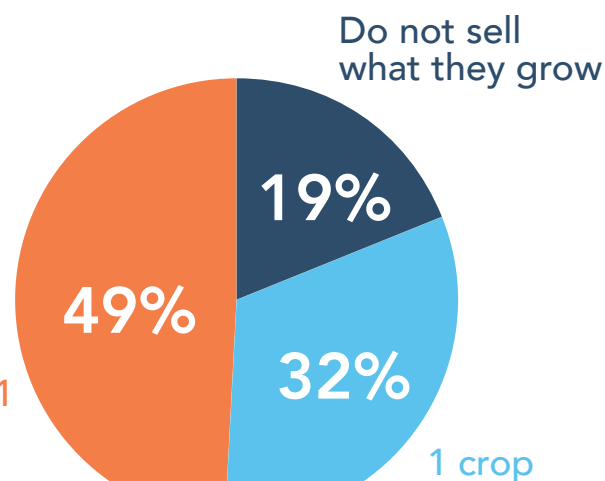
## Number of crops grown for consumption

Sample: Smallholder farmers who grow crops, n=4,726.



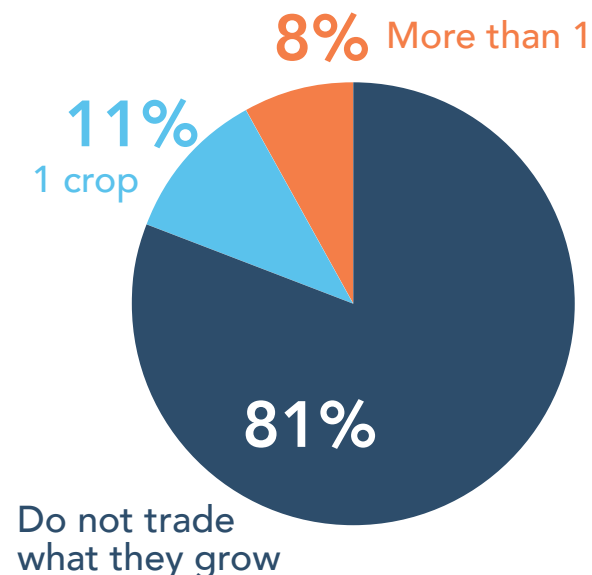
## Number of crops grown for selling

Sample: Smallholder farmers who grow crops, n=4,726.



## Number of crops grown for trading

Sample: Smallholder farmers who grow crops, n=4,726.

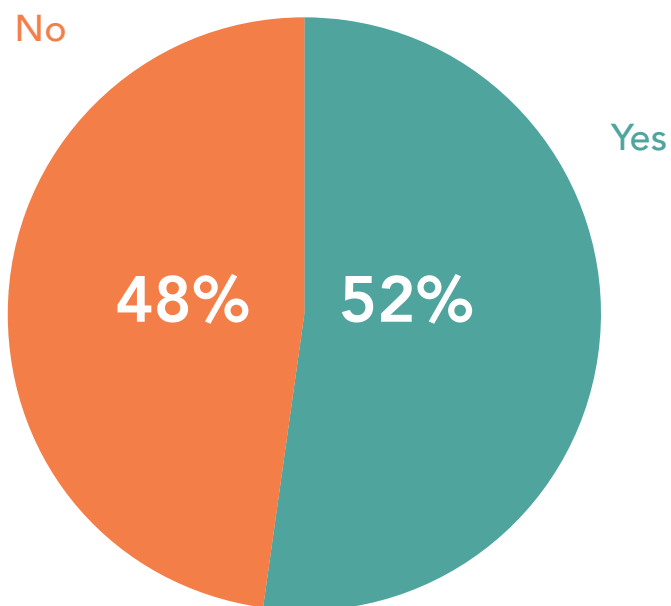


Most households use their crops in multiple ways. Consuming crops rates is more prevalent than selling or trading them. 62% of smallholder families grow crops to sell and consume, while only 17% sell, trade, and consume what they produce.

# Over half of smallholders also raise livestock.

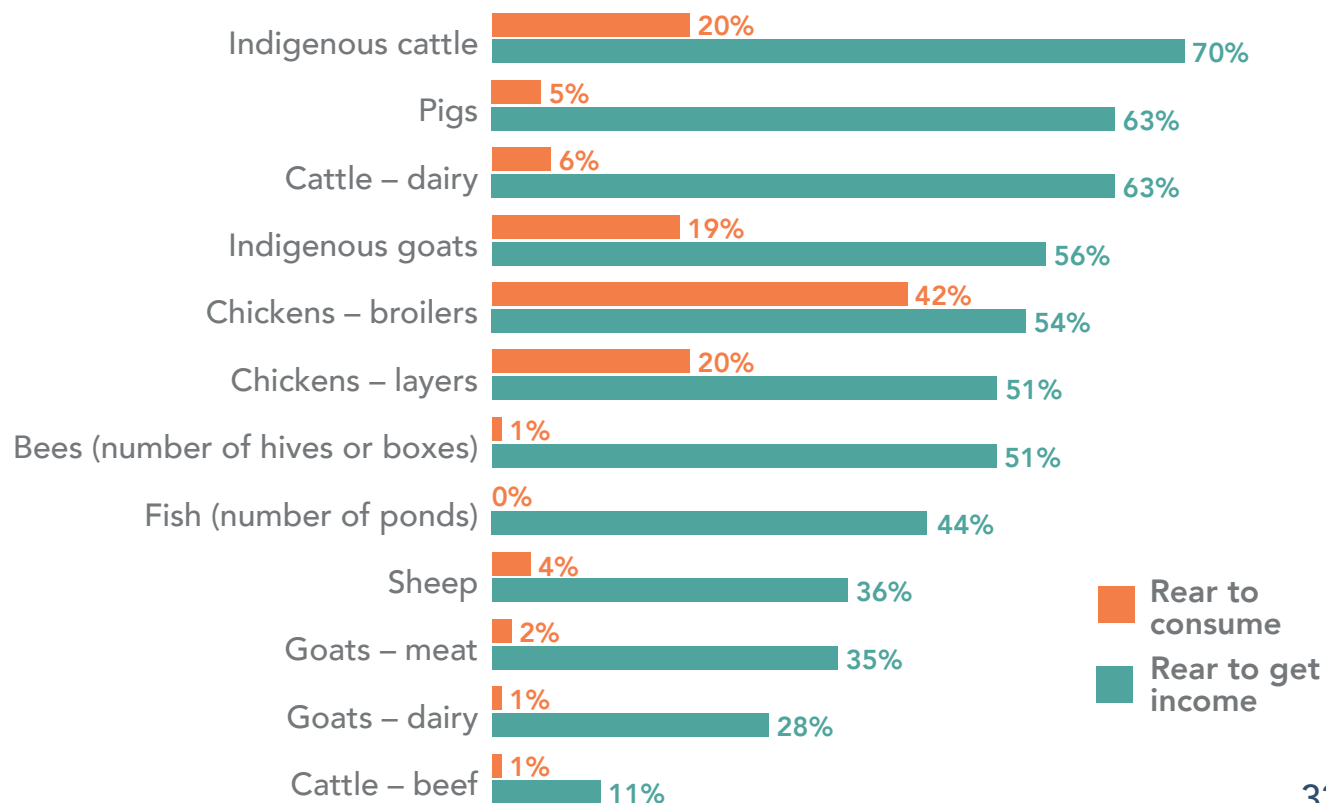
## Do you have any livestock, herds, other farm animals, or poultry?

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



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

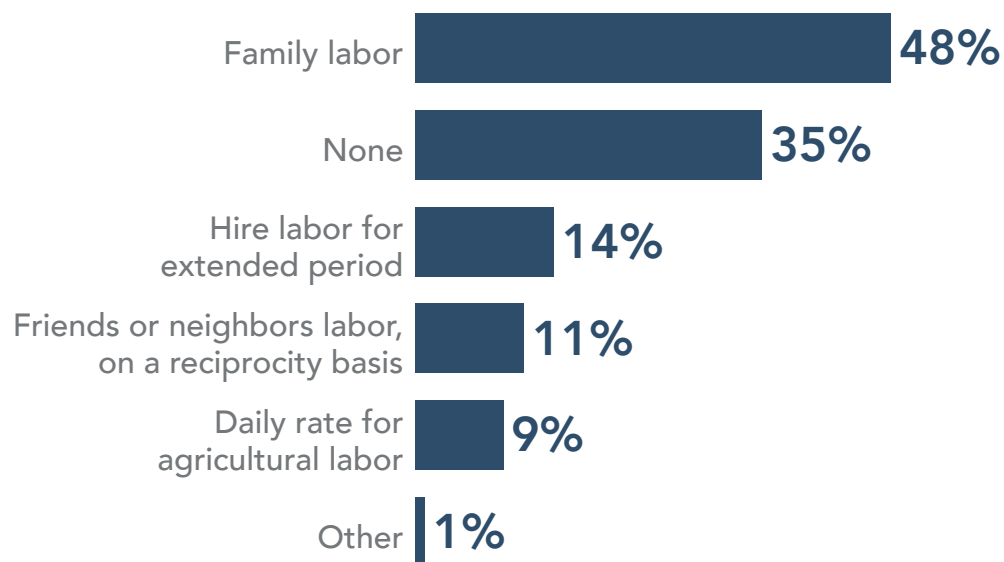
Sample: Smallholder farmers who have any livestock, herds, other farm animals or poultry, n=2,585. Multiple responses allowed.



# Family labor powers the farm.

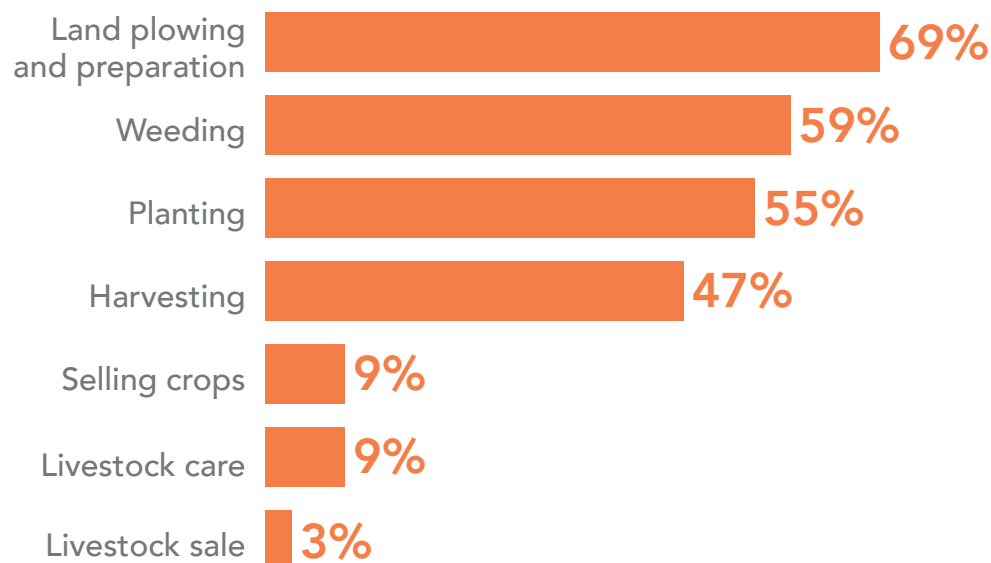
## For managing the land and livestock, what types of labor do you use?

Sample: Smallholder farmers who participate in household's agricultural activities, n=4,742.  
Multiple responses allowed.



## What do you use the labor for?

Sample: Smallholder farmers who use labor for managing land and livestock n=3,083.  
Multiple responses allowed.

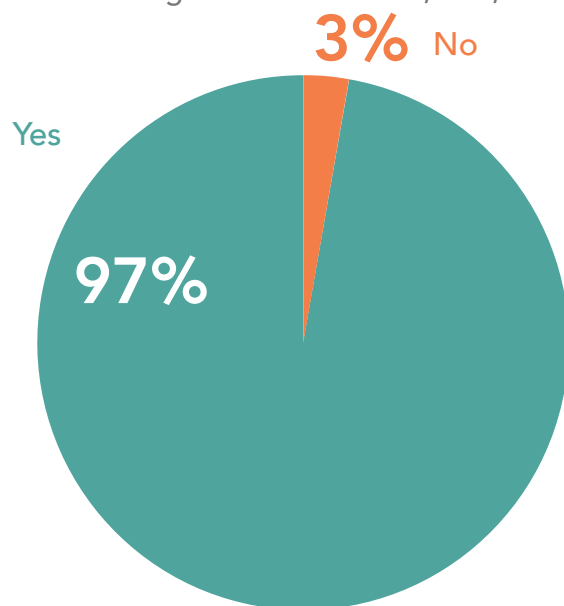


Smallholder farmers in Tanzania view their family's agricultural activities as a household business. They rely on themselves and their family for labor to support their agricultural activities. But more than a third do not use any labor at all.

# Smallholders are committed to agriculture.

## Do you intend to keep working in agriculture?

Sample: Smallholder farmers who participate in household's agricultural activities, n=2,638.



## 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, n=2,638.



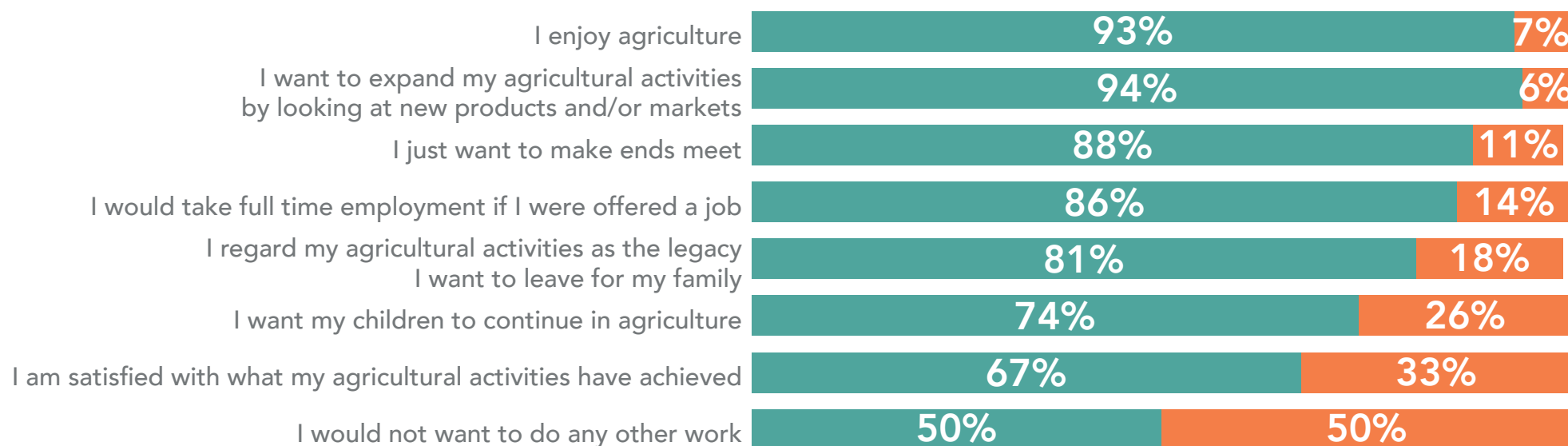
Consistent across smallholder households in Tanzania, agriculture emerges as a livelihood choice and key part of identity. Nearly all smallholder farmers intend to keep working in agriculture. This commitment is consistent across tenure in farming, gender, and self-reported poverty level (above).

# Smallholders enjoy agriculture and see it as part of their legacy.

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

■ Agree ■ Disagree

Sample: Smallholder farmers who participate in household's agricultural activities, n=2,638.



Smallholders have a range of feelings about their future aspirations. They demonstrate a strong commitment to agriculture and indicate that they enjoy the work and want to expand.

At the same time, most would take full-time employment if the opportunity arose, perhaps recognizing the challenges of farming and their own limitations as they get older. Smallholders might not want to leave agriculture, but they may be prepared for other options.

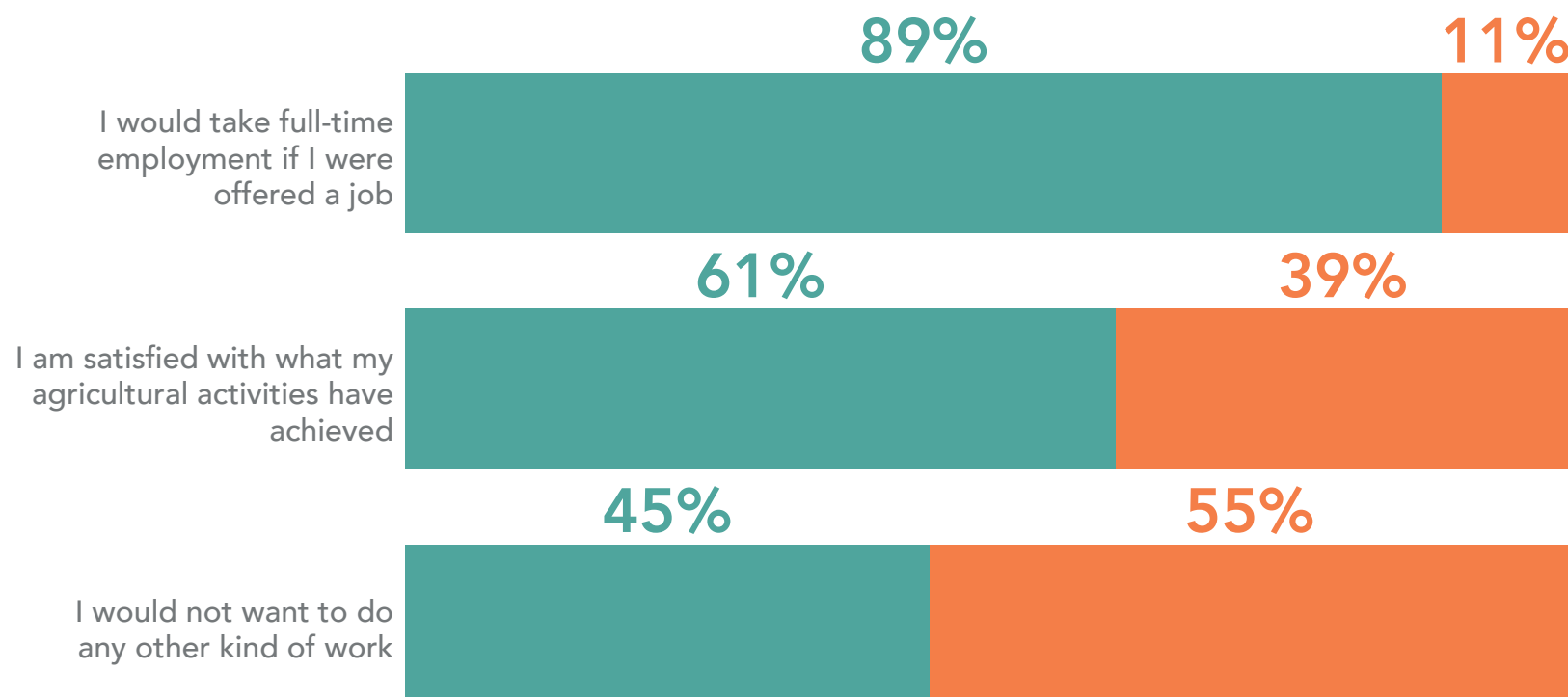


# Younger smallholders show interest in other employment too.

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

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

Agree Disagree



# What does the data teach us?

**Smallholders in Tanzania take pride in agriculture. They see it as part of their identity and a legacy for future generations.**

- Smallholders often own small plots of land. Maize is the most commonly grown staple crop and few smallholders also grow cash crops. About half of smallholders raise livestock as well, both for consumption and sale.
- Agriculture offers a livelihood that smallholders enjoy. They see a future in farming and are looking for opportunities and tools to expand.
- Smallholders also recognize the challenges of agriculture, particularly as they grow older. There is clear commitment to working in agriculture, though openness to off-farm employment too.



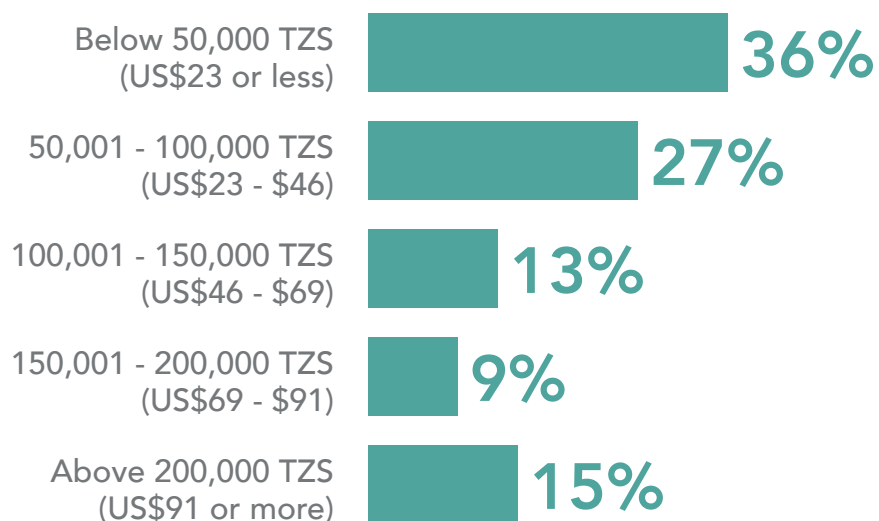
3

**Income and  
expenses**

# Income needs in smallholder households vary.

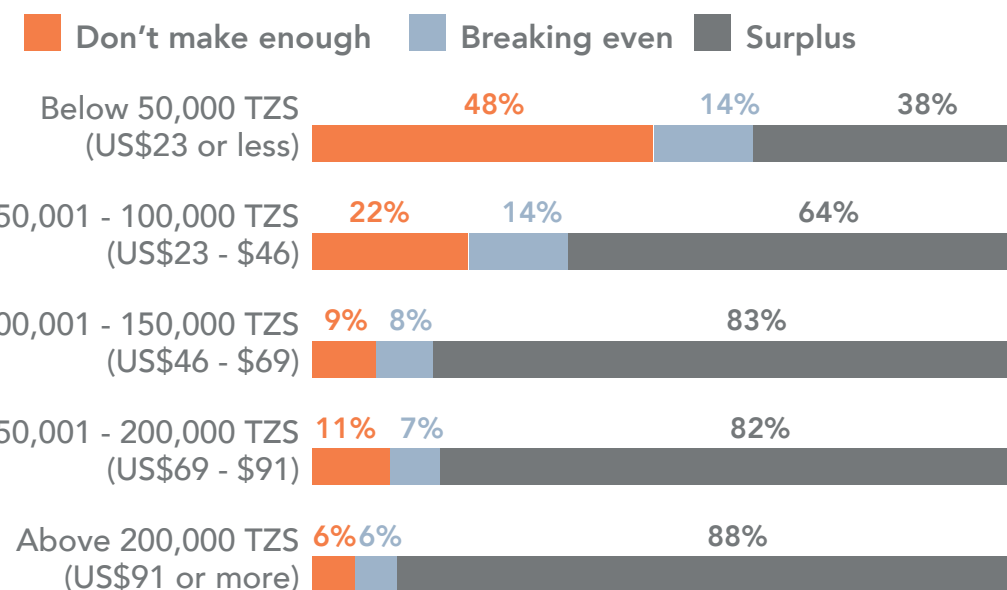
## What is the minimum amount your household needs to survive per month (for personal expenses)?

Sample: Smallholder households who gave a minimum amount for households' survival n=2,959. Quintile.



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

Sample: Smallholder households, n=2,887

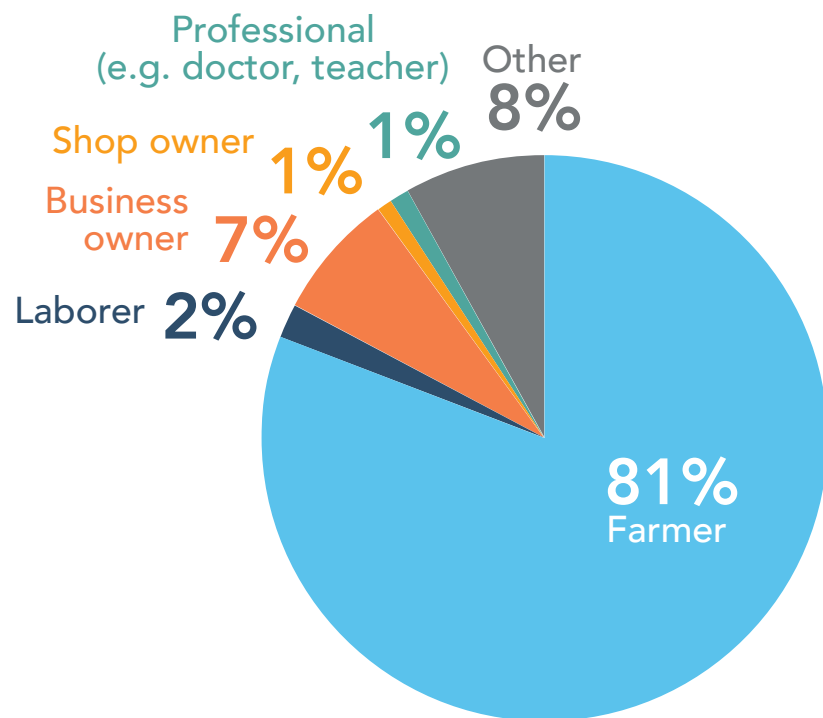


Except for the lowest-income quintile, household income among smallholder families in Tanzania usually surpasses expenses. Most farming households are in a slightly better financial situation month to month.

# Smallholders see agriculture as driving household income...

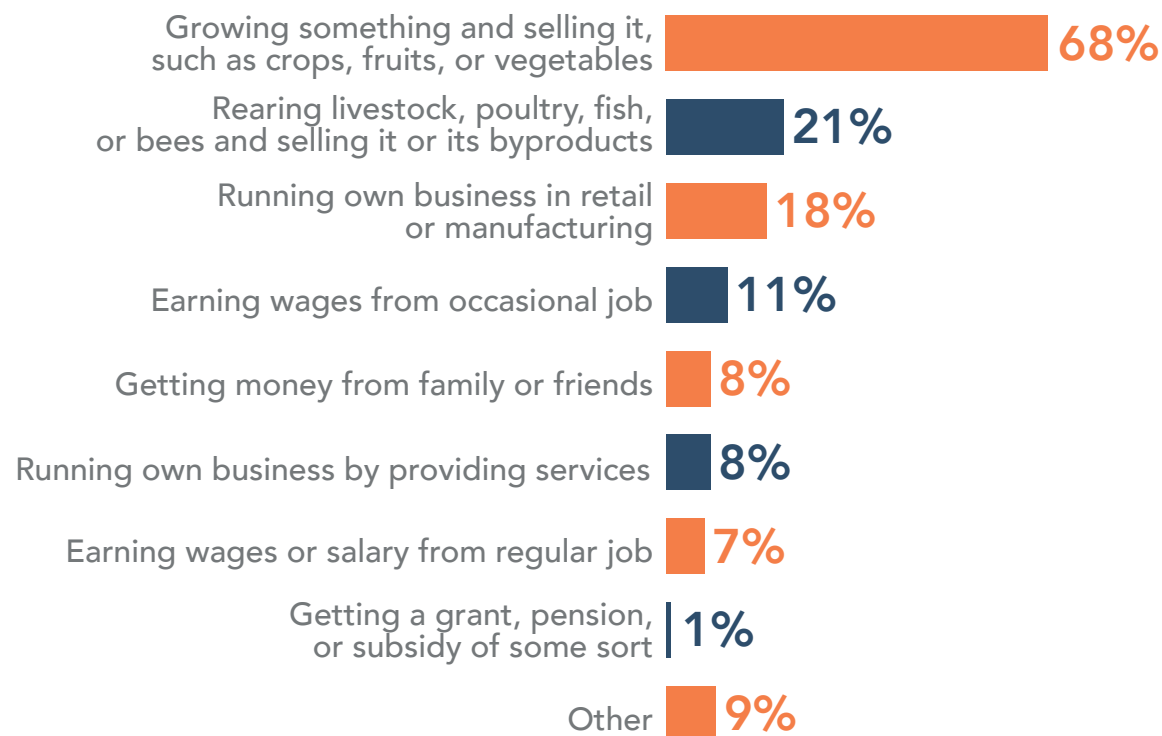
## What is your primary job?

Sample: Smallholder farmers, n=5,034.



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

Sample: Smallholder farmers, n= 5,034. Multiple responses allowed.



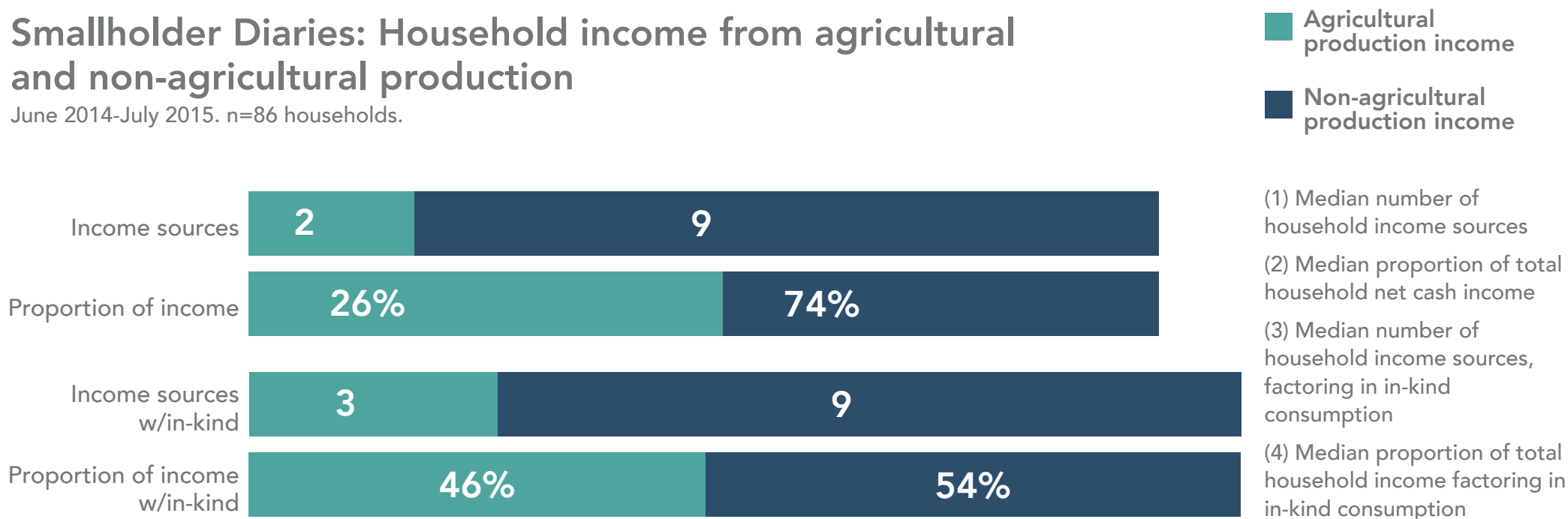
Smallholders see agriculture as their primary job, though they are generating income from a number of sources related and unrelated to their agricultural production.



# ...but agriculture may not be the main source of cash income.

## Smallholder Diaries: Household income from agricultural and non-agricultural production

June 2014-July 2015. n=86 households.



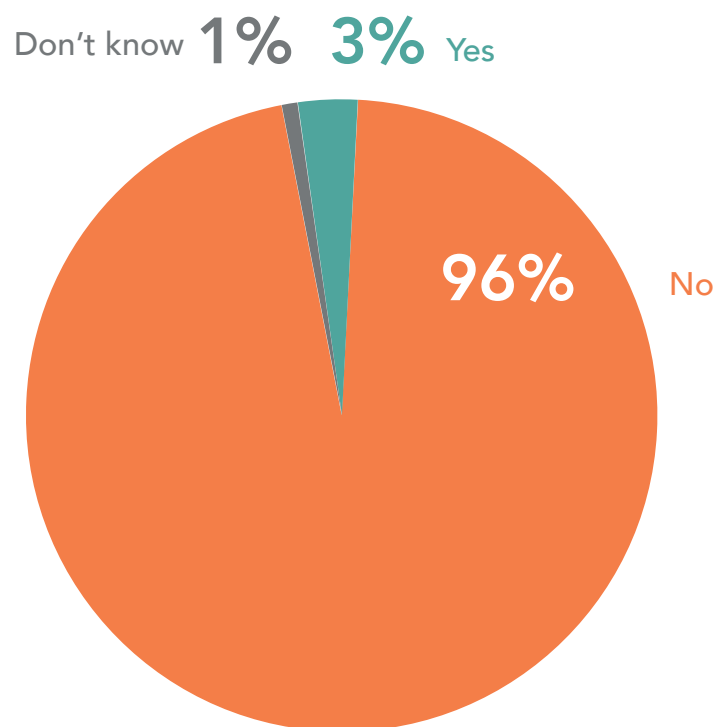
After a year of fortnightly data collection, at the median the Smallholder Diaries sample in Tanzania generated about a quarter of their household cash income (i.e. revenue less expenses) from agricultural production. Sample households had 11 different sources of cash income at the median.

Their own agricultural outputs played a key role in household consumption in the sample. By including in-kind consumption, agricultural production contributed about half of total household income in these smallholder households.

# Smallholders sell without contracts and get paid in cash.

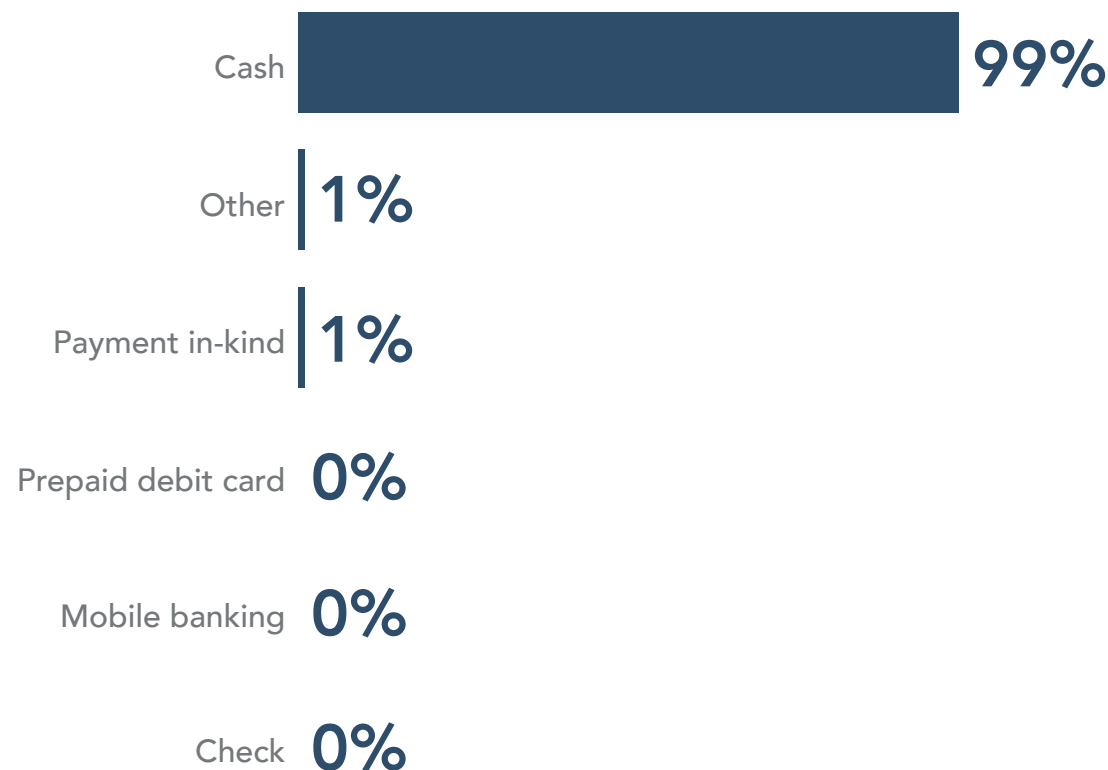
## Do you have a contract to sell any of your crops or livestock?

Sample: Smallholder farmers who grow and sell crops, n=3,803.



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

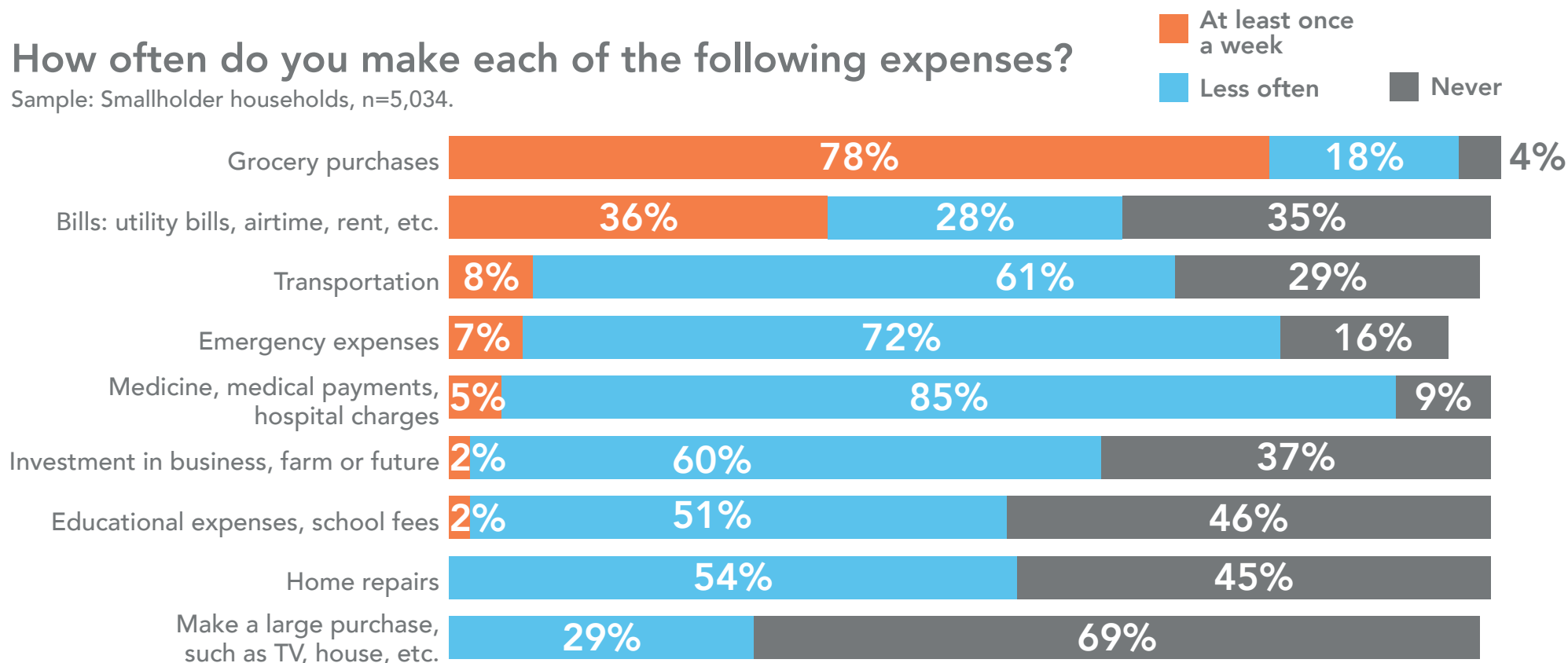
Sample: Smallholder farmers who grow and sell crops, n=3,803.  
Multiple responses allowed.



# Groceries and bills are the most frequent expenses.

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

Sample: Smallholder households, n=5,034.

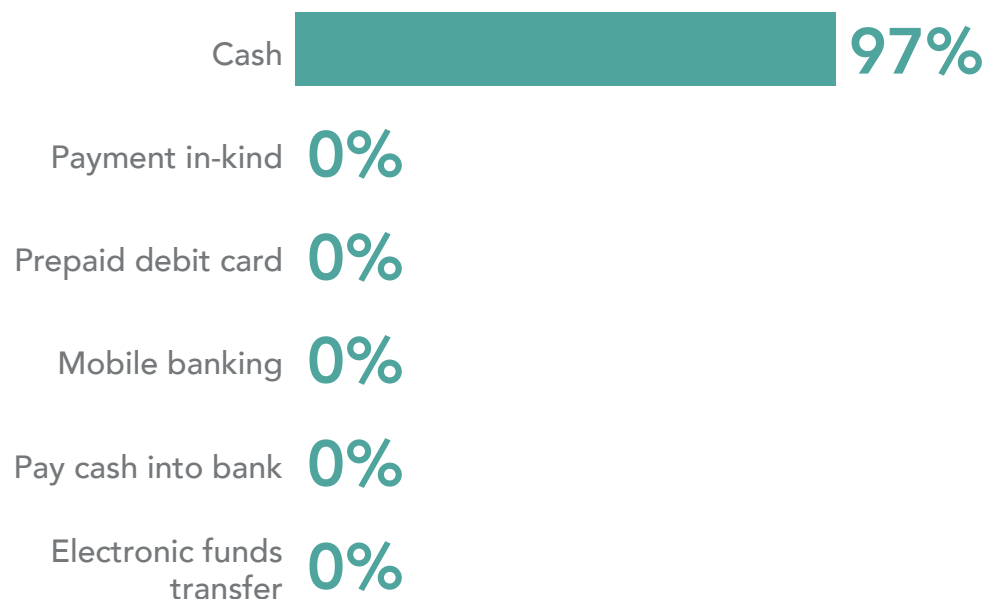


Smallholder households incur smaller expenses more regularly than larger expenses, as is common. Groceries and bills are the most frequent expense and offer important channels to expand the digital financial ecosystem.

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

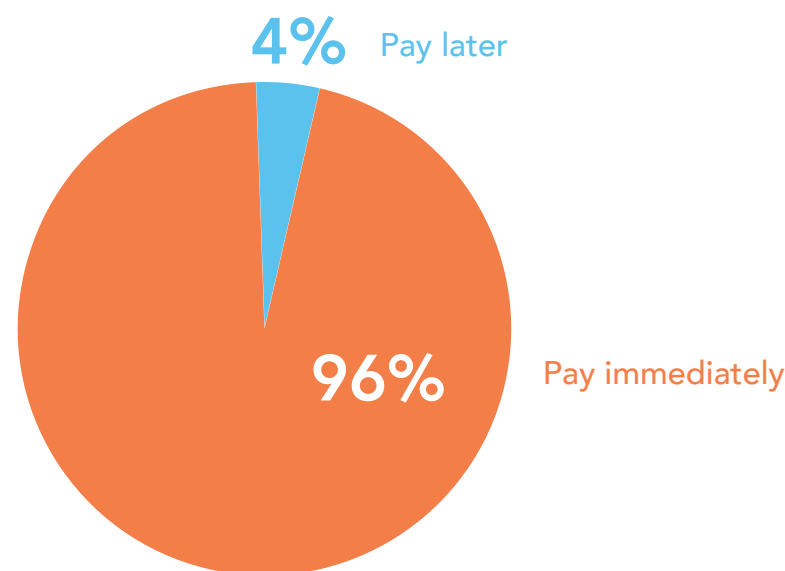
## How do you usually pay your suppliers of inputs?

Sample: Smallholder farmers who purchase main agricultural and livestock inputs, n=3,731. 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=3,616.



Over three-quarters (79%) of smallholders buy agricultural inputs such as seeds, fertilizer and pesticide. Transactions tend to be in cash and paid at the point of purchase. Very few smallholders even have an option to pay later, which can strain household budgets and explains the emphasis on saving for inputs.

# What does the data teach us?

## Smallholder households have a range of income sources, including but not limited to agriculture.

- The self-reported expenses of smallholder households are often less than they earn, but families still struggle to get by.
- Agriculture is seen as driving household income, but there are many other sources of income. Smallholder households are also earning regular wages, running their own businesses, and engaging in casual labor on other nearby farms to earn cash income. In-kind consumption of the crops and livestock that the household is growing also plays an important role in overall household income.
- Smallholders sell their output largely outside of contracts and for cash. Groceries and bills are their most frequent expenses, and they need to pay in cash on the spot. There are few options to pay later.





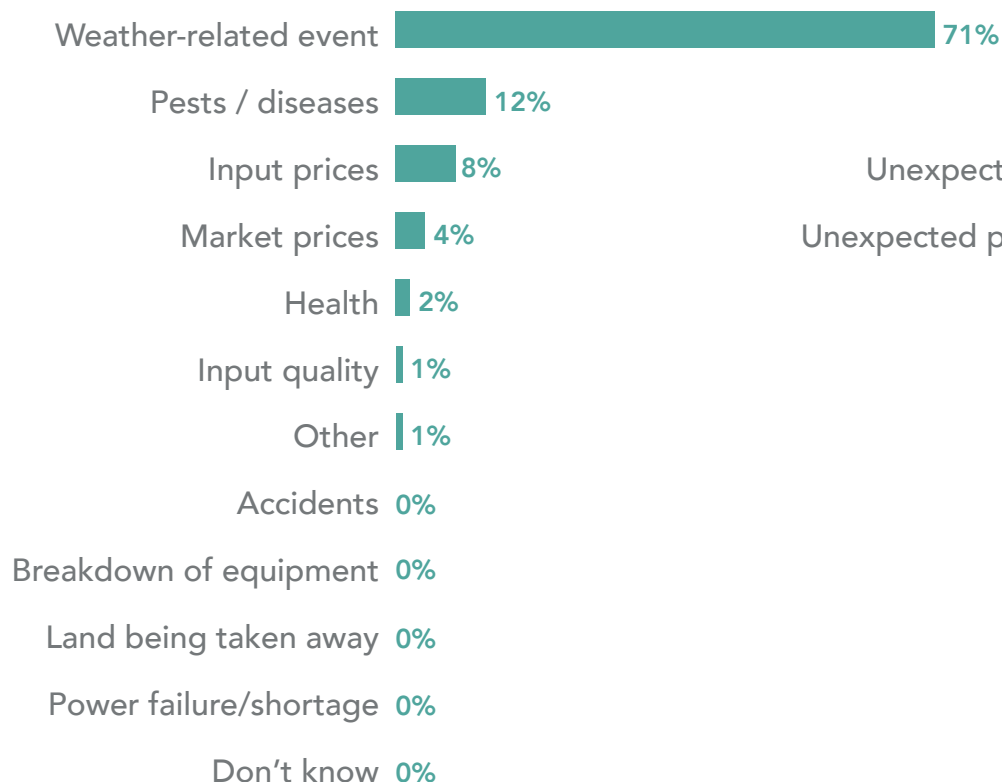
# 4

## Risk management

# Smallholders see weather as their greatest threat.

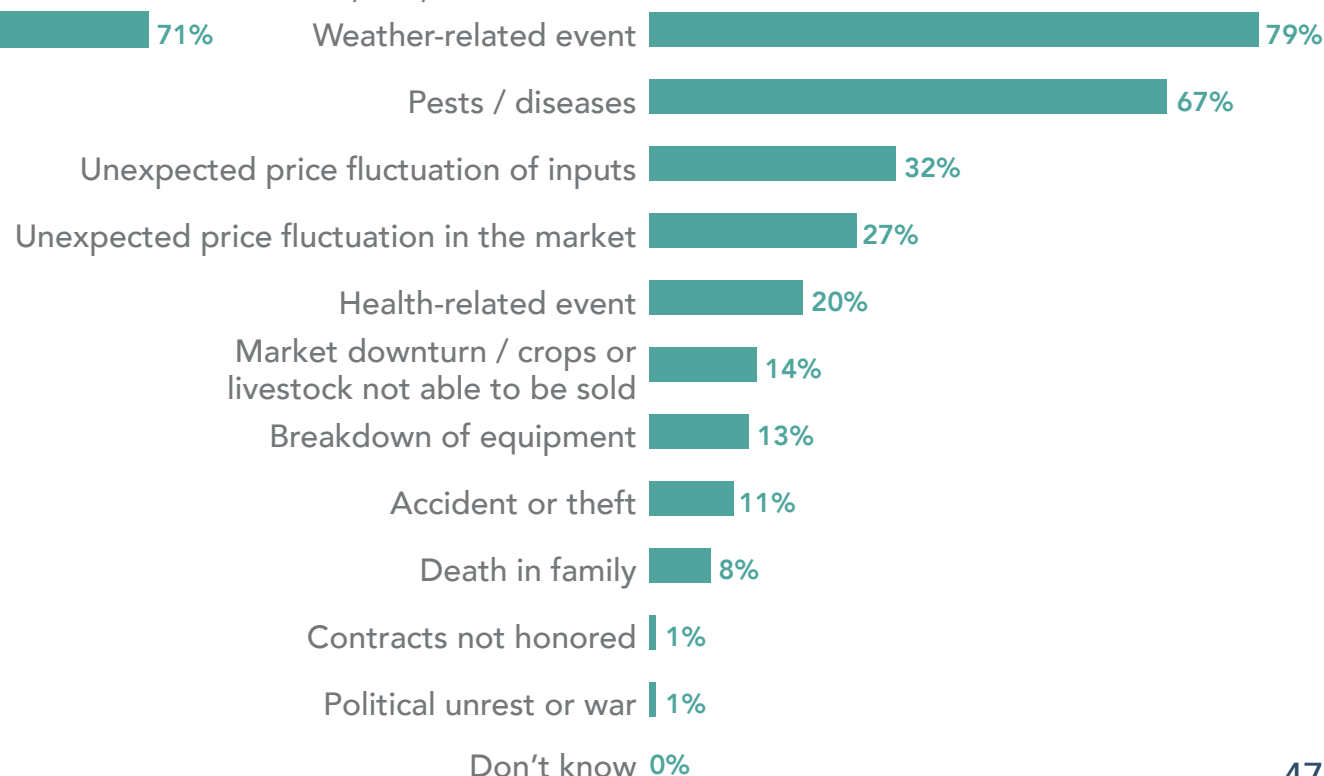
## What poses the most significant risk to your agricultural activities?

Sample: Smallholder farmers who participate in household's agricultural activities, n=2,638.



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

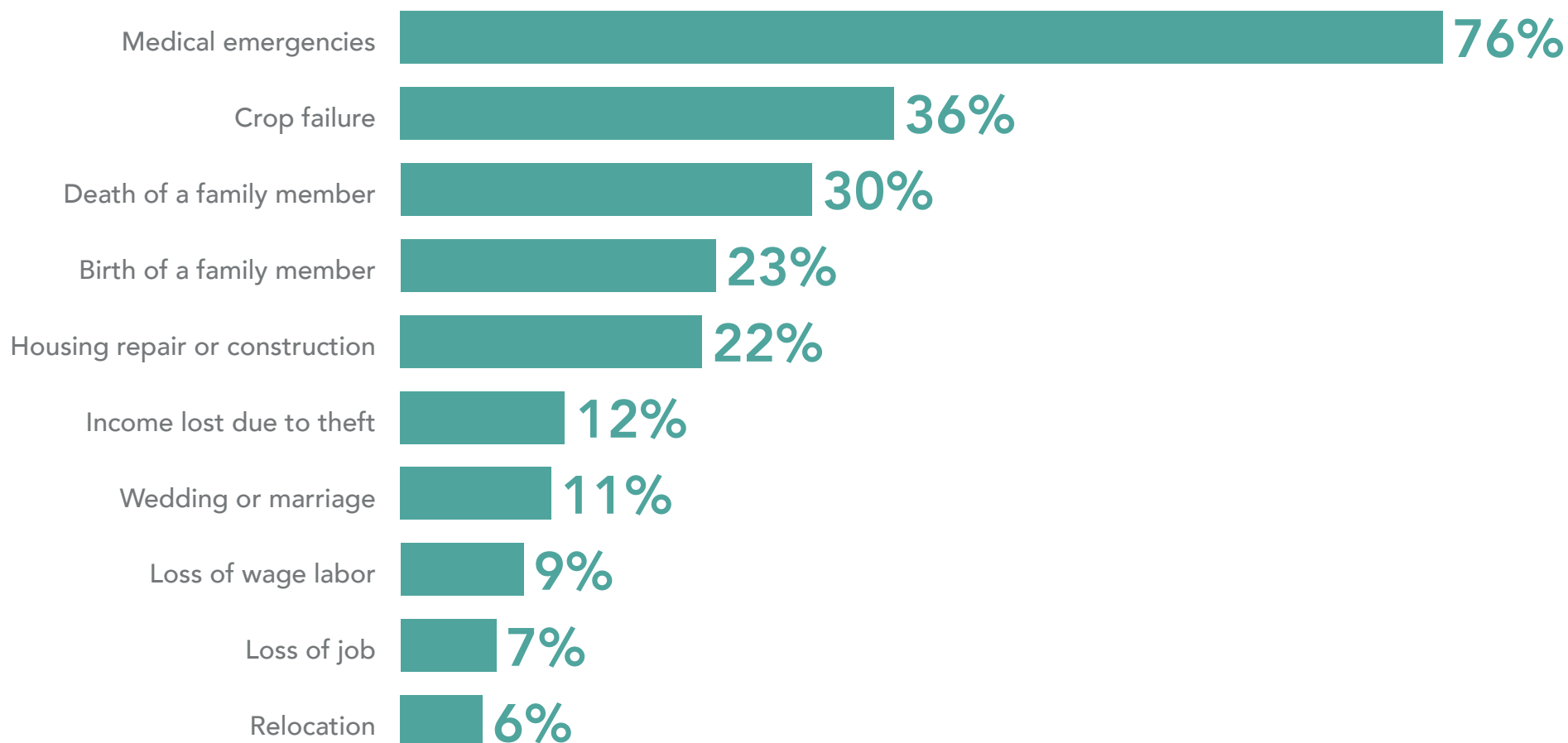
Sample: Smallholder farmers who participate in household's agricultural activities, n=2,638.



# Medical emergencies have hit them hard too.

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

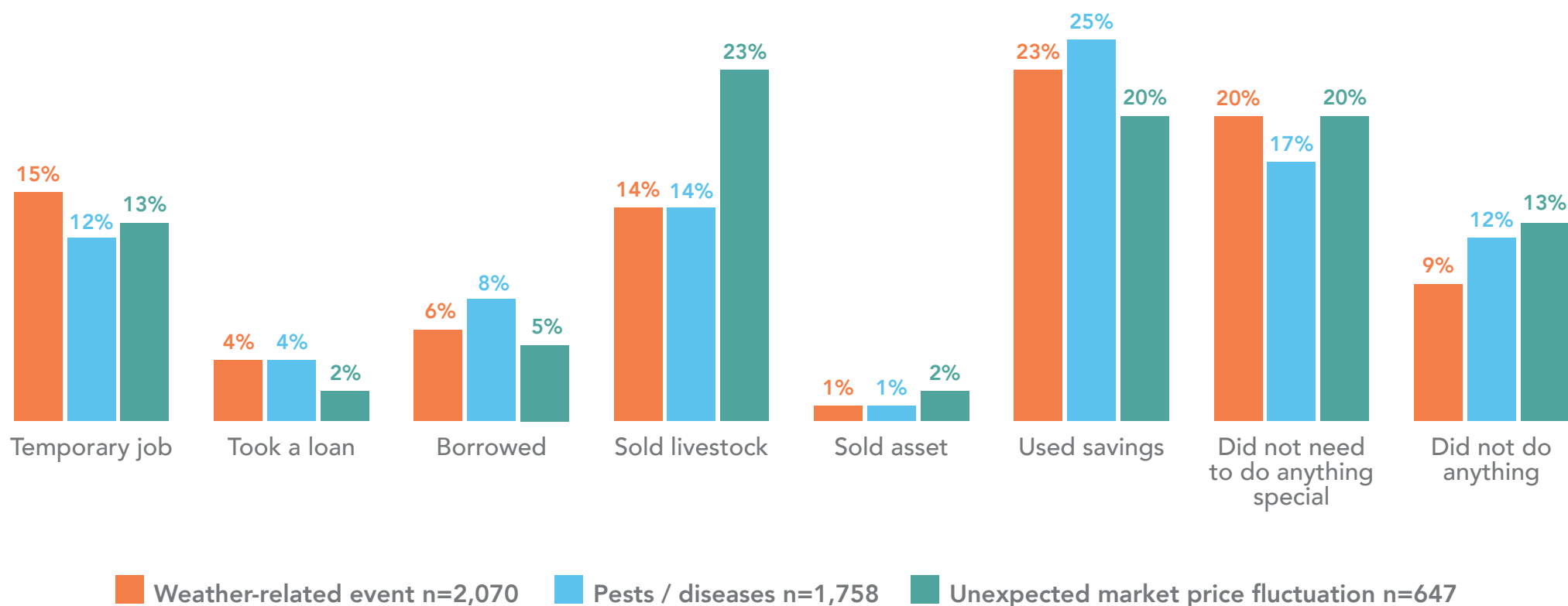
Sample: Smallholder farmers, n=2,795. Multiple responses allowed.



# Savings, livestock sales, and off-farm income were used to cope – if they did anything.

## How did you mainly cope when this happened?

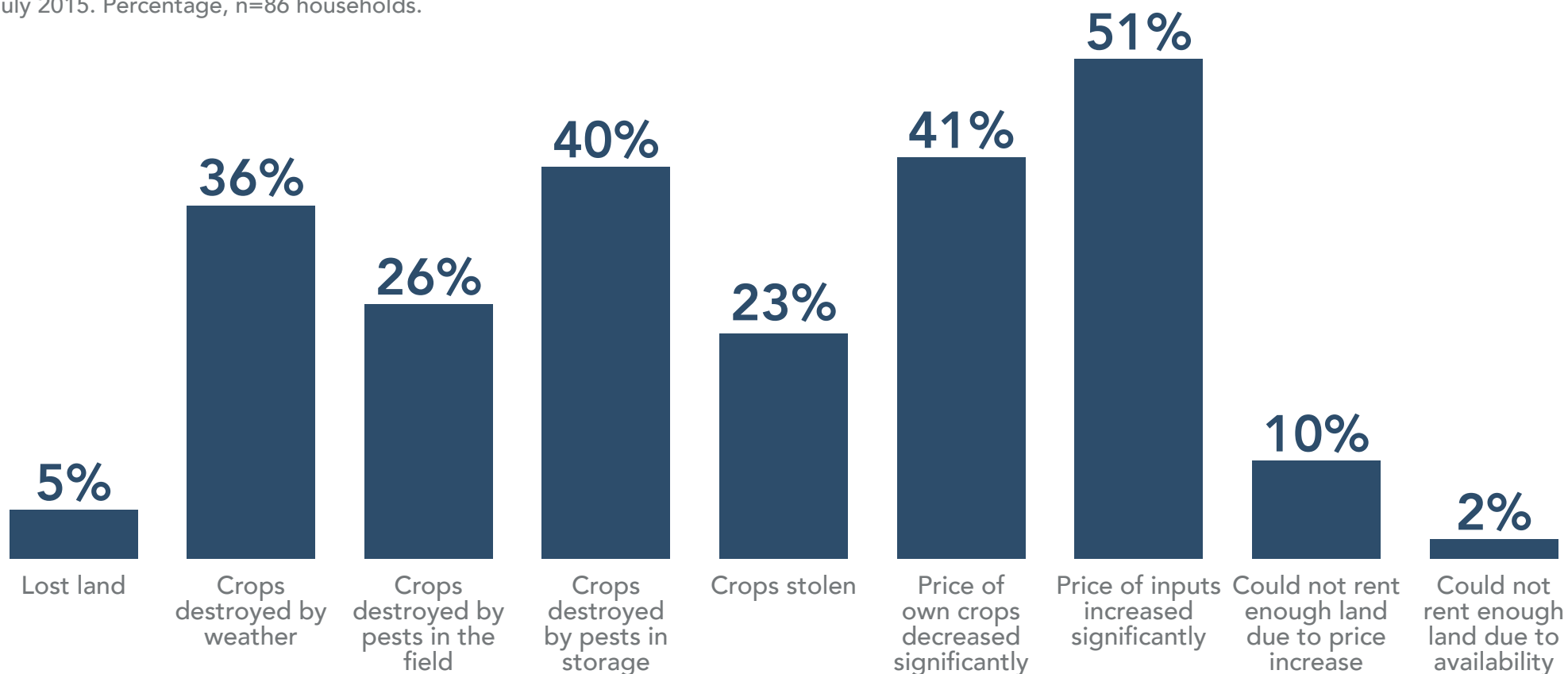
Sample: Smallholder farmers who say their agricultural activities have been seriously affected by each category.



# Smallholders Diaries families faced price changes and crop loss...

**Smallholder Diaries: Households that experienced selected agricultural shocks at least once in the past five years.**

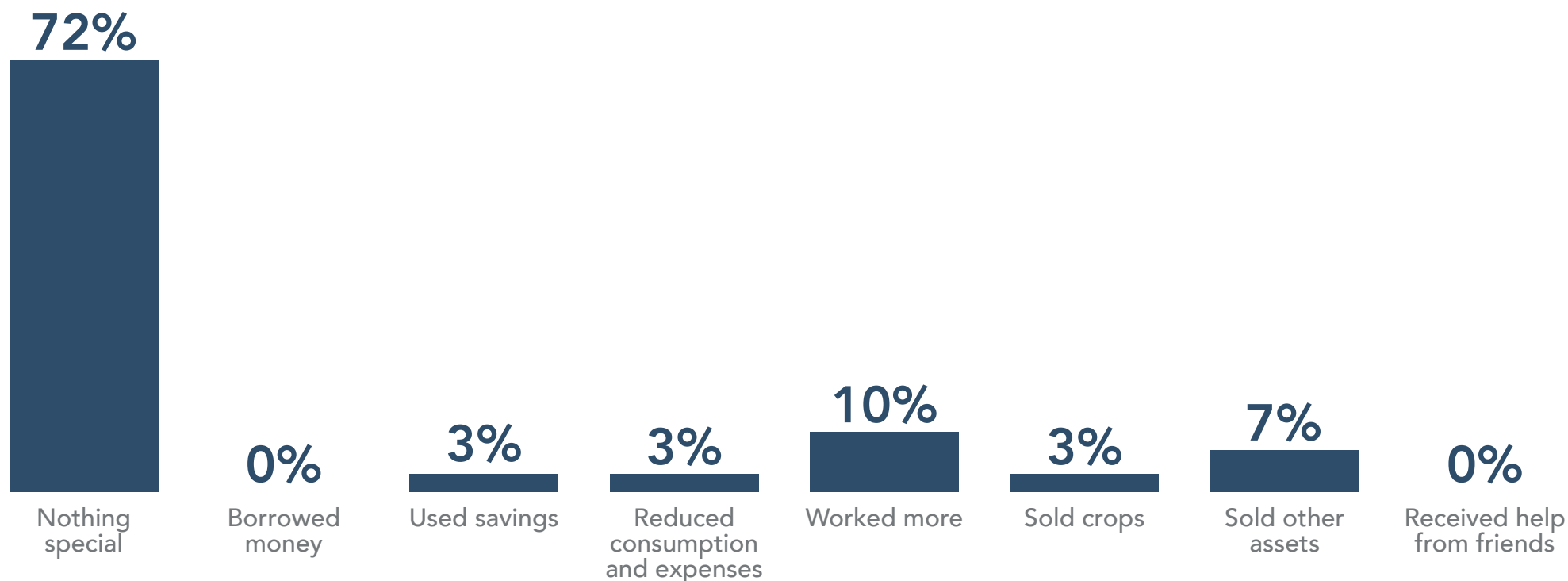
July 2015. Percentage, n=86 households.



...but most had no specific response to these shocks.

## Smallholder Diaries: Households that used these coping mechanisms when crops were destroyed by weather.

Percentage; n=86 households, multiple answers allowed.

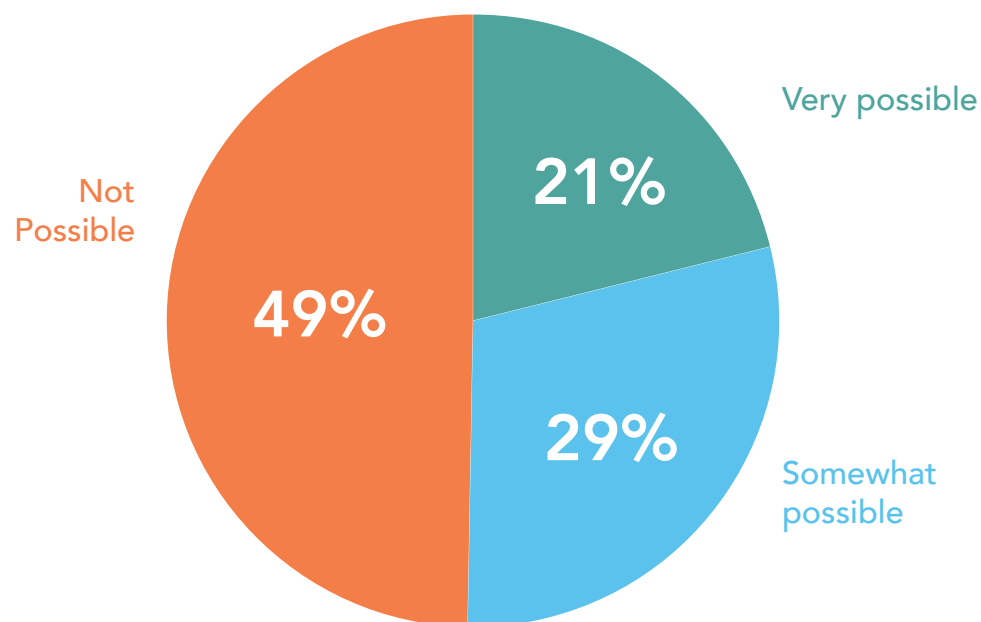




# Coping with emergencies is a struggle.

Imagine that you have an emergency and you need to pay 100,000 shillings. How possible is it that you could come up with 100,000 shillings within the next month?

Sample: Smallholder farmers, n=2,795.

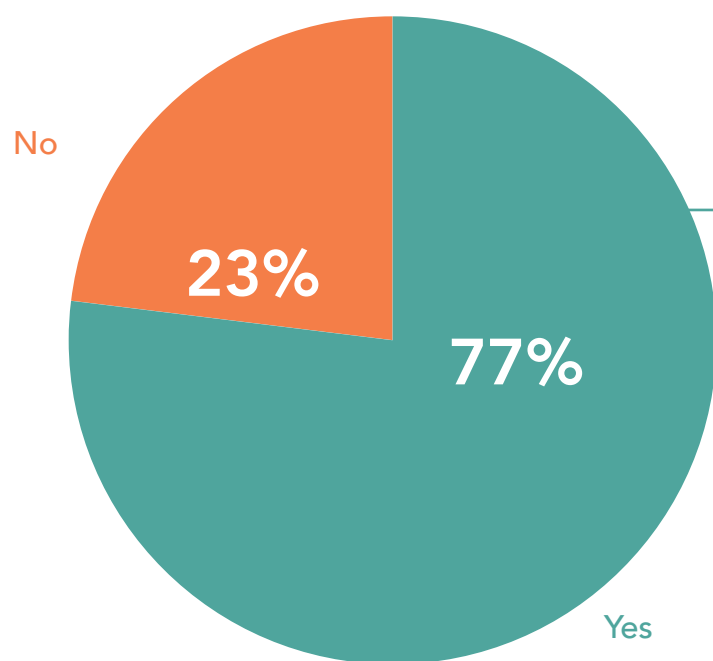


When emergencies happen, coming up with a relatively small amount of money in order to cope is not always possible. For those who could mobilize some funds, they would turn to their family or friends, or draw from their limited savings.

# As a form of risk mitigation, three-quarters of smallholders store crops.

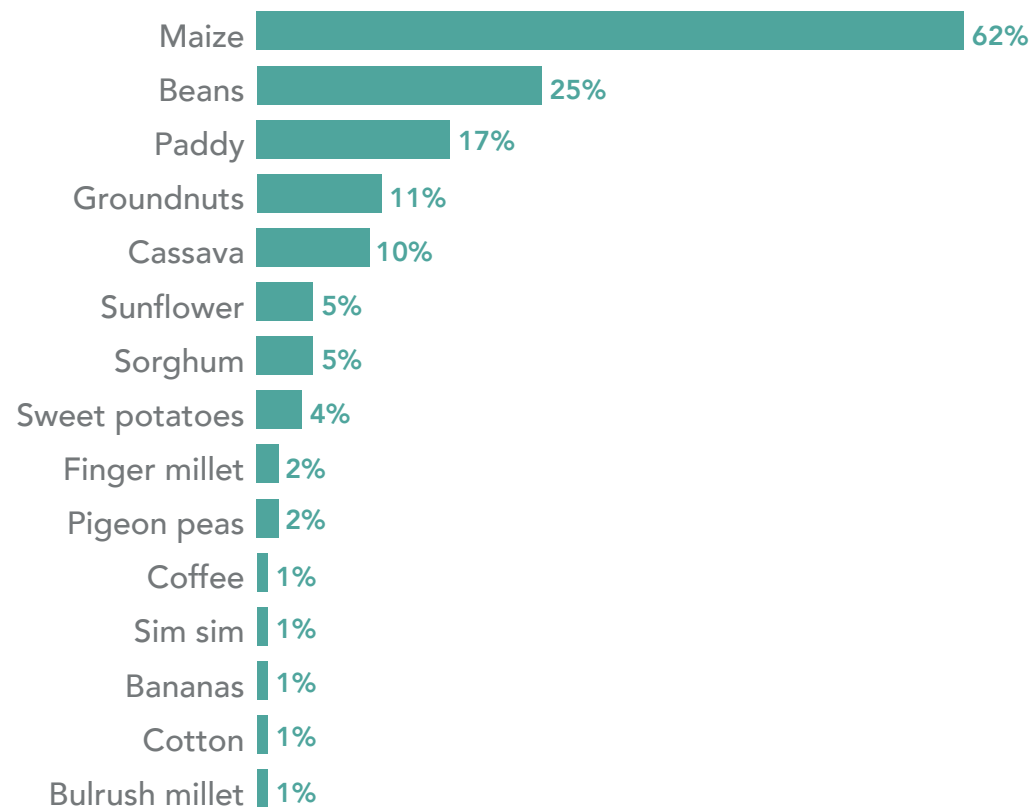
## Do you currently store any of your crops after the harvest?

Sample: Smallholder farmers who participate in household's agricultural activities, n=2,638.



## Which crops do you normally store?

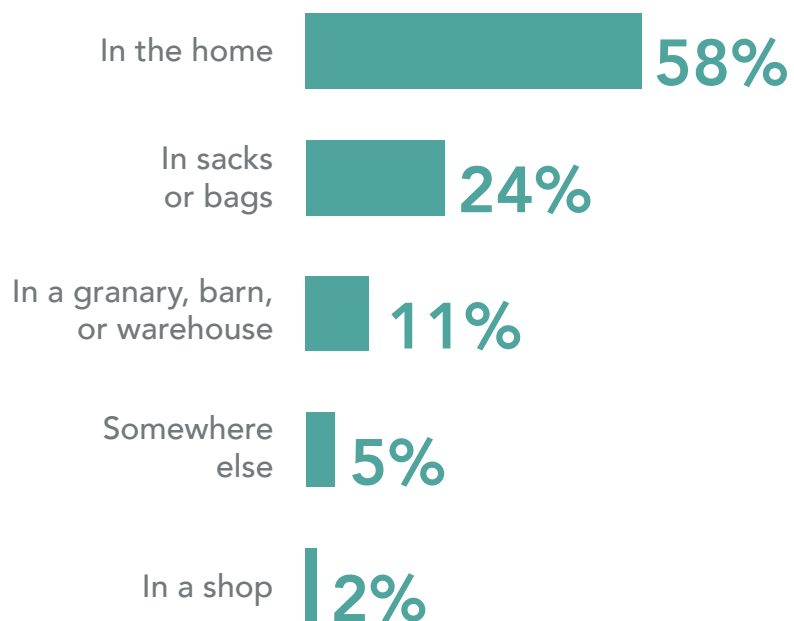
Sample: Smallholder farmers who currently store any crops after harvest, n=2,008.



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

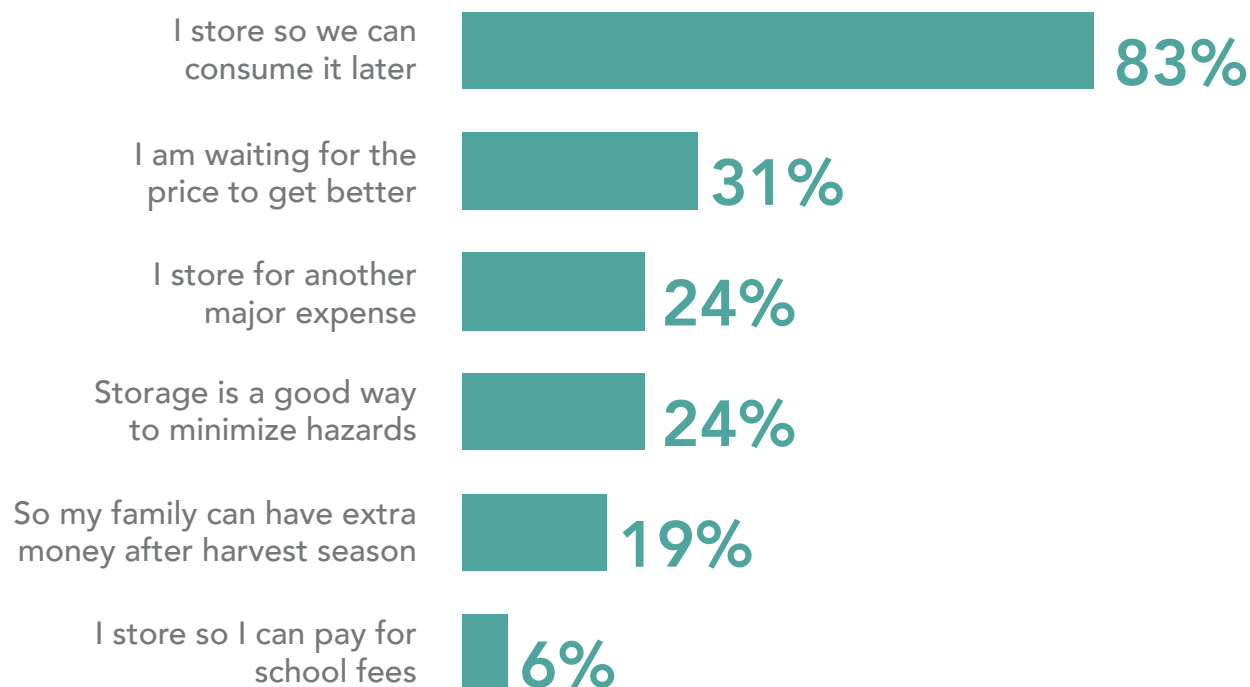
## Where do you store your crops?

Sample: Smallholder farmers who currently store any crops after harvest, n= 2,008. Multiple responses allowed.



## Why do you store your crops?

Sample: Smallholder farmers who currently store any crops after harvest, n=2,008. Multiple responses allowed.

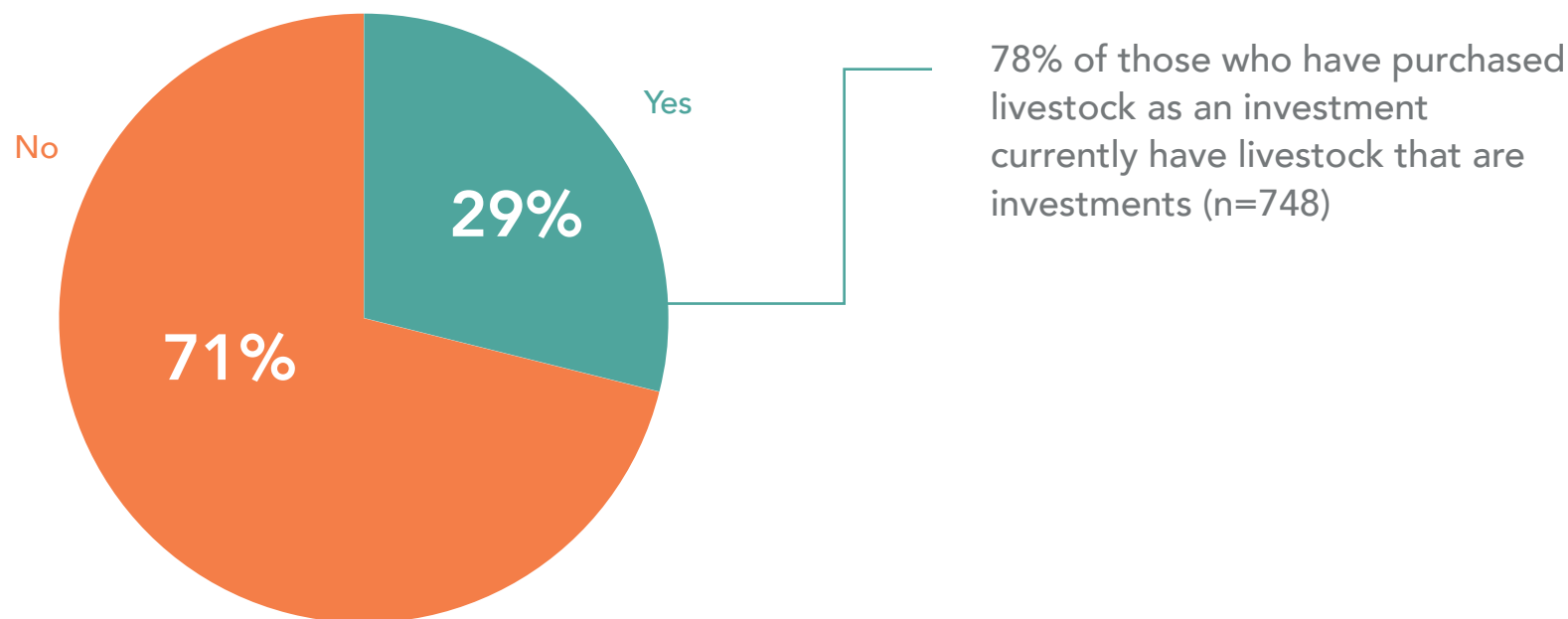


One-quarter of smallholders treat their stored crop as a form of savings, selling it when they need the money.

# 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=2,638.



Investing in livestock also helps smallholder households mitigate risk. More than a quarter of smallholders in Tanzania have purchased livestock as a kind of investment.

# What does the data teach us?

## Mitigating risk is a top priority for smallholders

- Smallholders know that working in agriculture is intensive, risky, and challenging. They see weather as their greatest risk, and like all families, they confront medical emergencies as well.
- Often when facing shocks, smallholders have no specific response, as there are few if any coping tools at hand.
- A majority of smallholders in Tanzania see the importance of setting aside money for certain agricultural expenses, most notably seeds, pesticides, fertilizer, and equipment.
- Tanzanian smallholders are looking for financial tools to help them manage risk. The appetite for financial tools such as savings, credit, and insurance is high. Crop storage and livestock purchases are common methods of savings and risk mitigation among smallholders.

A decorative graphic on the left side of the slide consisting of seven horizontal bars of equal length. The bars are colored from top to bottom: light blue, dark grey, orange, teal, light blue, dark blue, and orange. The light blue bar is the longest, while the others are shorter.

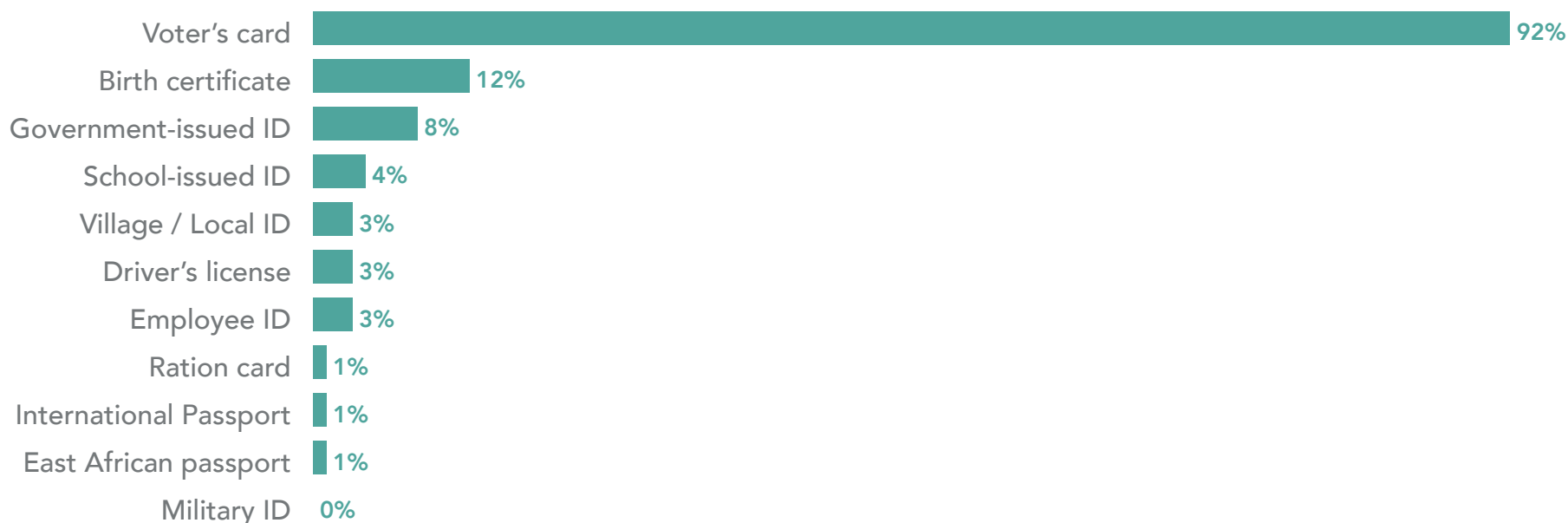
5

**Financial tools**

# Almost all smallholders have a voter's card.

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

Sample: Smallholder farmers, n=5,034. Multiple responses allowed.



A voter's card is the most popular type of official identification among smallholder farmers in Tanzania. This is consistent for men and women (92% each).

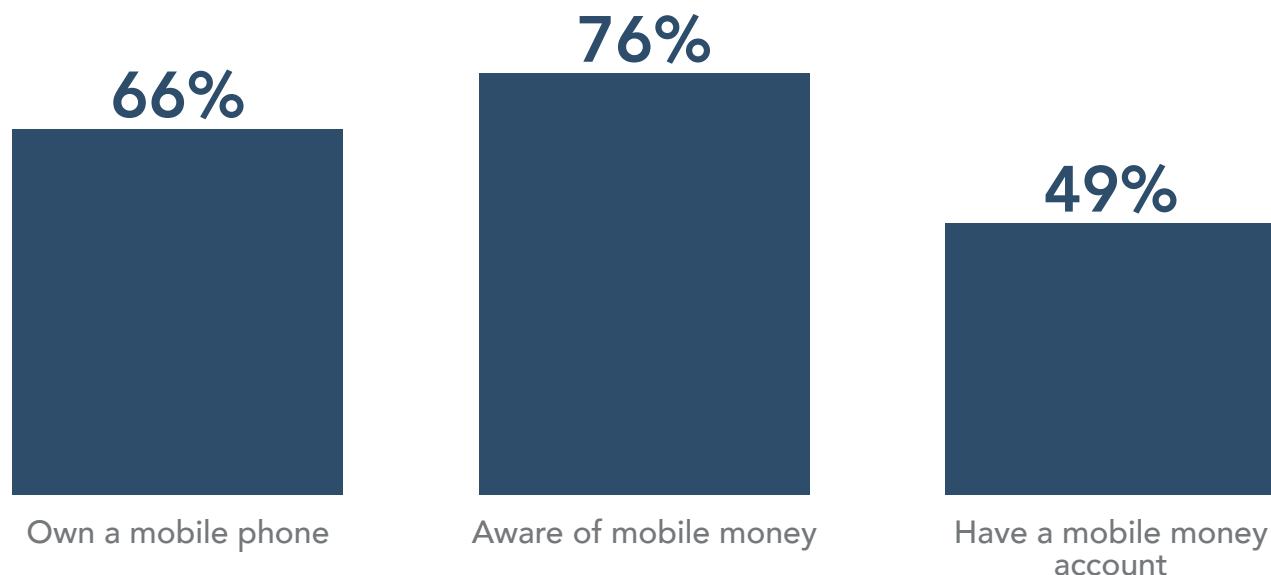
A voter card, driver's license, passport, school identification, and national identification can be used to obtain a mobile money account.



# Mobile money drives financial inclusion among smallholders.

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

Sample: Smallholder farmers, n=2,771.

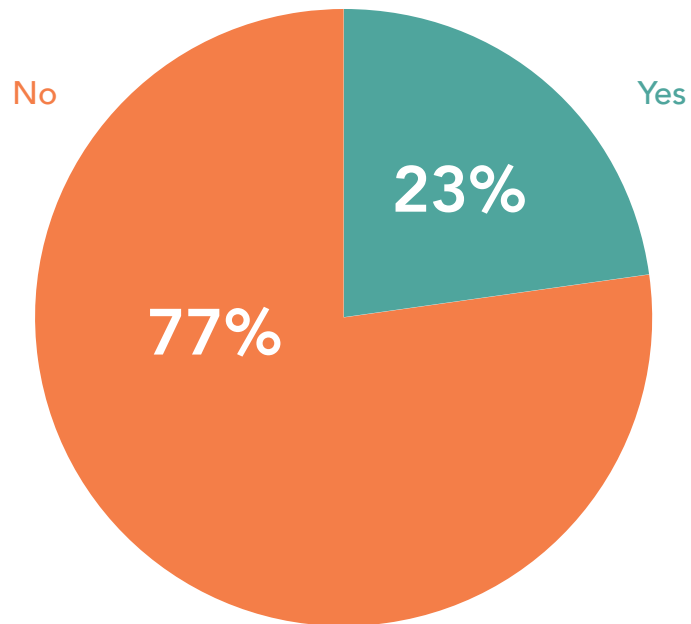


Ownership of mobile phones and awareness of mobile money is significant among smallholders in Tanzania. But the proportion with mobile money accounts has not kept pace.

# Smallholders don't have bank accounts.

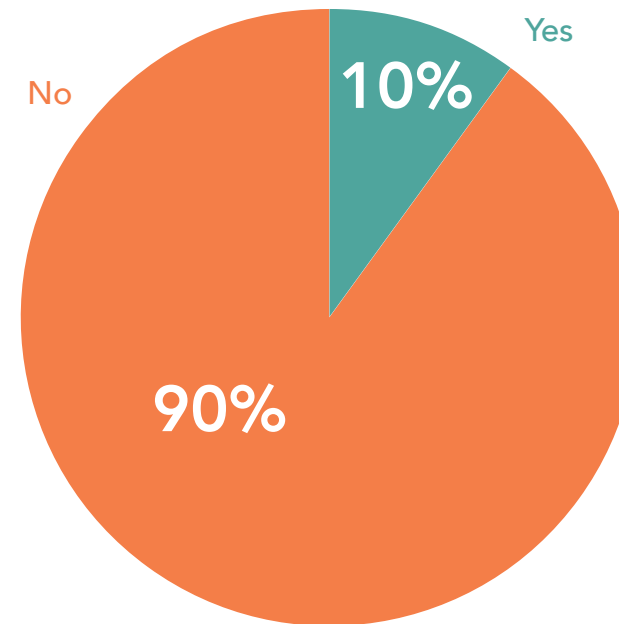
**Have you ever been inside a bank?**

Sample: Smallholder farmers, n=2,795.



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

Sample: Smallholder farmers, n=2,795.

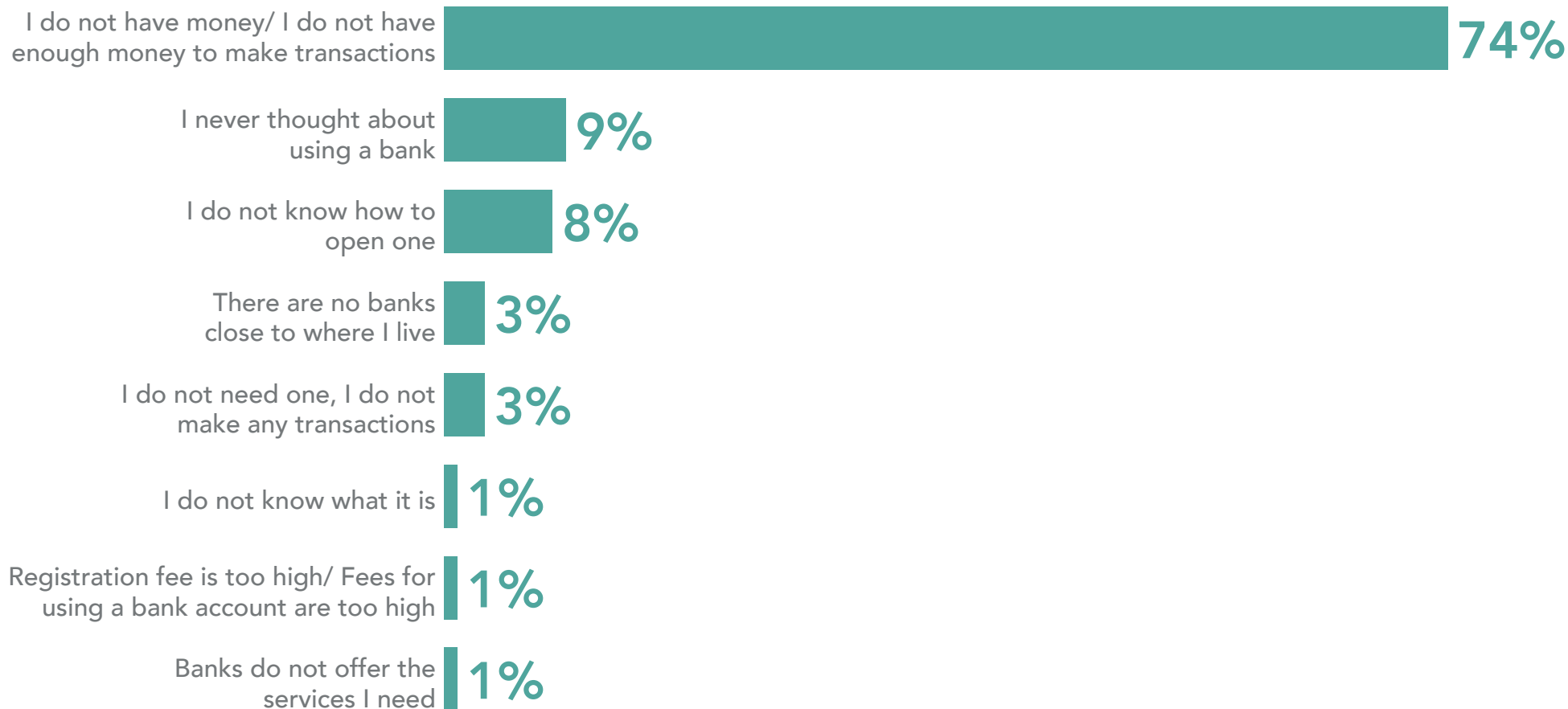


Only a quarter of smallholders have ever entered a bank. With such limited exposure to these financial service providers, it is not surprising that only 10% have a bank account in their name.

# Smallholders say they lack the money for a bank account.

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

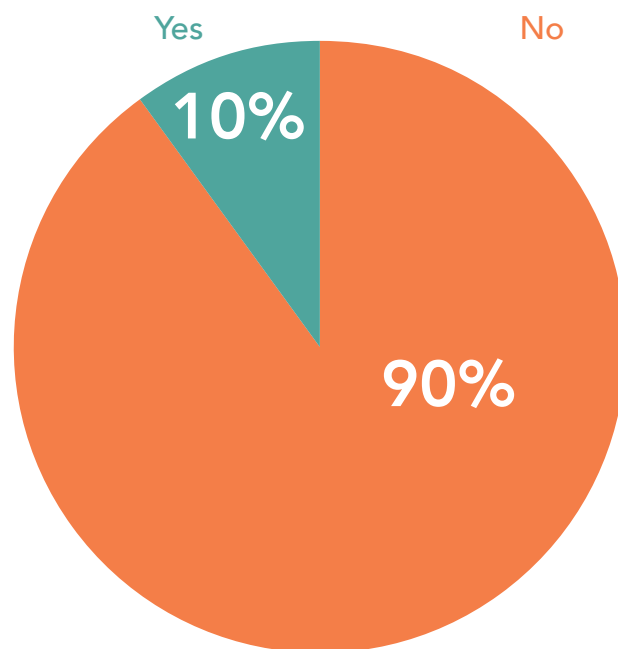
Sample: Smallholder farmers who don't have a bank account, n=2,505.



# Few smallholders have outstanding loans.

## Do you currently have any loans?

Sample: Smallholder farmers, n=2,795.



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

Sample: Smallholder farmers, n=2,795. Multiple responses allowed.

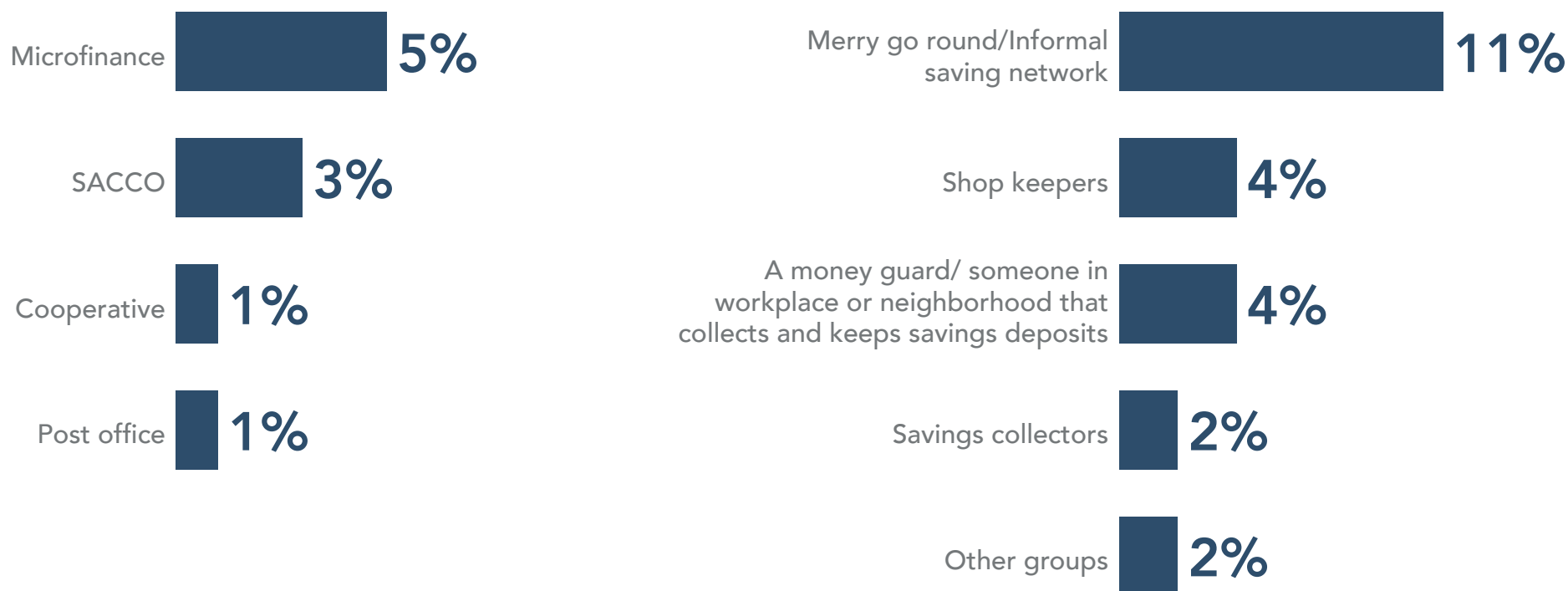


Smallholders show some interest in credit to start or expand a business, buy inputs or support their agricultural activities, and cope with emergencies.

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

## Have you ever used any of the following?

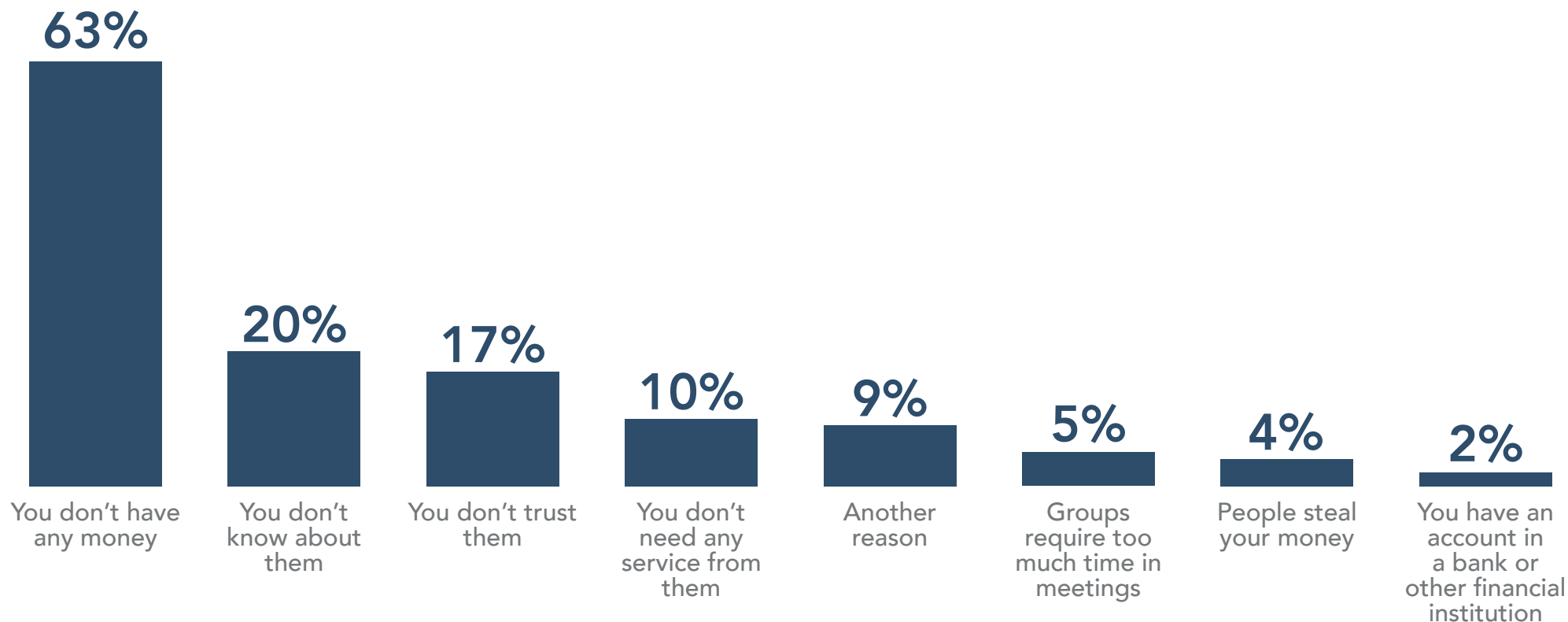
Sample: Smallholder farmers, n=2,795.



# Perceived lack of money limits interest in informal financial service providers.

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

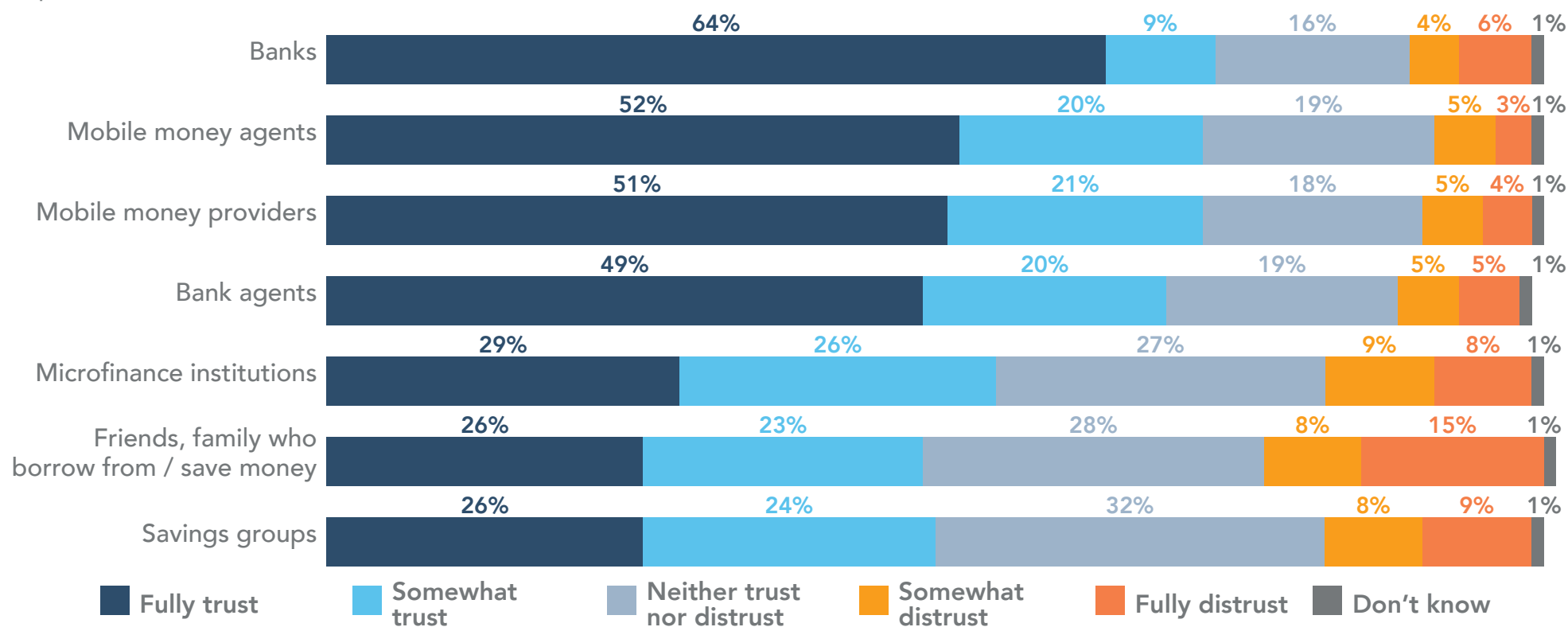
Sample: Smallholder farmers who do not have any membership with an informal financial service provider, n=2,276.  
Multiple responses allowed.



# Trust varies across providers.

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

Sample: Smallholder farmers, n=2,795.



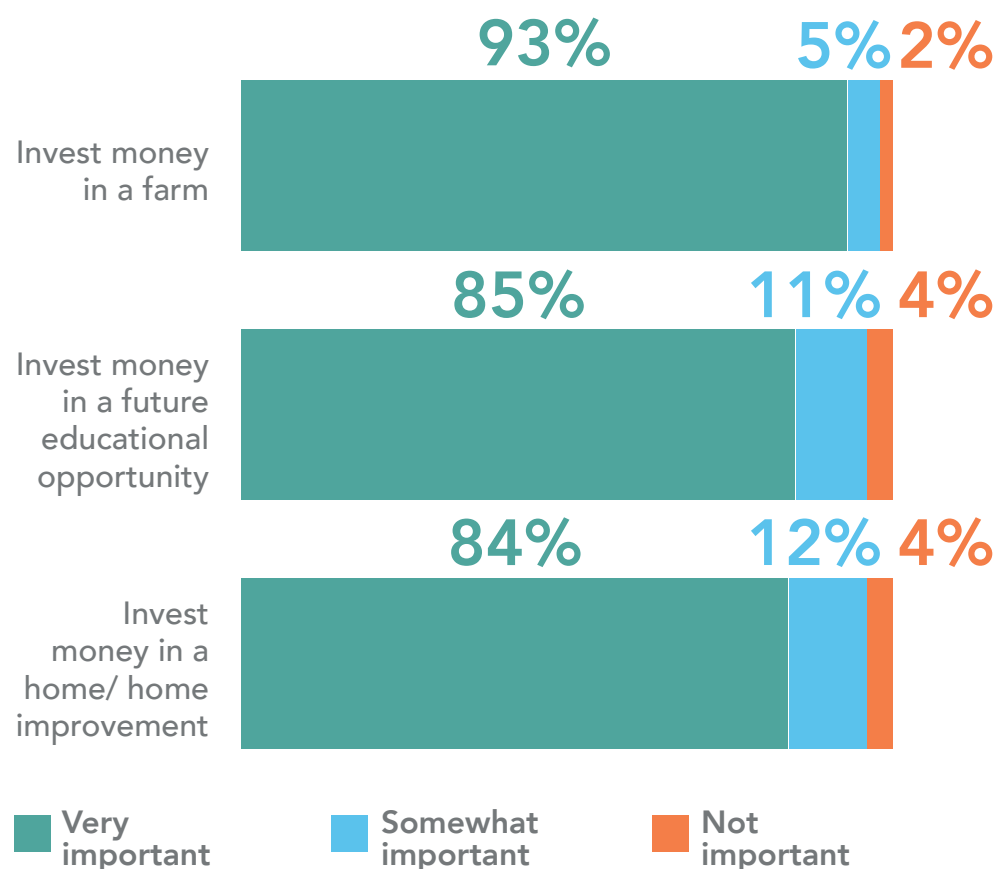
Roughly half of smallholders in Tanzania fully trust banks, bank agents, mobile money providers, and mobile money agents. This is much higher than their trust in nonbank and informal financial institutions.



# Investing in the farm, home, and education are priorities.

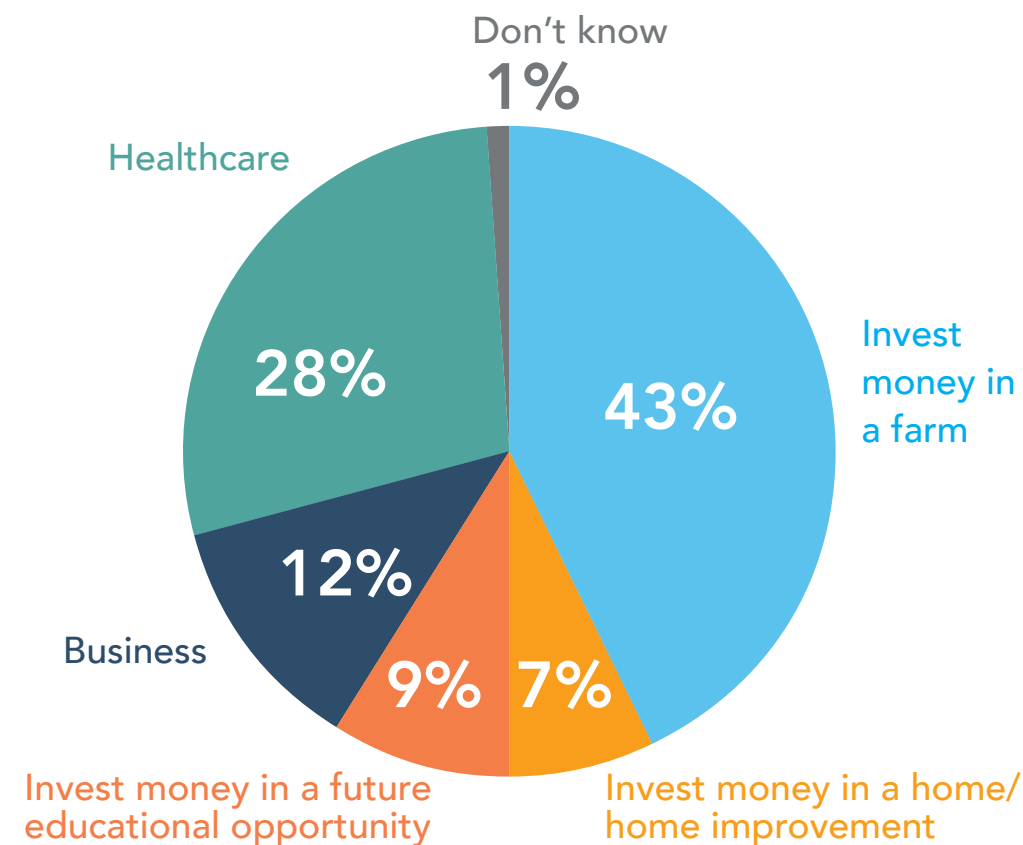
How important is it for your household to invest in each of the following?

Sample: Smallholder farmers, n=2,795.



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

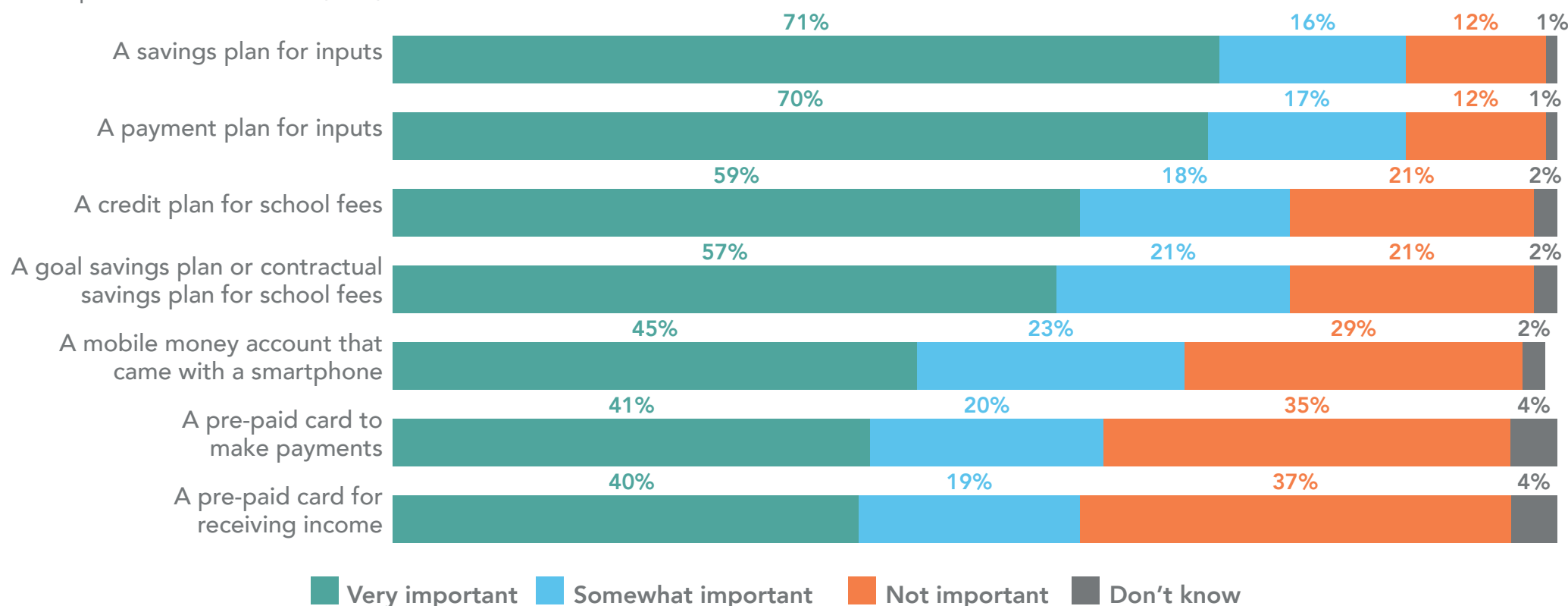
Sample: Smallholder farmers, n=2,794.



# These three priorities drive interest in financial tools.

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

Sample: Smallholder farmers, n=2,795.

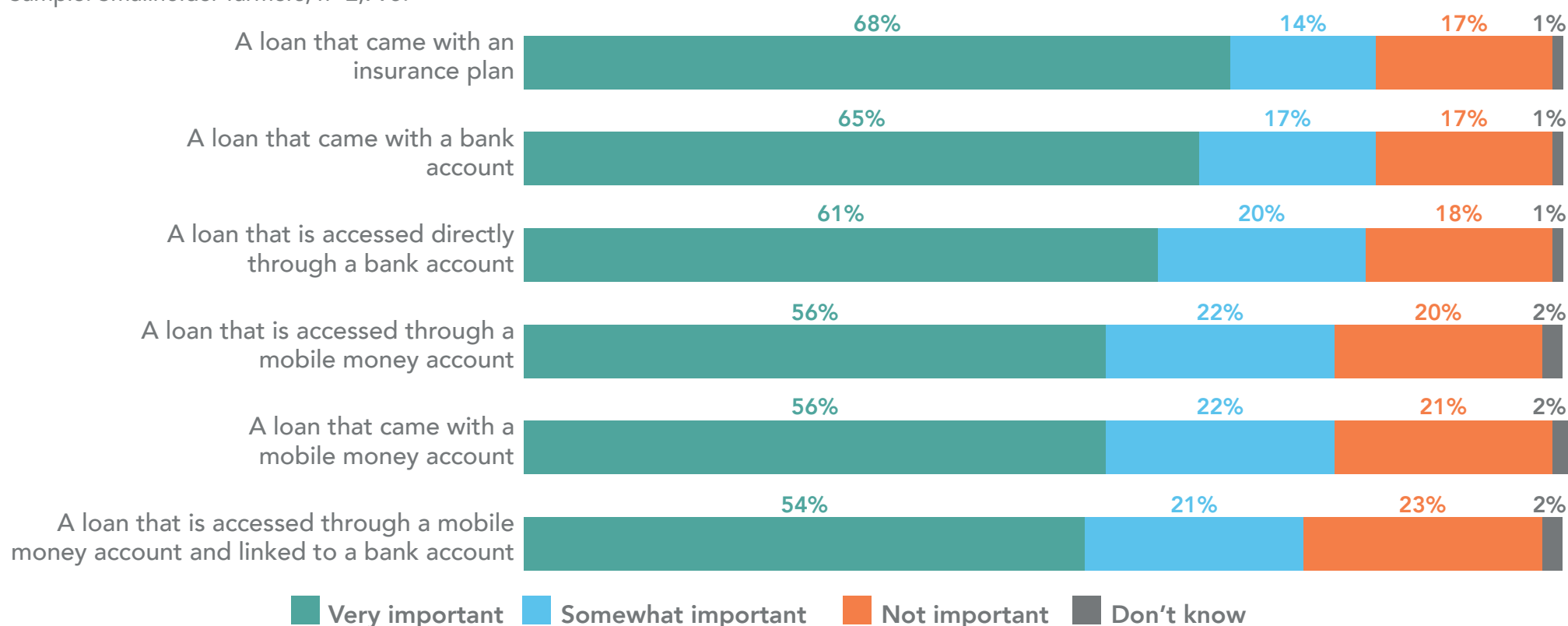


Smallholder farmers in Tanzania consider savings, credit, and payment plans for school fees and inputs important to their agricultural activities. Prepaid cards and mobile money accounts are considered relatively less important.

# Bundled financial solutions are also considered important.

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

Sample: Smallholder farmers, n=2,795.



Smallholders show interest in loans that come with an addition service or accompanying account, such as an insurance plan, bank account, and mobile money account.

# What does the data teach us?

## Mobile money drives financial inclusion among smallholders in Tanzania

- Three-quarters of the smallholder farmers in Tanzania say they have heard of mobile money and the majority of them know the benefits of having a mobile money account, though only half actually do have a mobile money account.
- Only 10% of smallholders in Tanzania personally have a bank account registered in their own name.
- Use of non-bank and informal financial providers is also rare among smallholders.
- Smallholders prioritize investments in their family's farm, health, and education. They show interest in various credit or savings solutions to pay for inputs and school fees, as well as bundled financial tools that combine credit with other services or accounts.



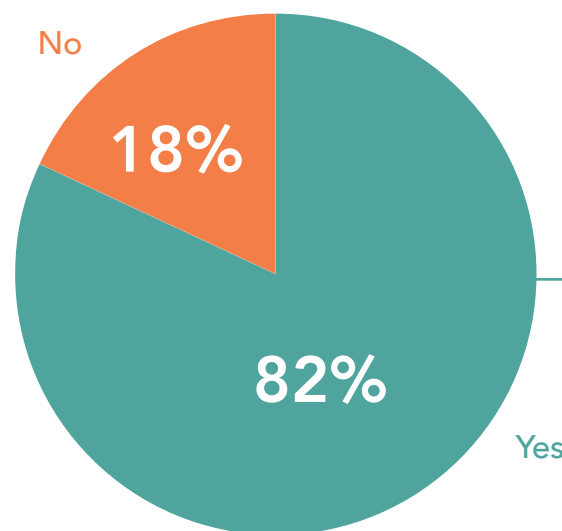
# 6

## Digital financial services

# Most smallholders use basic phones.

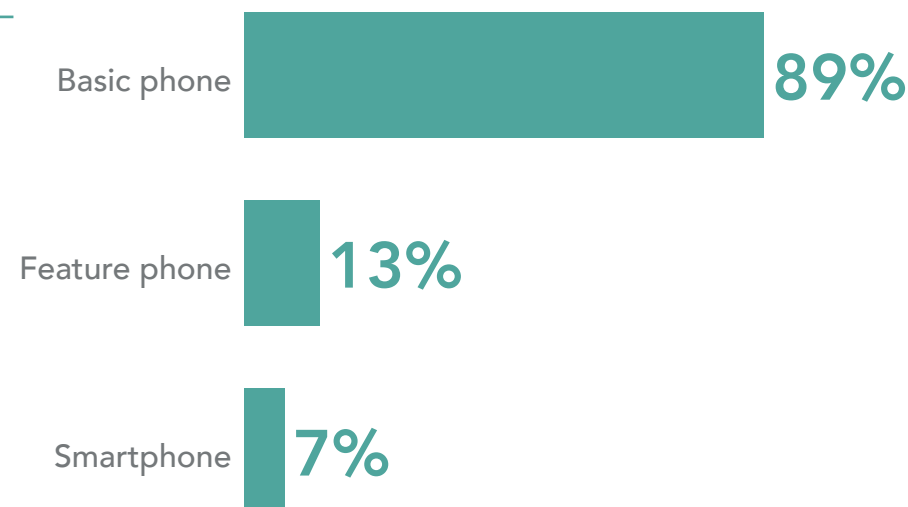
## Have you ever used a mobile phone?

Sample: Smallholder farmers, n=2,795.



## What type of phone have you used?

Sample: Smallholder farmers who have ever used a mobile phone, n=2,238.



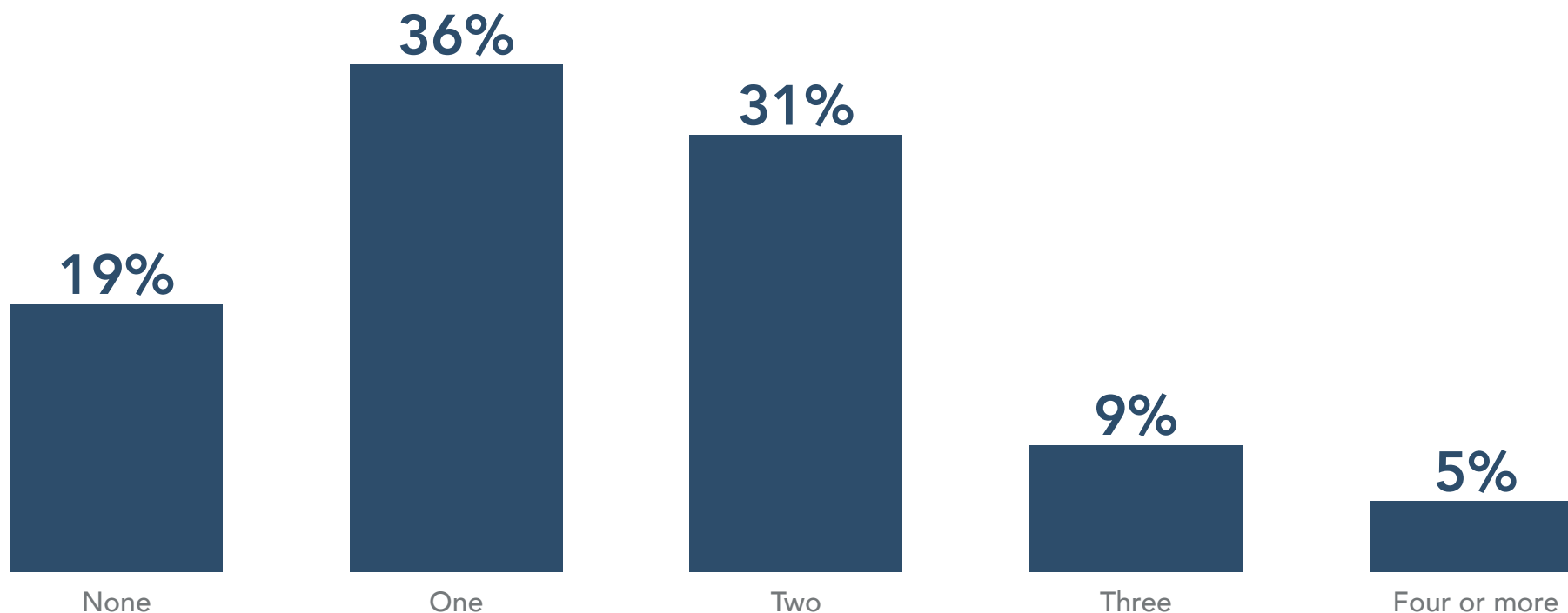
Over 4 in 5 of smallholder farmers in Tanzania have used a mobile phone, and of those, 80% have their own phone. This means that two-thirds of smallholders have their own phone, slightly lower than the 77% of the national population overall.

The most common phone is a basic phone without internet capability. The use of feature phones and smartphones remains quite low.

# 81% of smallholders have at least one handset in the household.

## Number of mobile phones owned by household members?

Sample: Smallholder farmers, n=2,993.

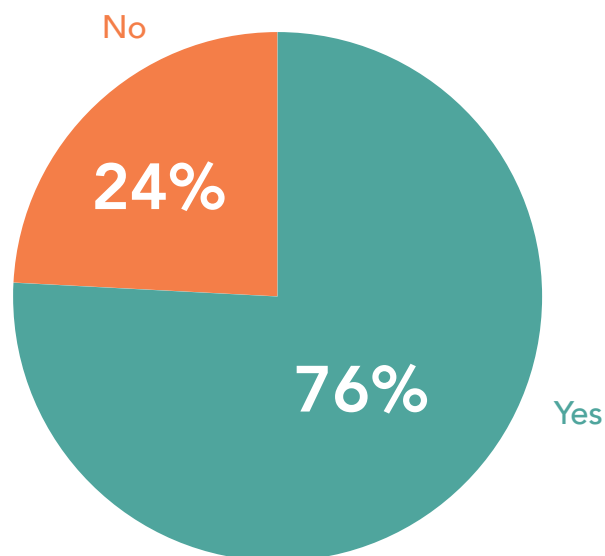




# Awareness and perceived benefits of mobile money are high.

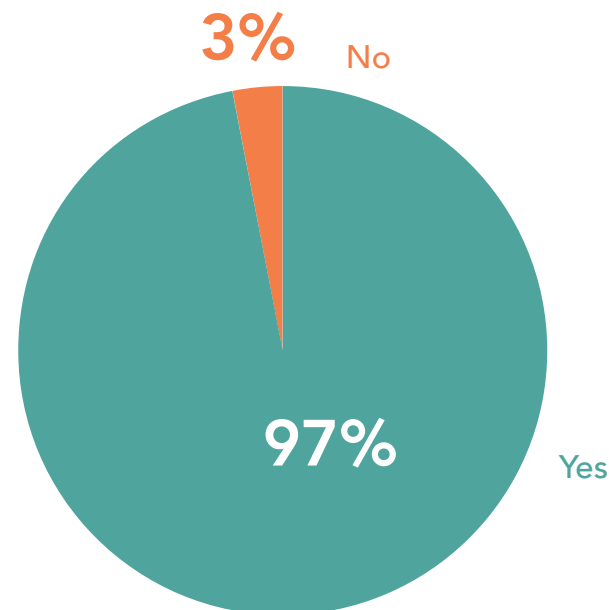
## Have you ever heard of something called mobile money?

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.

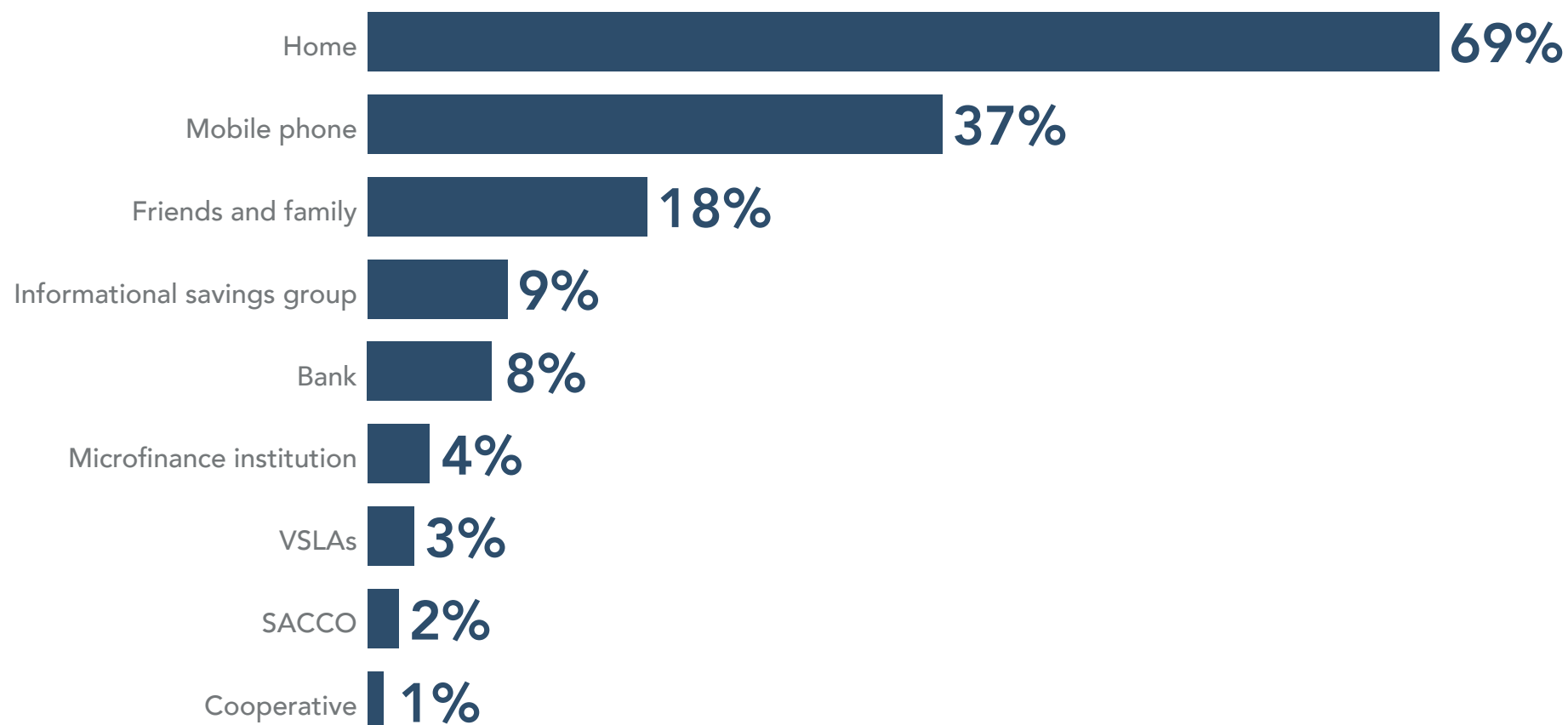


Three-quarters of the smallholder farmers in Tanzania say they have heard of mobile money, and the vast majority see benefits to having a mobile money account. Smallholders name the ability to do person-to-person transfers and save money as key benefits to mobile money.

# This awareness and understanding of benefits translate into some use.

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

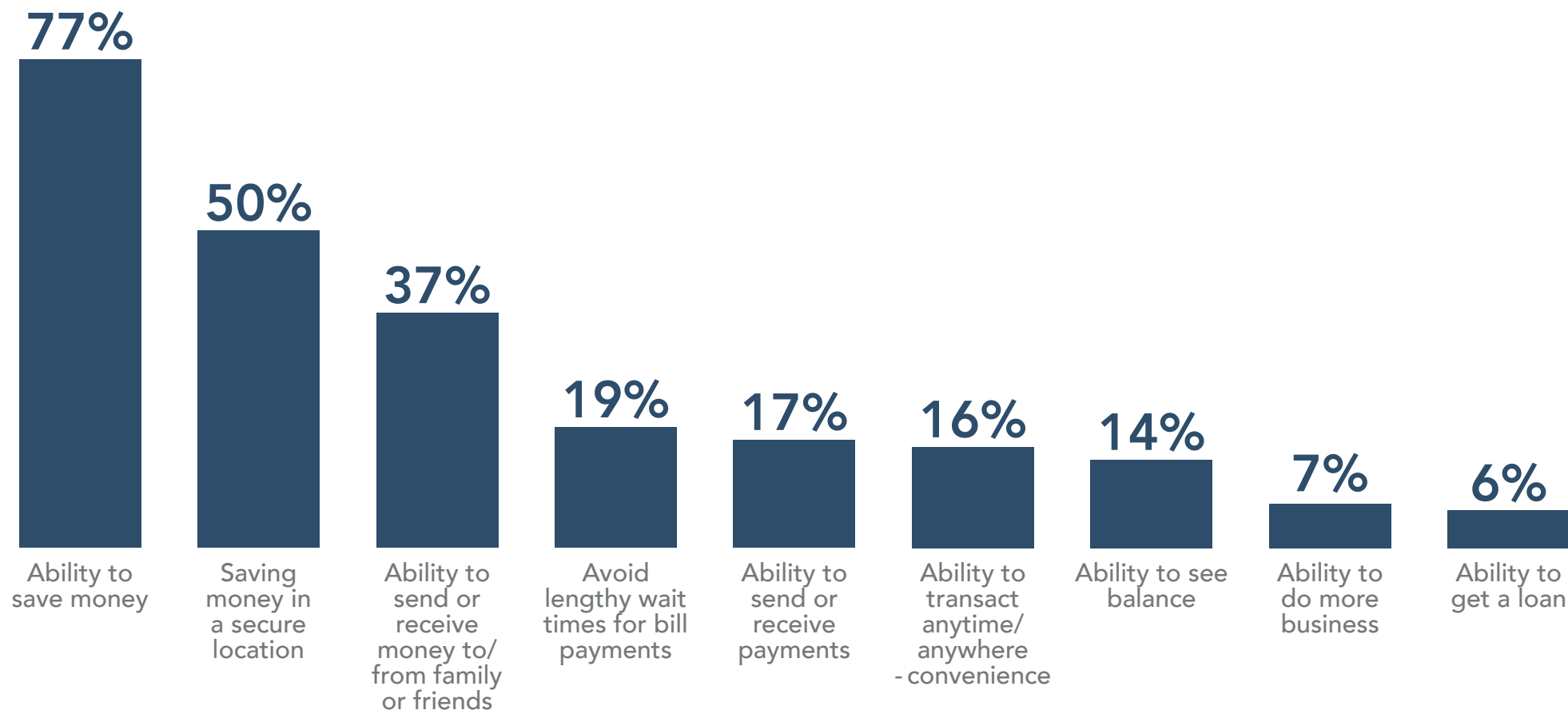
Sample: Smallholder farmers, n=2,795.



# Saving stands out as a major benefit of mobile money.

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

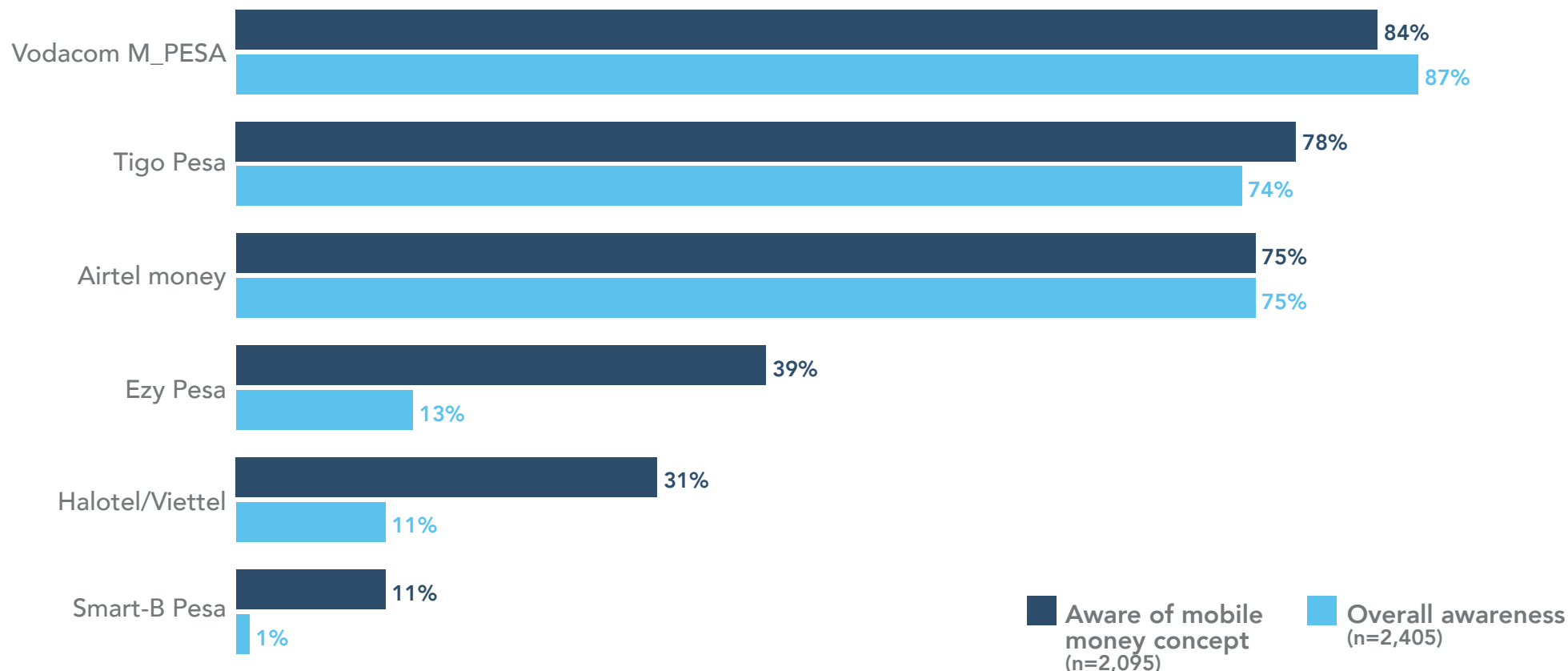
Sample: Smallholder farmers who believe there are benefits to having a mobile money account, n=2,022. Multiple responses allowed.



# Awareness of Vodacom, Tigo, and Airtel is high.

## Please tell me the names of any mobile money providers that you are aware of?

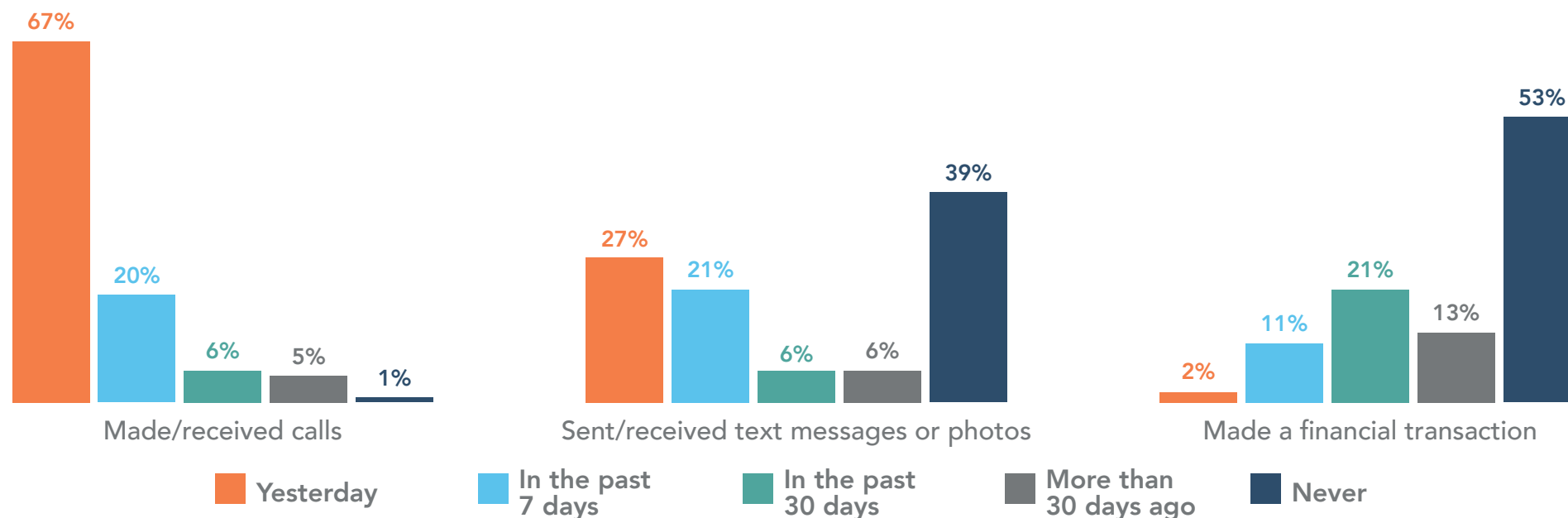
By overall awareness and awareness of mobile money concept. Sample: Smallholder farmers, n=2,771. Multiple responses allowed.



# One-third conducted a financial transaction on a mobile phone within 30 days.

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=2,150.

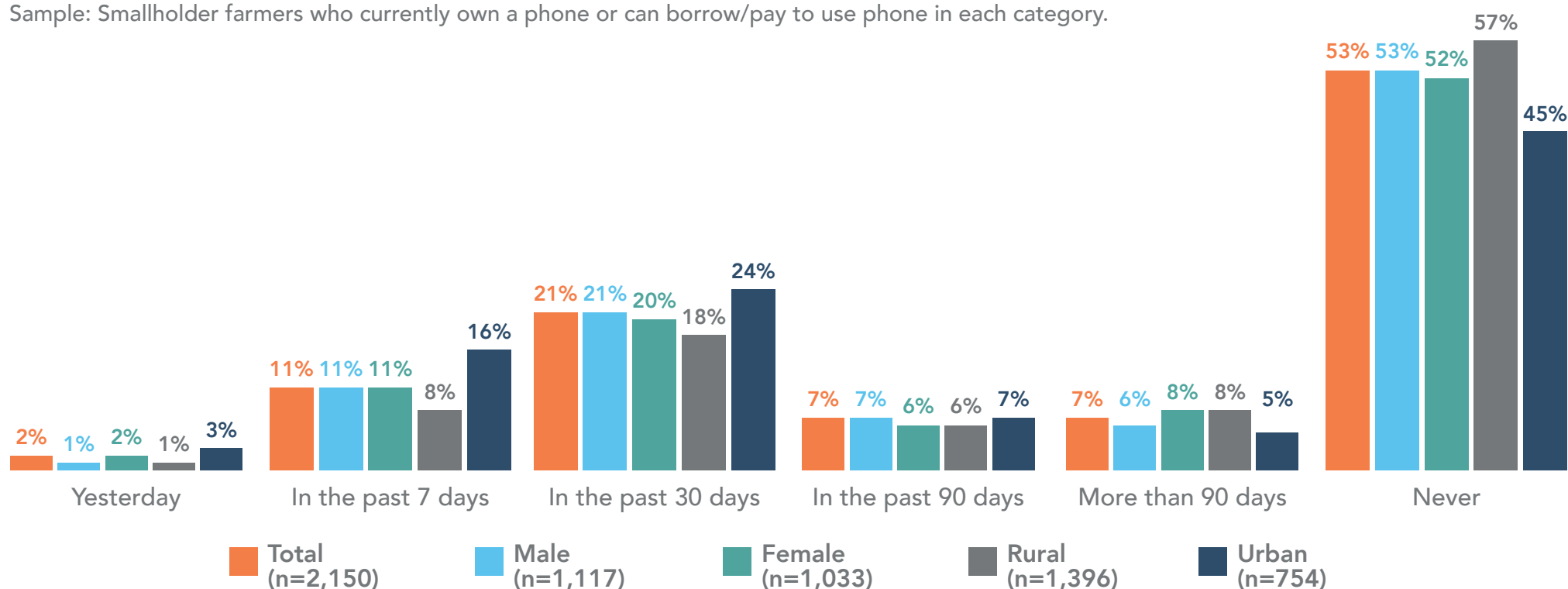


Those with a mobile phone typically use it to make calls or send texts. Close to half have ever made a financial transaction with their phone, but these types of transactions are not as frequent as calls and texts.

# A significant group of smallholders regularly uses mobile money

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

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



Men and women are about equally likely to make financial transactions with a mobile phone and with the same frequency. This suggests that for smallholders with a mobile phone, gender is not a barrier to mobile money.

# What does the data teach us?

**Smallholders see mobile phones as key financial tools and want more solutions to support their financial and agricultural lives.**

- Four-fifths of smallholders have at least one mobile phone in the household. Most are basic phones without internet capability, and digital solutions should be simple and tailored to such devices.
- A significant group of smallholders regularly uses mobile money. Men and women are equally likely to make financial transactions with a mobile phone and with the same frequency.
- Smallholders already recognize the mobile phone as an important tool for communication and channel for financial services that can benefit their agricultural activities.
- Financial services providers do not need to convince smallholders about the importance and potential of mobile phones. They need to design solutions that smallholders can access using their mobile devices.

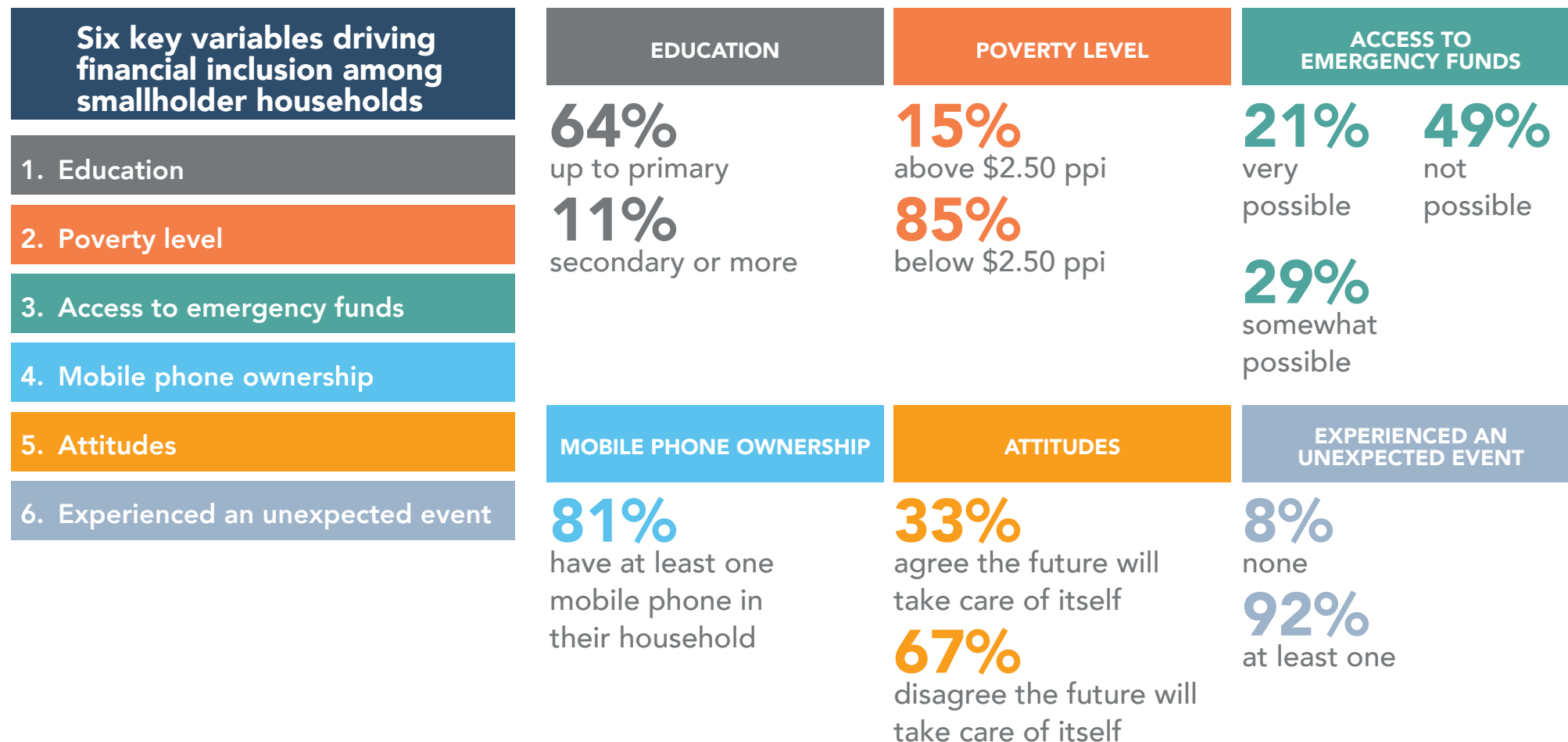




# 7 Segmentation



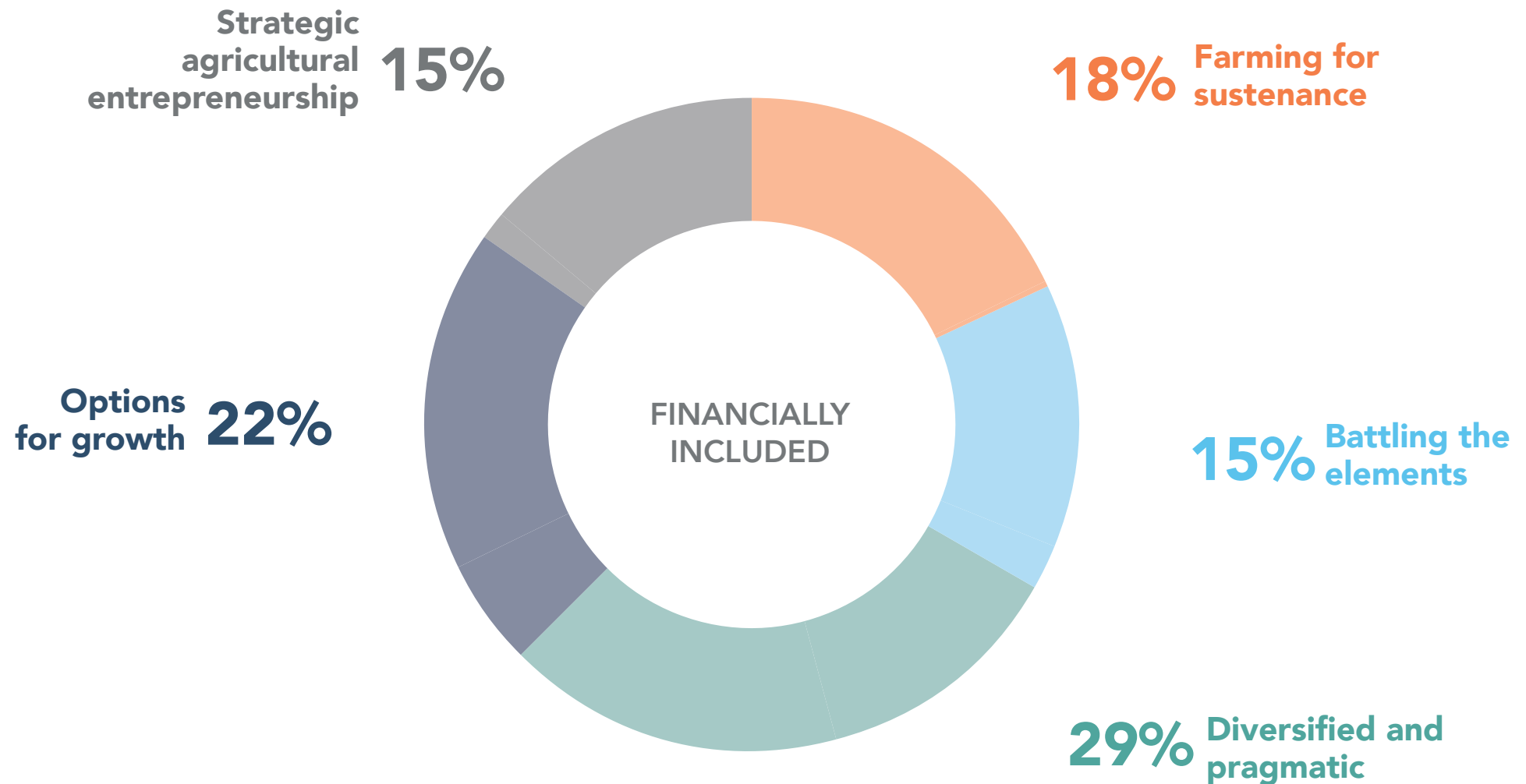
# Smallholder households are not homogeneous.



# Five segments of smallholder households in Tanzania

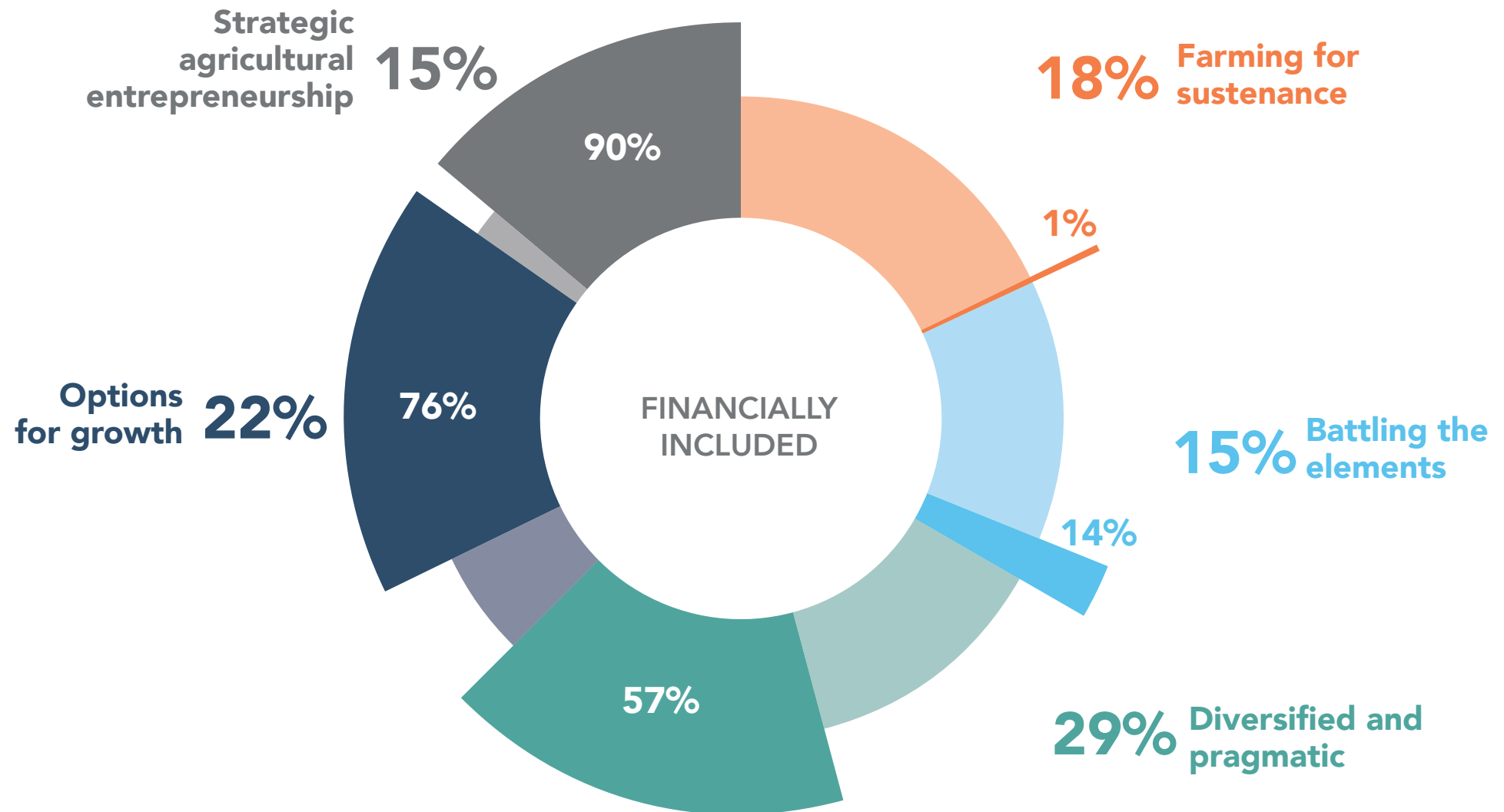
| Farming for sustenance   | Battling the elements   | Diversified and pragmatic   | Options for growth   | Strategic agricultural entrepreneurship   |
|--|---|---|--|---|
| <ul style="list-style-type: none"> <li>• The oldest segment</li> <li>• Lowest household income, and generating very little agricultural income</li> <li>• Very limited access to financial tools</li> <li>• Most interested in their children continuing in agriculture</li> </ul> | <ul style="list-style-type: none"> <li>• The youngest segment</li> <li>• Low household income, but more from both agriculture and other sources</li> <li>• More financial tools, still very vulnerable to shocks</li> </ul> | <ul style="list-style-type: none"> <li>• Growing more, selling more, and earning more</li> <li>• Engaged in more income streams and using more financial tools</li> </ul> | <ul style="list-style-type: none"> <li>• Rely heavily on agricultural income, and most likely to have other stable income sources</li> <li>• Young, optimistic and love farming, but have options and could pivot out of agriculture toward another opportunity</li> </ul> | <ul style="list-style-type: none"> <li>• Relatively highest income and most access to financial mechanisms</li> <li>• Successful in agriculture</li> <li>• Have resources and tools to get through tough times</li> </ul> |
| Highly vulnerable to shocks  | Persevered through harsh agricultural challenges yet remain optimistic toward farming   | Take pride in their agricultural activities, but more likely to leave the sector if given the choice  | Could pivot into or out of farming depending on opportunities  | Perseverant and with big aspirations for their agricultural activities, and committed to agriculture  |

# Five segments of smallholder households in Tanzania

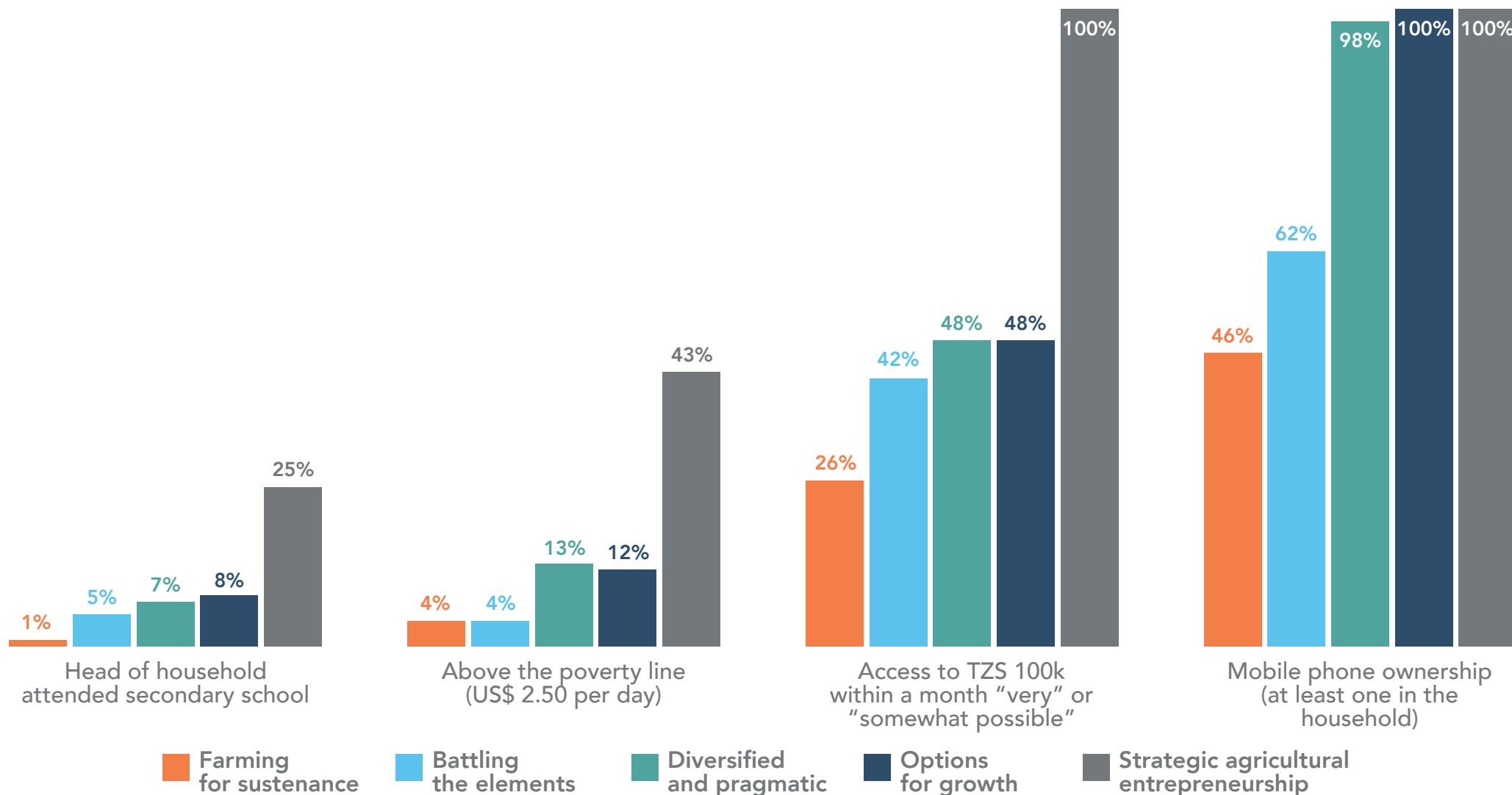


# Five segments of smallholder households in Tanzania

*Percentage of segments financially included*



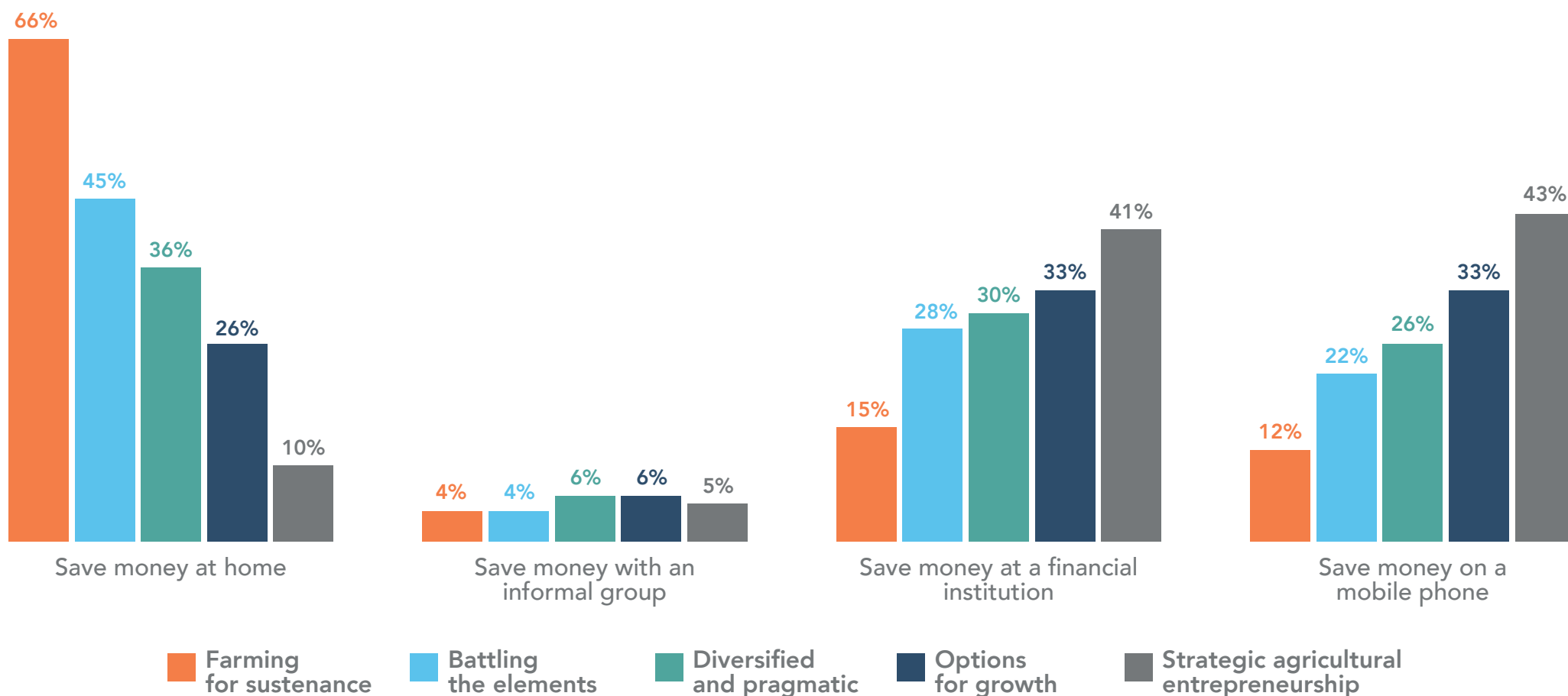
# Clear distinctions between smallholder household segments



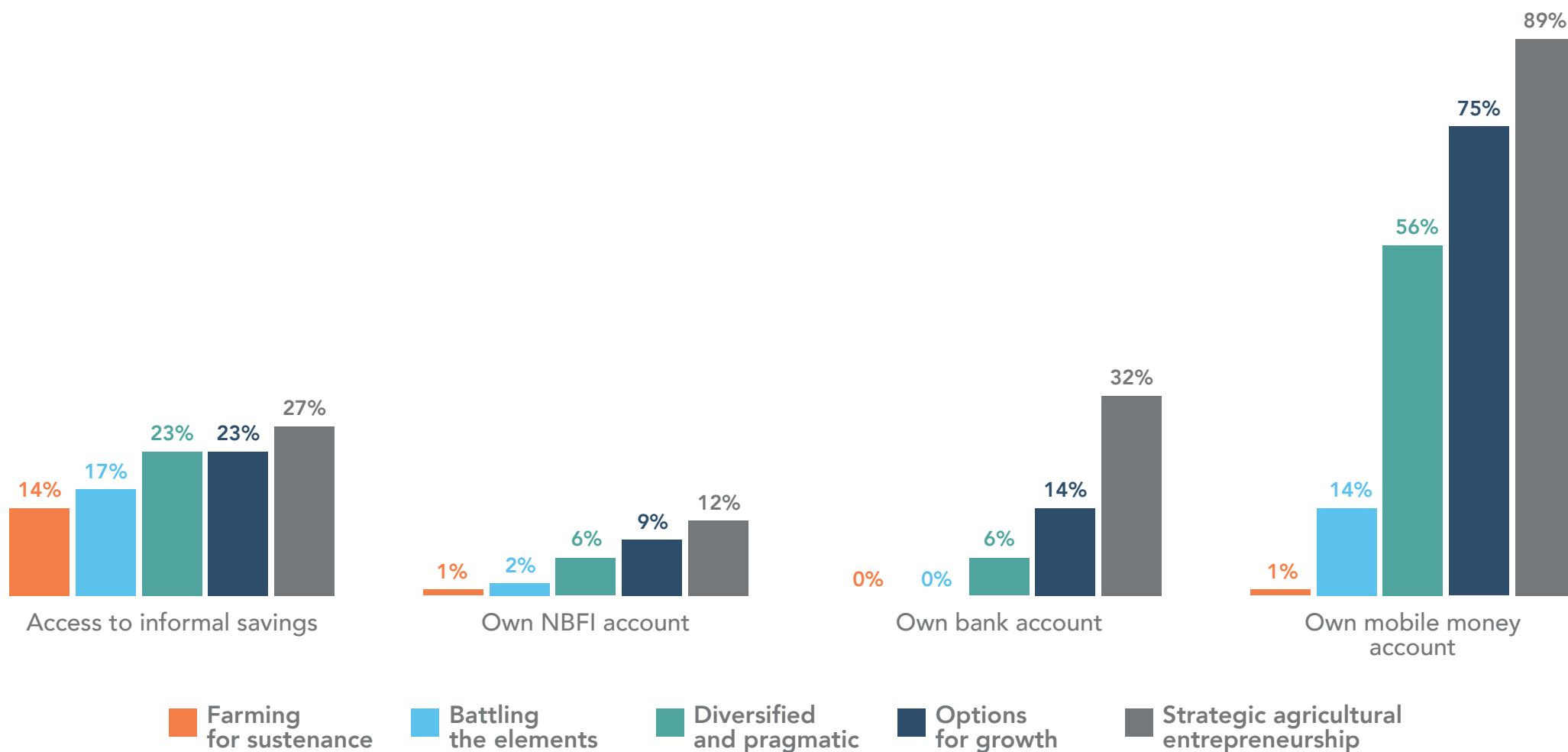
# Varied importance of savings mechanisms across segments

## How important is it for your household to save at each of the following?

Sample: Smallholder farmers, n=2,795.



# Varied access to financial mechanisms across segments





# What does the data teach us?

**Smallholder families are diverse and can be segmented into a few key profiles that share common characteristics.**

- The agricultural sector in Tanzania is 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, five segments of smallholder households emerge. Their profiles range from low income, 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.



Photo by Erin Scronce

## IMPLICATIONS

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# Financial service providers

## **LEVERAGE MOBILE PHONES AS A DELIVERY MECHANISM**

Mobile phone penetration is good, but mostly for basic and feature phones. Any intervention that targets smallholders, including financial and advisory services, must be simple and compatible with the basic mobile devices that smallholders currently use.

## **BUNDLE PRODUCTS AND SERVICES FOR ALL HOUSEHOLD NEEDS**

Tanzanian smallholders want to save, invest and insure their livelihood activities. They are looking for a bundle of financial solutions that align with their household cash flow and meet both immediate and long-term needs.

## **TAILOR SOLUTIONS**

Some challenges are common to all smallholders, such as volatile incomes, higher agricultural expenses, and clear risks with few coping mechanisms, but there is diversity across this important client group in what they grow, where they sell it, their mix of household income sources, and the technology they use. It is therefore important to understand which segments to target, their needs and priorities, and design specific solutions to address them.

## **DEVELOP THE ECOSYSTEM AND EDUCATE SMALLHOLDERS**

The awareness and perceived benefits of mobile money is high, but uptake remains low. It will be critical to continue developing the ecosystem and educating the farmers on how to leverage their mobile devices to perform financial transactions. This education must be embedded in real products and the actual customer journey.

# Donors

## **INVEST IN INFRASTRUCTURE**

Digital financial services rely on consistent access to electricity, cell phone networks, and the internet for uptake and continued effective use. Good transportation infrastructure is also essential to reduce costs, open new markets, and increase sales. Smallholders feel limited by the current state of the information and transportation infrastructure. Working with government partners, donors play a unique role in supporting these crucial improvements.

## **BUILD CAPACITY**

Donors should increase their capacity building support to MFIs, MNOs and Banks to help understand customers and tailor and diversify the products and services tailored for smallholders.

## **FACILITATE THE ECOSYSTEM**

Support regulators to continuously review and develop policy guidelines that foster a supportive ecosystem for financial inclusion.

# Government

## **SUPPORT THE NEXT GENERATION OF FARMERS**

As younger generations seek alternative employment outside of agriculture, the future of agriculture in Tanzania hangs in balance. The Government should design supportive strategies to increase pathways for youth into agriculture, support young entrepreneurs in agriculture, connect to related innovations and digital start-ups, and foster the community of future agricultural leaders in Tanzania.

## **FOSTER INNOVATION**

Start-ups are working to overcome some of the challenges facing smallholder farmers—including counterfeit inputs and seeds, lack of information about agricultural practices and prices, and limited market access—through verification and educational initiatives and platforms that link buyers and sellers directly. Progressive regulatory policies that foster innovation and collaboration between these various actors would further support smallholders.

## **INVEST IN INFRASTRUCTURE**

Agricultural outputs must reach markets to generate income, and improvements in the transportation infrastructure play an important role in helping smallholders access new buyers, earn competitive prices, and reduce transport costs. Continued investment in the information and power infrastructure is also key. Focusing donor support in these crucial areas can have important positive impacts on smallholders.





Photo by Erin Scronce

## RESOURCES

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# 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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