

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

Insights from the Household Survey in Nigeria



NOVEMBER 2017

NIGERIA

Contents

<u>BACKGROUND</u>	3
<u>WHY IT MATTERS</u>	14
<u>INSIGHTS</u>	18
<u>IMPLICATIONS</u>	82
<u>RESOURCES</u>	88



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



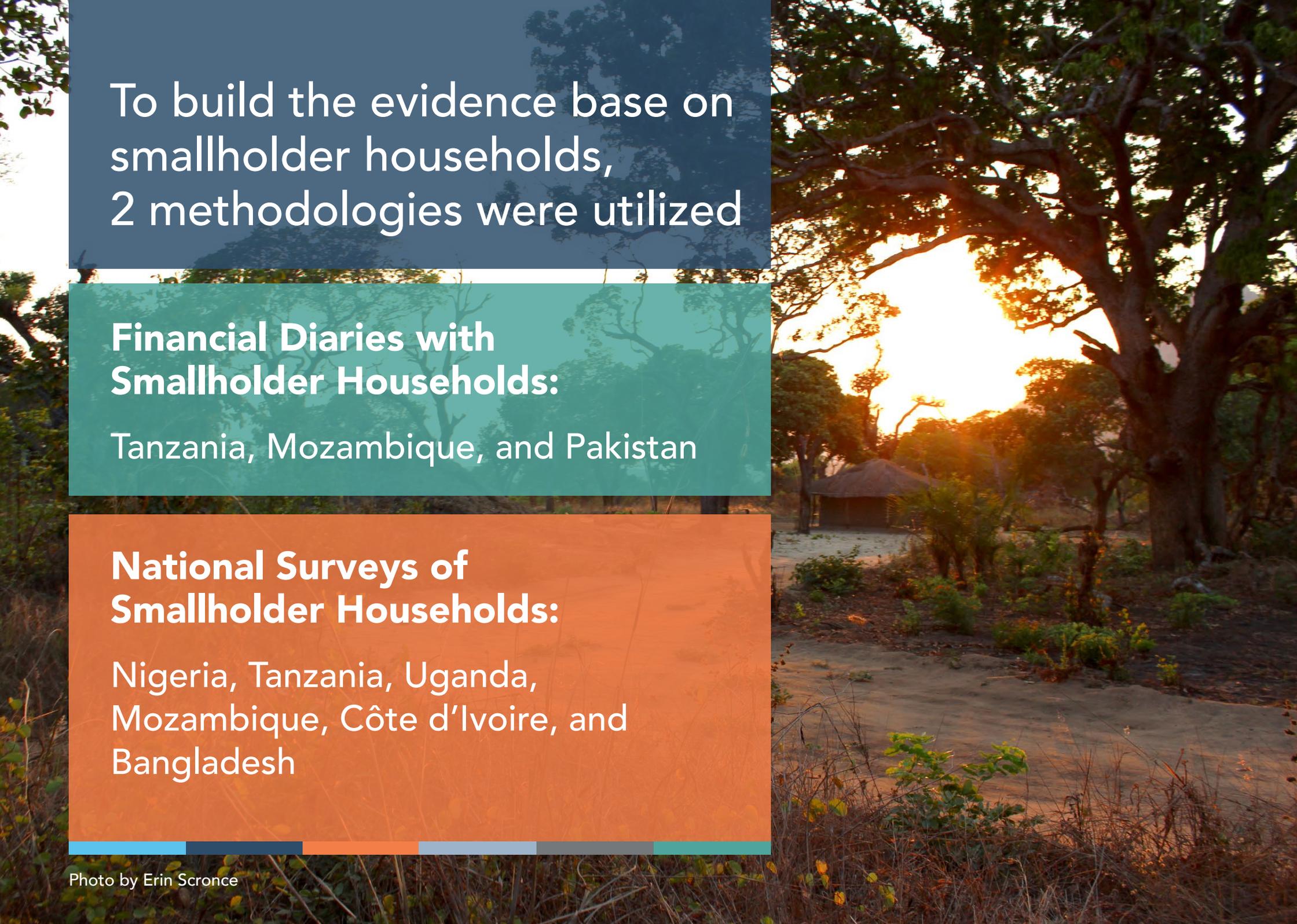
MOZAMBIQUE



TANZANIA



PAKISTAN



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

**Financial Diaries with
Smallholder Households:**

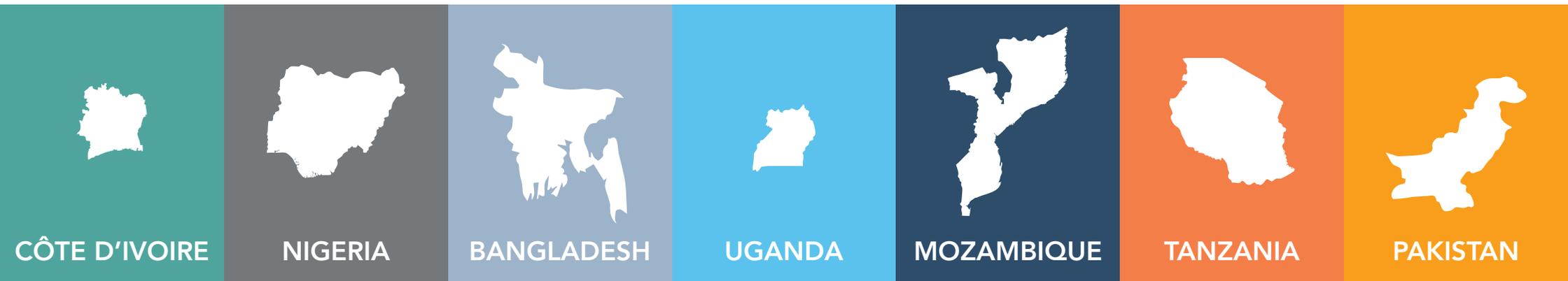
Tanzania, Mozambique, and Pakistan

**National Surveys of
Smallholder Households:**

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



Photo by Arne Hoel / World Bank

Agriculture is a key driver of the economy in Nigeria. It accounts for 21% of the GDP and employs 70% of the labor force.¹

Based on Nigeria's official definition of smallholders, more than 80% of farmers in Nigeria are considered smallholders because they own less than 5 hectares of land.

Smallholders produce 99% of Nigeria's agricultural outputs, yet their productivity is hindered by several limitations, including the lack and high cost of labor and agricultural inputs in rural areas; limited access to information, modern agricultural technology, and adequate financial services; a land tenure system that prevents the acquisition of new land; and inconsistent support from local government councils.²

Many smallholder farmers in Nigeria 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.



To explore the financial needs and behaviors of smallholder families in Nigeria, in 2016, CGAP, in coordination with Enhancing Financial Innovation and Access (EFInA) and working closely with the National Bureau of Statistics, conducted a nationally-representative survey of smallholder households.

This presentation highlights key insights from this research.

Source: 1) Central Intelligence Agency. World Factbook. <https://www.cia.gov/library/publications/the-world-factbook/geos/ni.html> 2) Mgbenka, R. N., and E. N. Mbah. 2016. "A Review of Smallholder Farming in Nigeria: Need for Transformation." International Journal of Agricultural Extension and Rural Development Studies, Vol. 3, No. 2, pp. 4-54, May. <http://www.eajournals.org/wp-content/uploads/A-Review-of-Smallholder-Farming-In-Nigeria.pdf>

National Survey of Smallholder Households

Sample Design

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

Sampling Frame

Working closely with the National Bureau of Statistics in Nigeria, InterMedia conducted a household listing operation in randomly selected enumeration areas (EAs) on 6-18 October 2016 to construct a reliable sampling frame.

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 was collected by Ipsos Nigeria, InterMedia's local field partner.

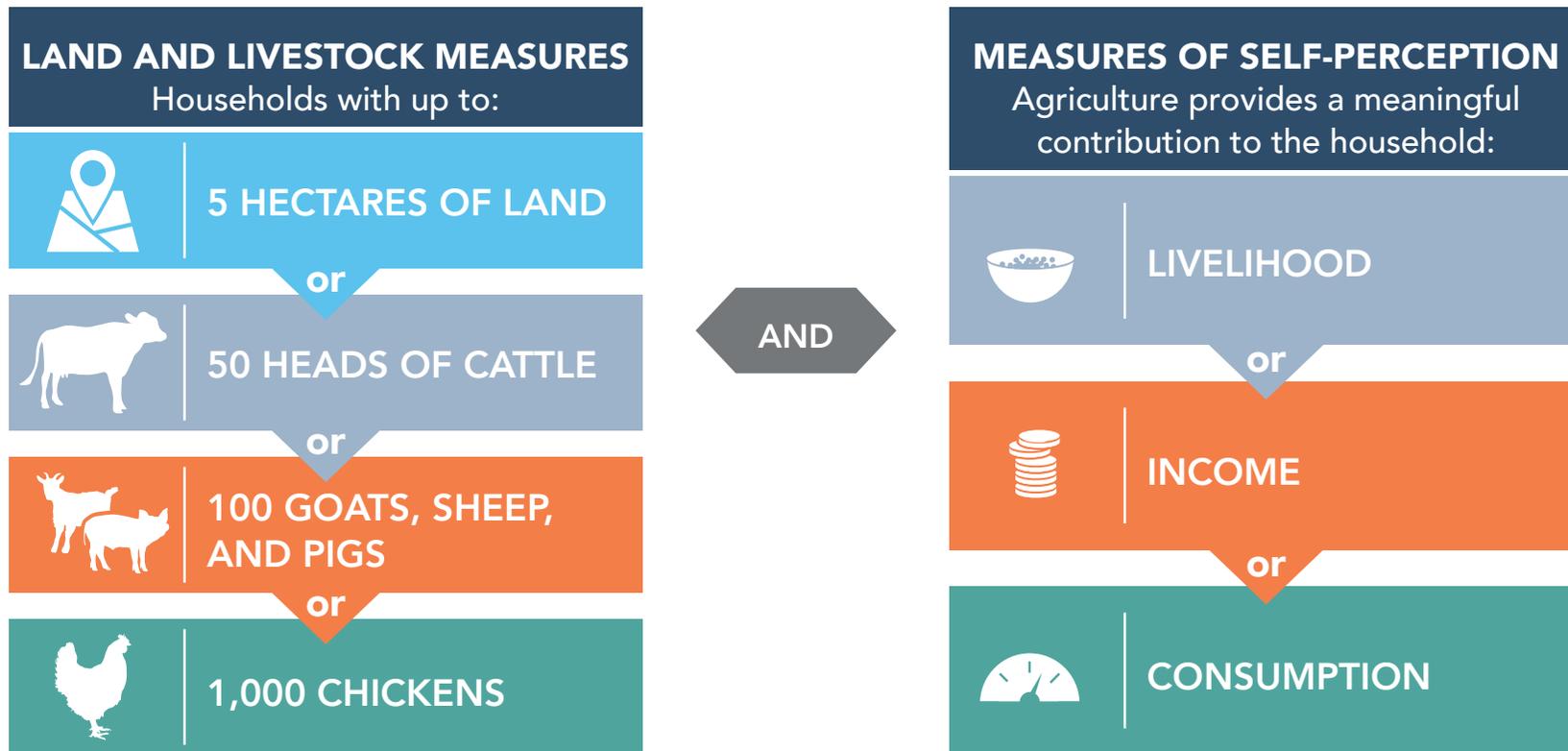
Data Collection

The questionnaire was translated into Pidgin, Yoruba, Igbo, and Hausa, and then tested and validated in each language to ensure the integrity of the questions and their alignment with social and cultural customs. Data collection took place from 21 November to 9 December 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 Nigeria, InterMedia's local field partner.

National Survey of Smallholder Households

Identification of relevant smallholder households to sample

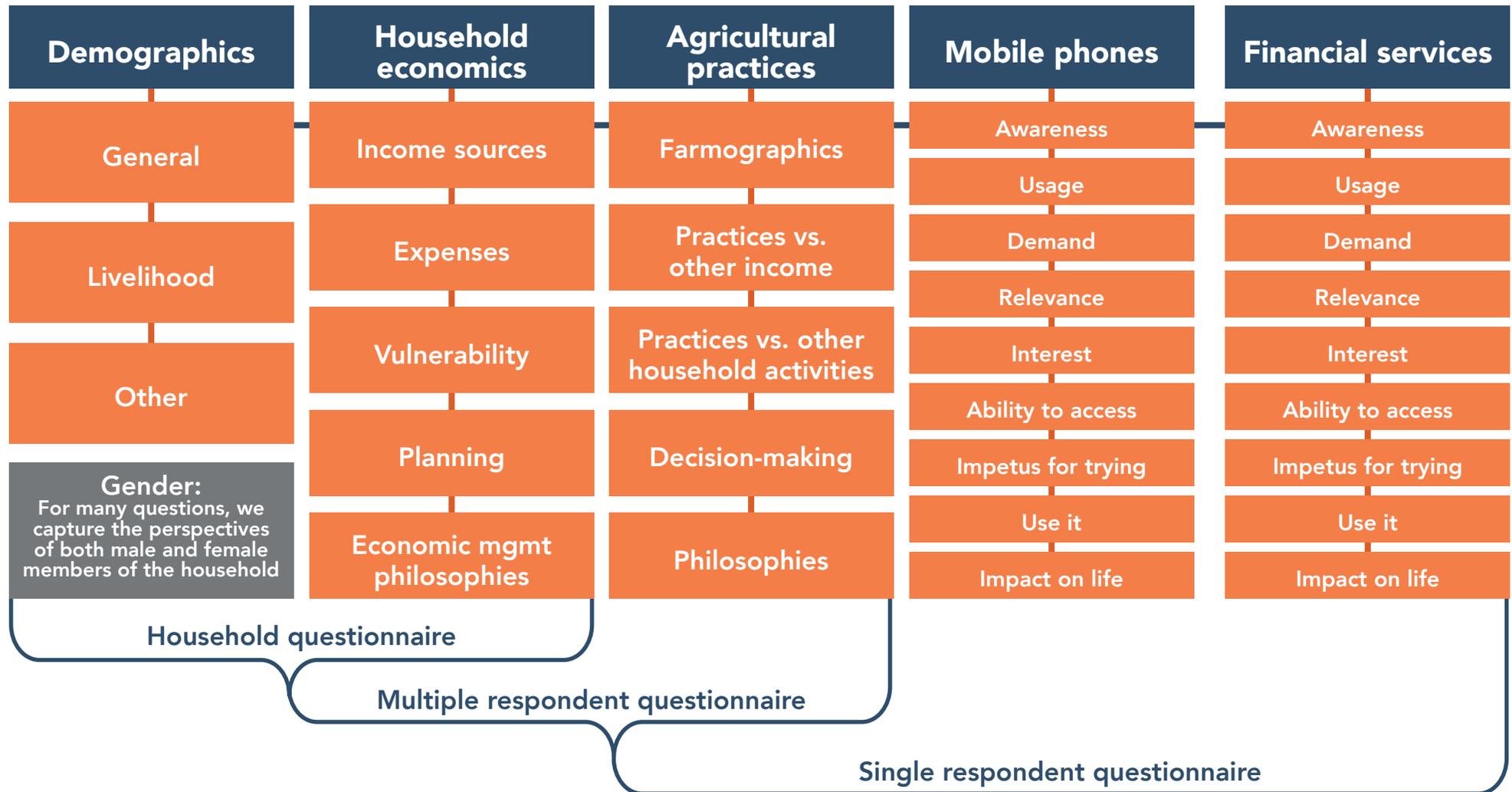
Listing criteria for the national surveys of smallholder households



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



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



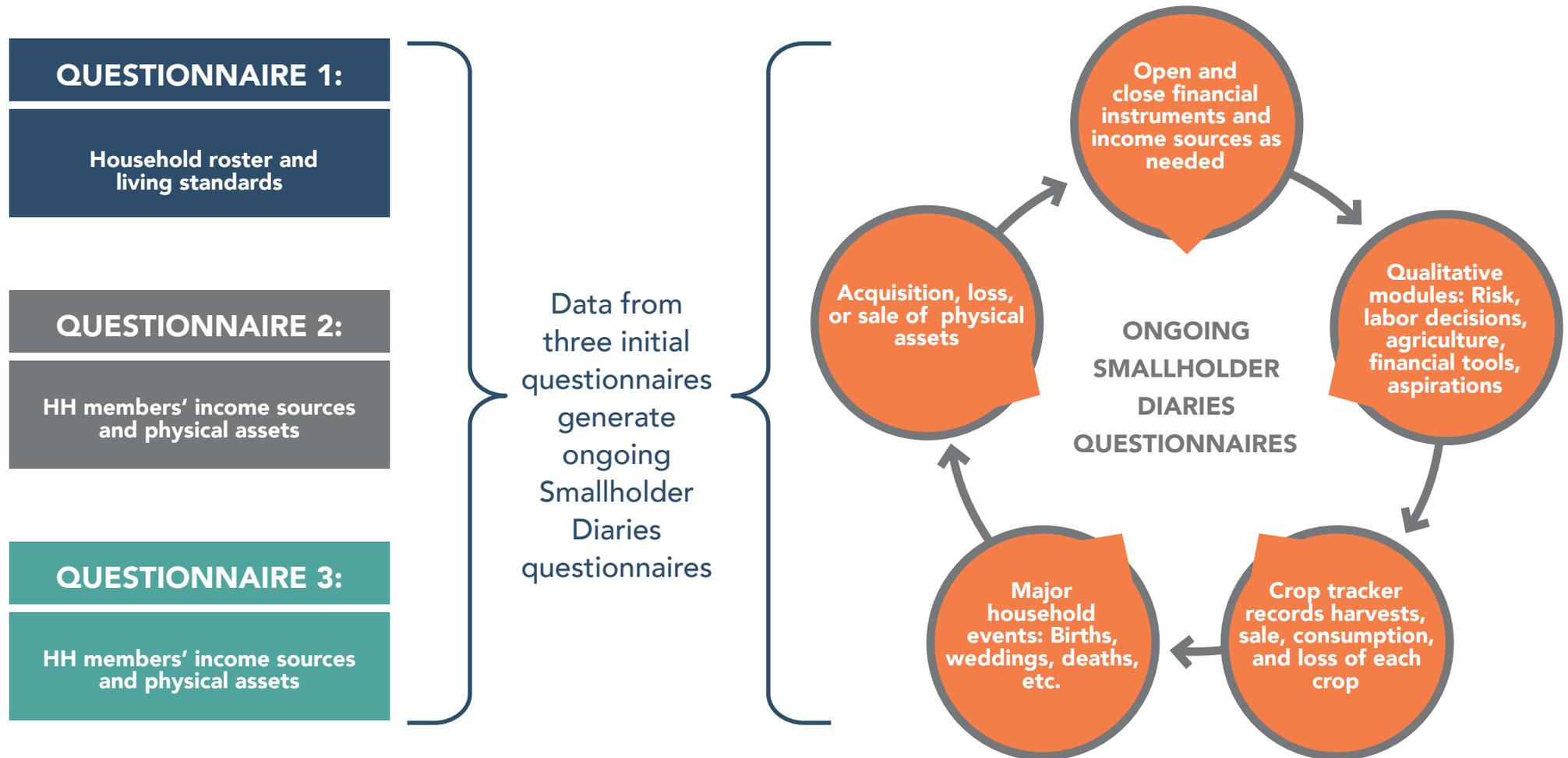
Sample households:
94

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

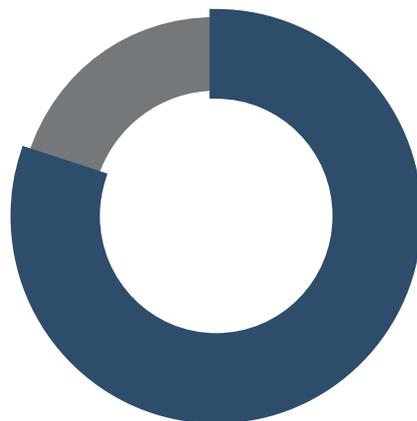
Smallholders drive the agricultural sector in Nigeria...

Agriculture in Nigeria accounts for*:

21%
of the GDP¹



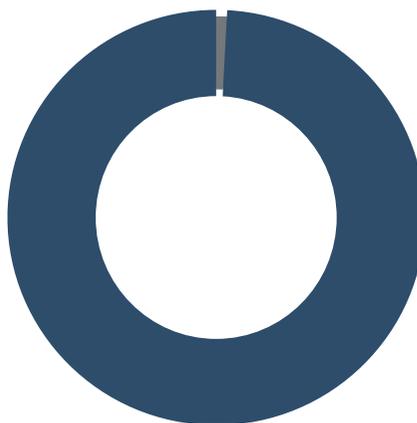
70%
of the labor force¹



Based on Nigeria's official definition of smallholders, more than

80%

of farmers in Nigeria are considered smallholders because they own less than 5 hectares of land.²



Smallholders produce

99%

of Nigeria's agricultural outputs.²

*Source: 1) Central Intelligence Agency. World Factbook. <https://www.cia.gov/library/publications/the-world-factbook/geos/ni.html> 2) Mgbenka, R. N., and E. N. Mbah. 2016. "A Review of Smallholder Farming in Nigeria: Need for Transformation." International Journal of Agricultural Extension and Rural Development Studies, Vol. 3, No. 2, pp. 4-54, May. <http://www.eajournals.org/wp-content/uploads/A-Review-of-Smallholder-Farming-In-Nigeria.pdf>

...but smallholder families are struggling.

Major constraints to smallholder farming in Nigeria include the lack and high cost of labor and agricultural inputs in rural areas; limited access to information, modern agricultural technology, and adequate financial services; a land tenure system that prevents the acquisition of new land; and inconsistent support from local government councils*.

73%

of smallholder households live in poverty,

and one-quarter live in extreme poverty, on less than

\$1.25

 per day

*Source: Mgbenka, R. N., and E. N. Mbah. 2016. "A Review of Smallholder Farming in Nigeria: Need for Transformation." International Journal of Agricultural Extension and Rural Development Studies, Vol. 3, No. 2, pp. 4–54, May. <http://www.eajournals.org/wp-content/uploads/A-Review-of-Smallholder-Farming-In-Nigeria.pdf>

Key statistics from the National Survey of Smallholder Households in Nigeria

73%

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

13%

of smallholders have a contract to sell their crops and livestock

81%

of smallholders have a voter's card for identification

43%

of smallholder households own less than one hectare of agricultural land

73%

of smallholders who own phones have a basic phone without internet capability

30%

of smallholders indicate that pests and plant diseases pose the greatest risk to their agricultural activities

100%

of payments for the sale of agricultural outputs are in cash, and **2%** are in kind

37%

of smallholders have ever entered a bank, and only **21%** have a bank account in their name

90%

of smallholders intend to keep working in agriculture

78%

of smallholders store crops after harvest, **54%** in the home

3%

of smallholders have heard of mobile money, but only **0.3%** have a mobile money account

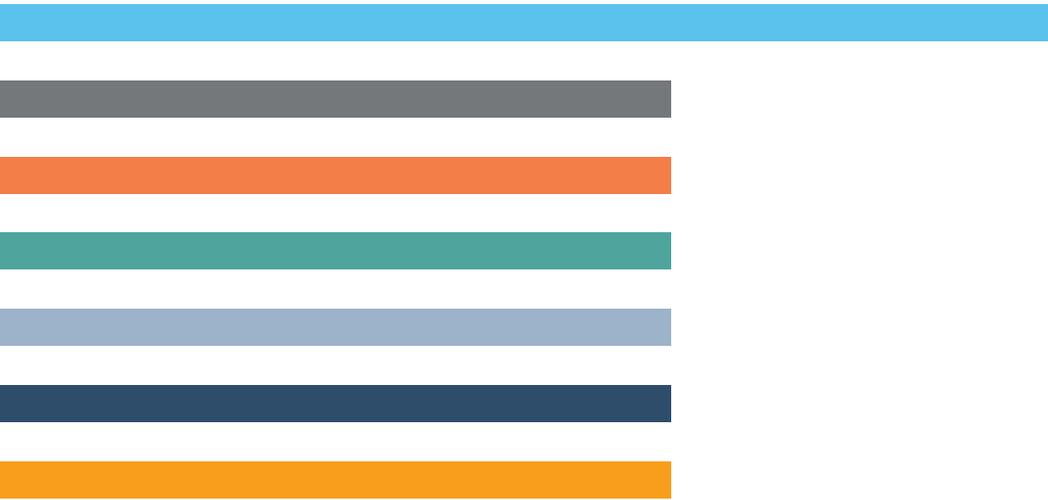


INSIGHTS

18

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

7 insights

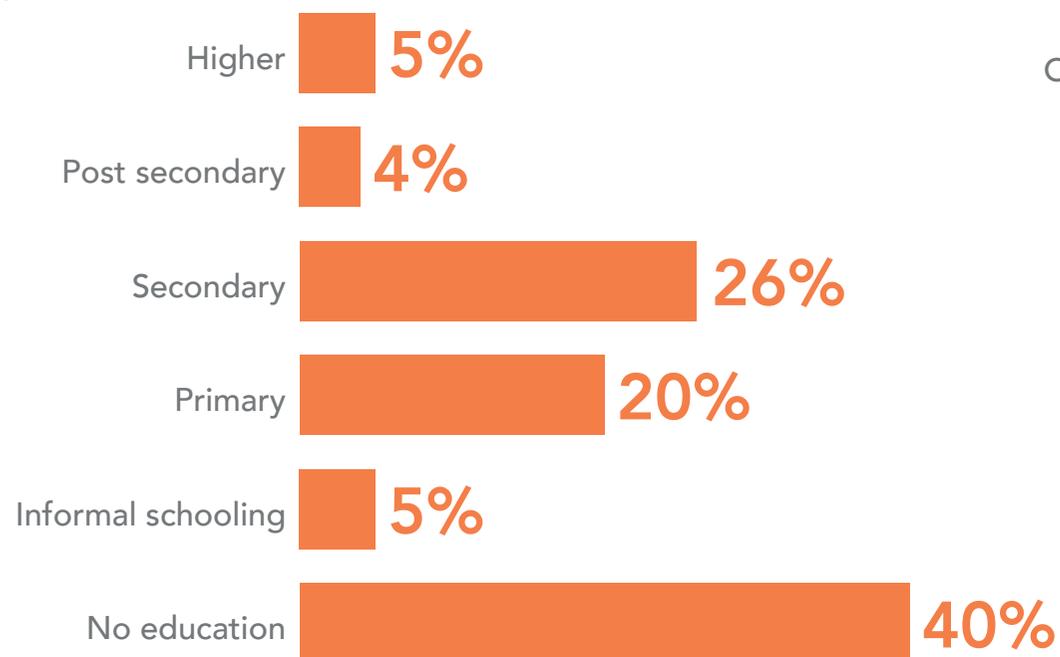


1 Demographics

Most smallholders in Nigeria have limited education and are over 40.

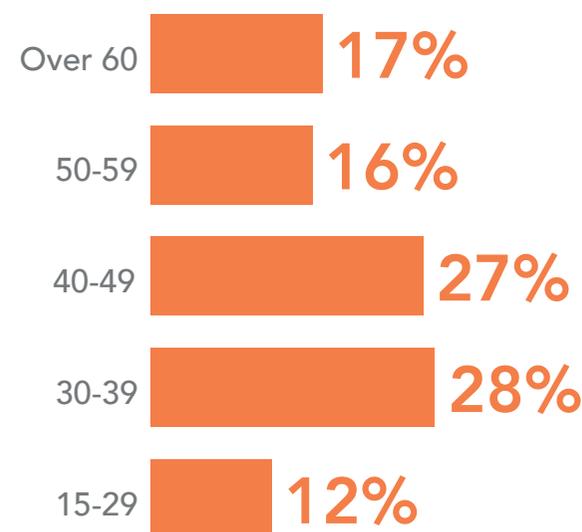
Highest education attended by head of household

Sample: Smallholder households, n=3,026.



Age of head of household

Sample: Smallholder households, n=3,026.

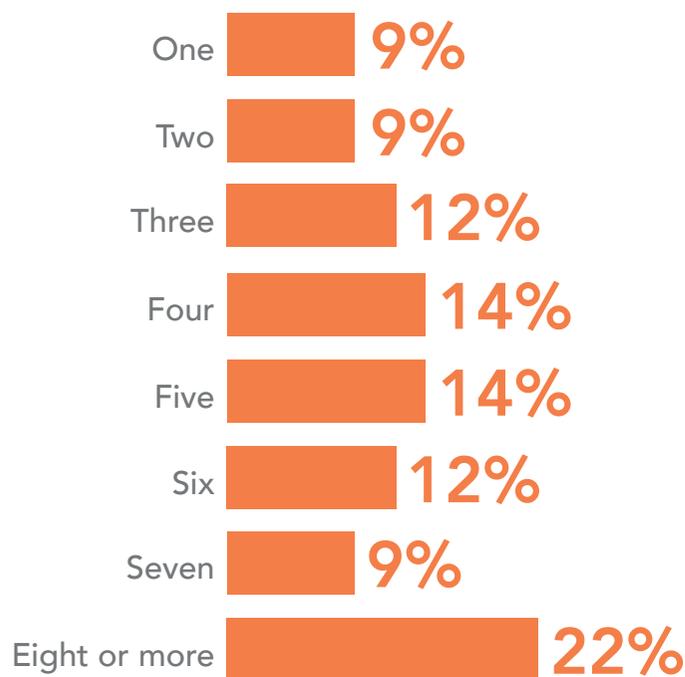


Among smallholder families in Nigeria, one-third of the household heads are over 50 years old. One in five completed primary education, but two in five never attended school.

The size of smallholder households varies, but only about one quarter live above the poverty line.

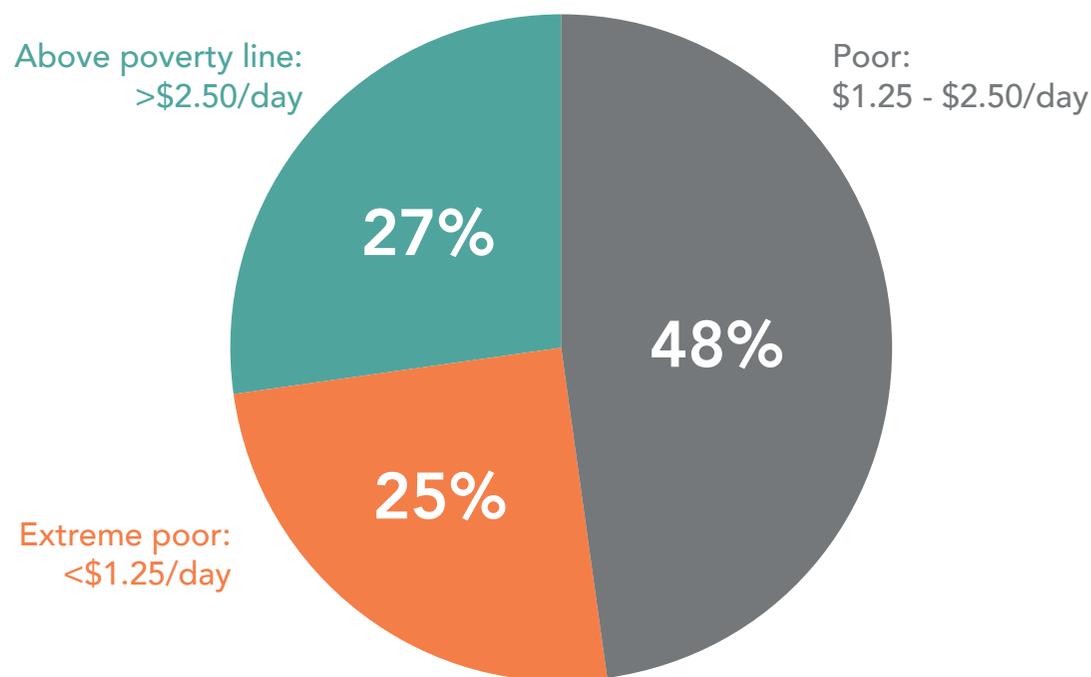
Number of people in household

Sample: Smallholder households, n=3,026.



Extreme poverty status of household

Sample: Smallholder households, n=3,026.

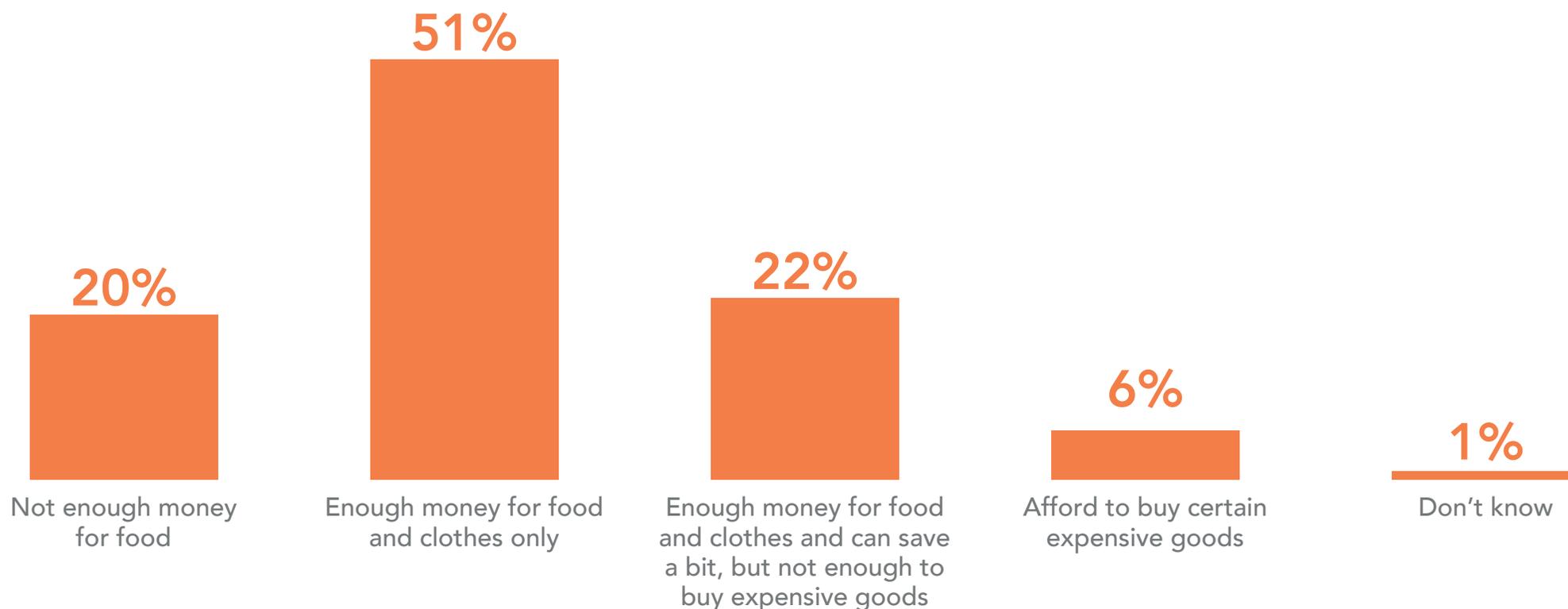


Six or more people live in 43% of smallholder households in Nigeria.
One quarter of smallholder families live in extreme poverty.

20% of smallholder families do not have enough money for food.

Household's current financial situation (self-assessed)

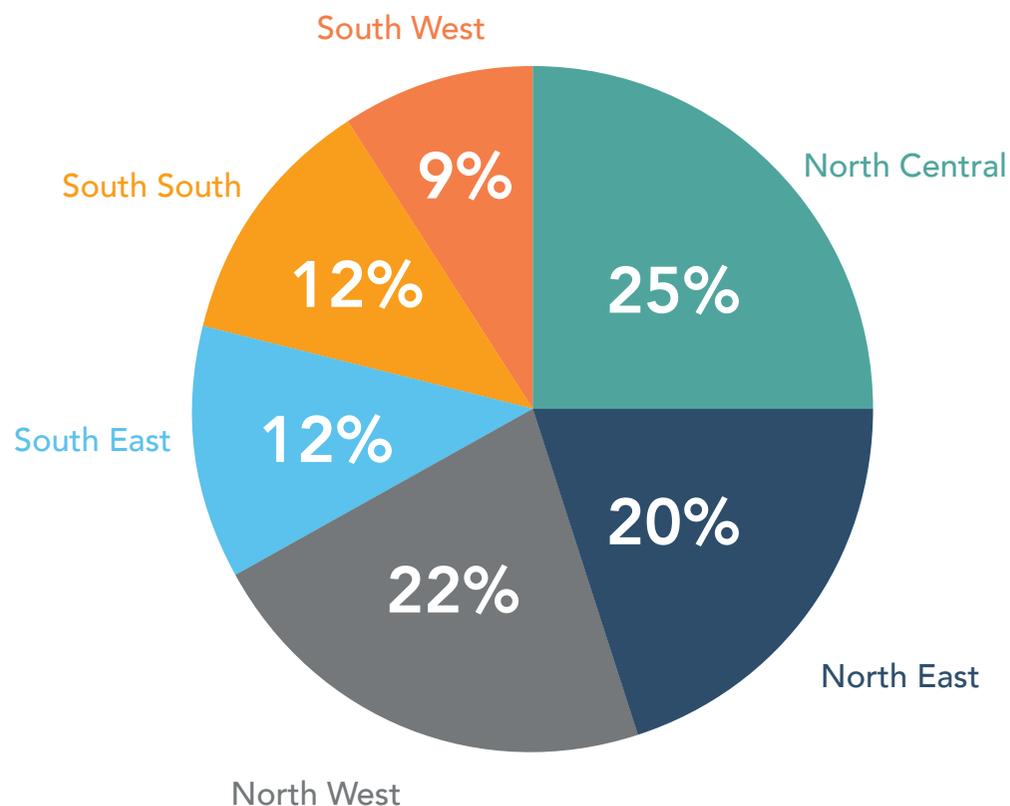
Sample: Smallholder households, n=3,026.



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

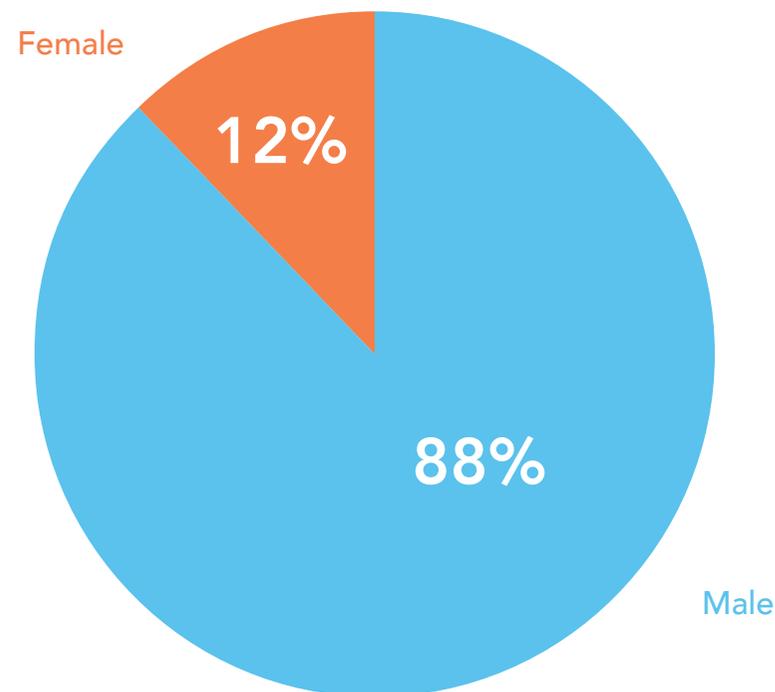
Regional zone

Sample: Smallholder households, n=3,026.



Gender of head of household

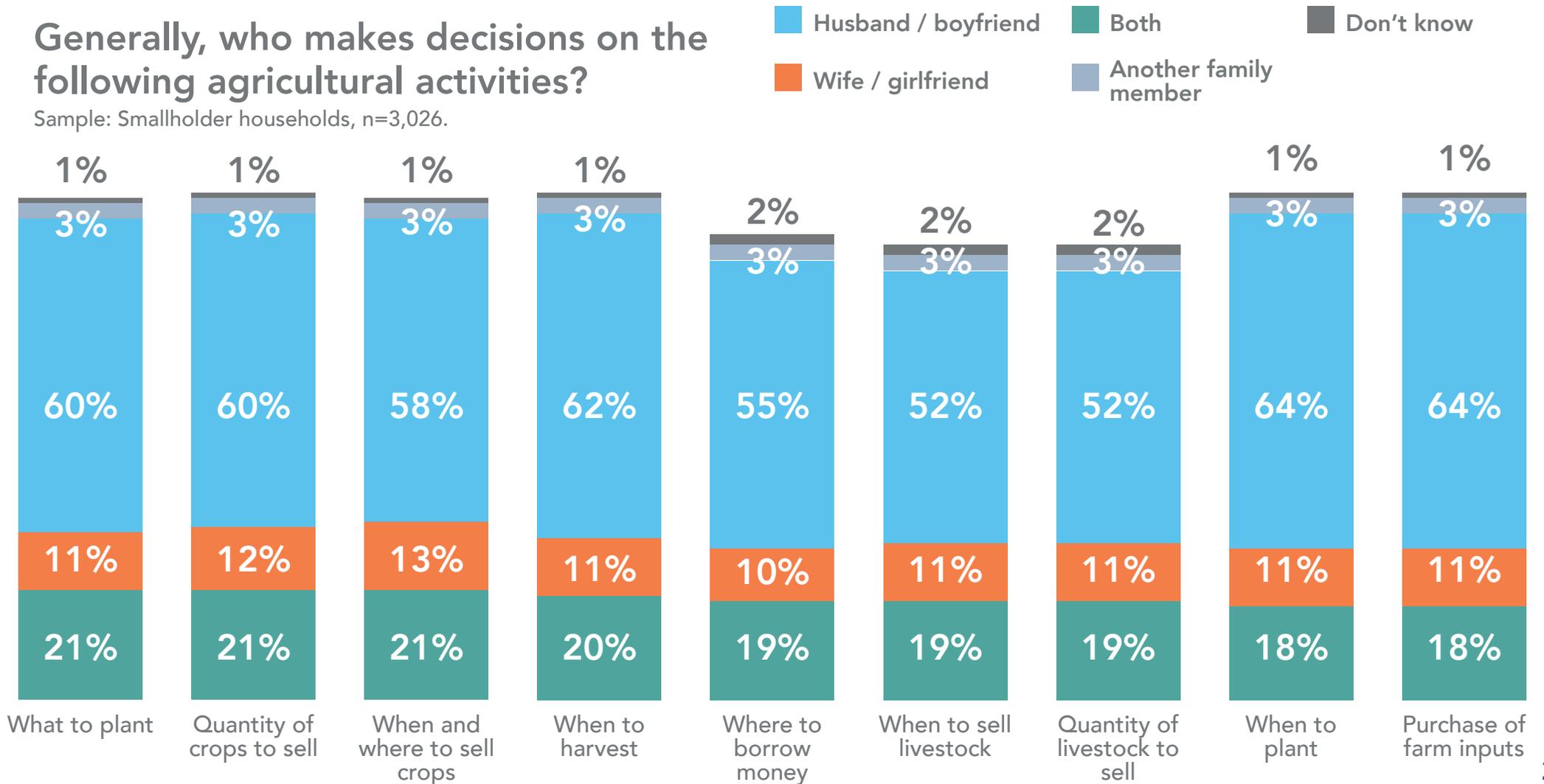
Sample: Smallholder households, n=3,026.



...and women play a limited role in decision-making.

Generally, who makes decisions on the following agricultural activities?

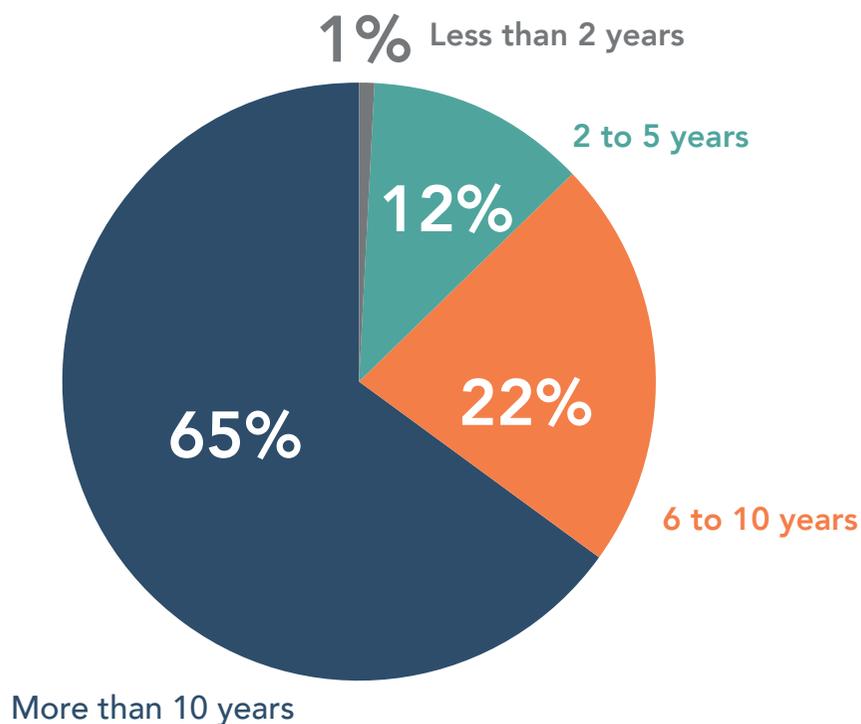
Sample: Smallholder households, n=3,026.



Most smallholders have been farming for several years.

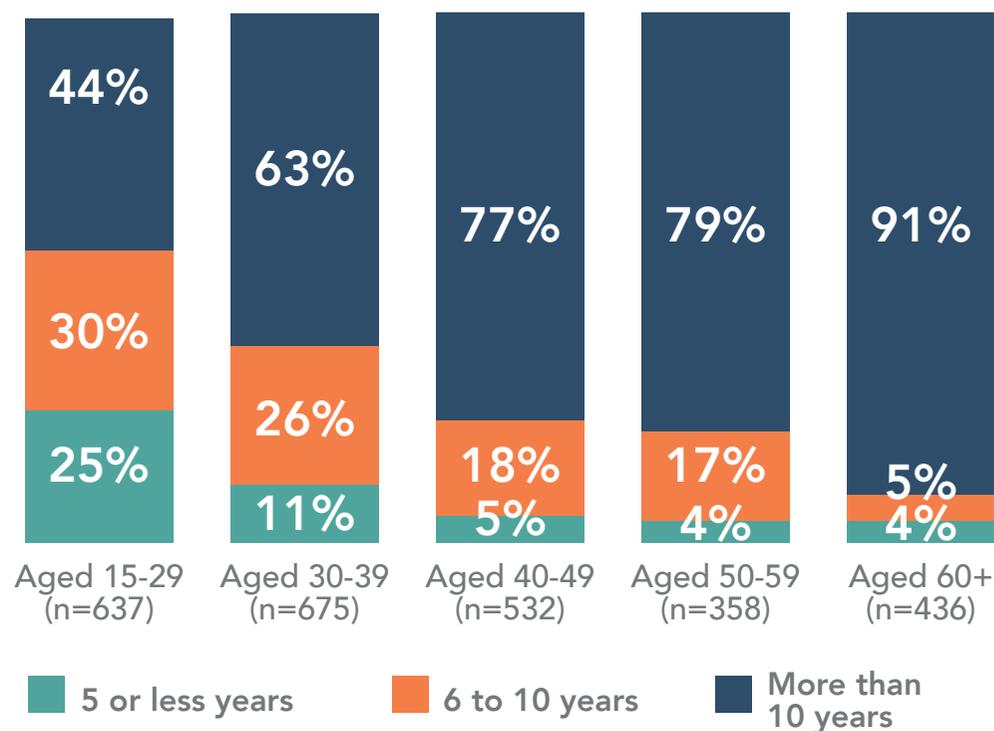
How many years have you been farming?

Sample: Smallholder farmers who participate in household's agricultural activities, n=2,502.



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

Sample: Smallholder farmers, n=2,502.
(% 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.
- Access to education among the heads of the smallholder households varies, and almost half did not attend school or had some informal schooling.
- Roughly half of all smallholder households indicate that they only have enough money for food and clothes.
- Most smallholders have been farming for several years.

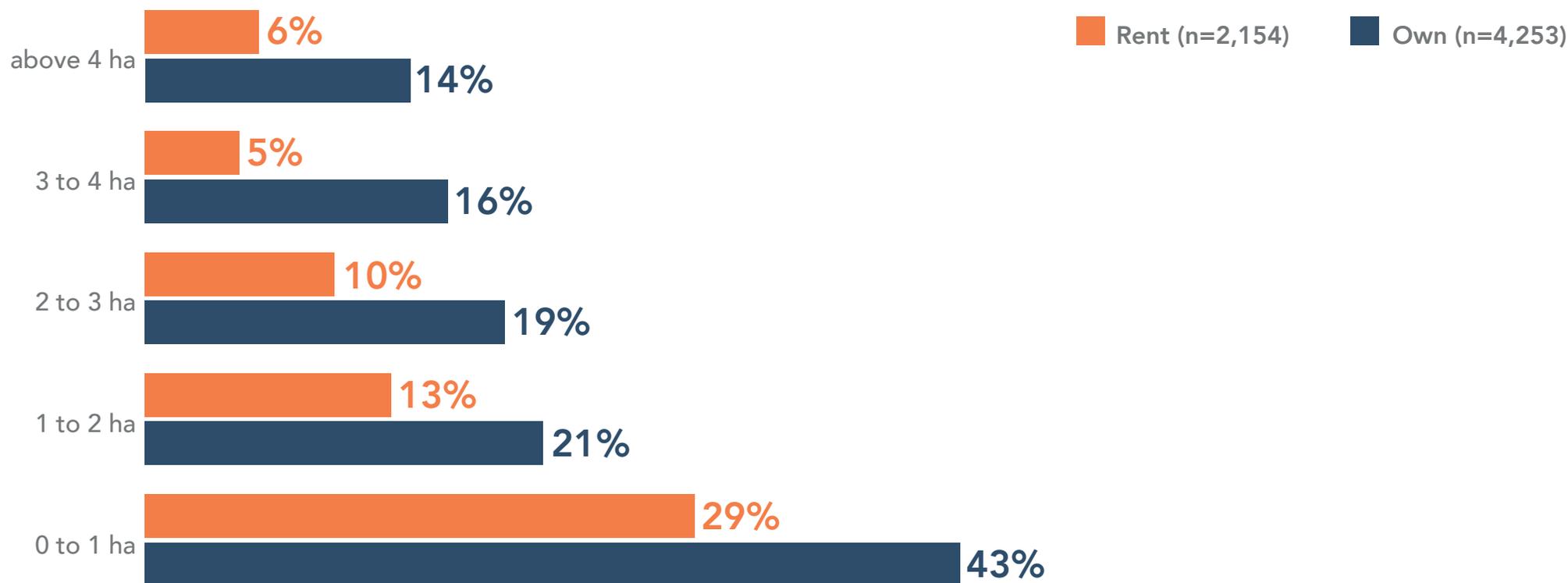


2

Agriculture

Almost half of smallholder households own less than one hectare of land.

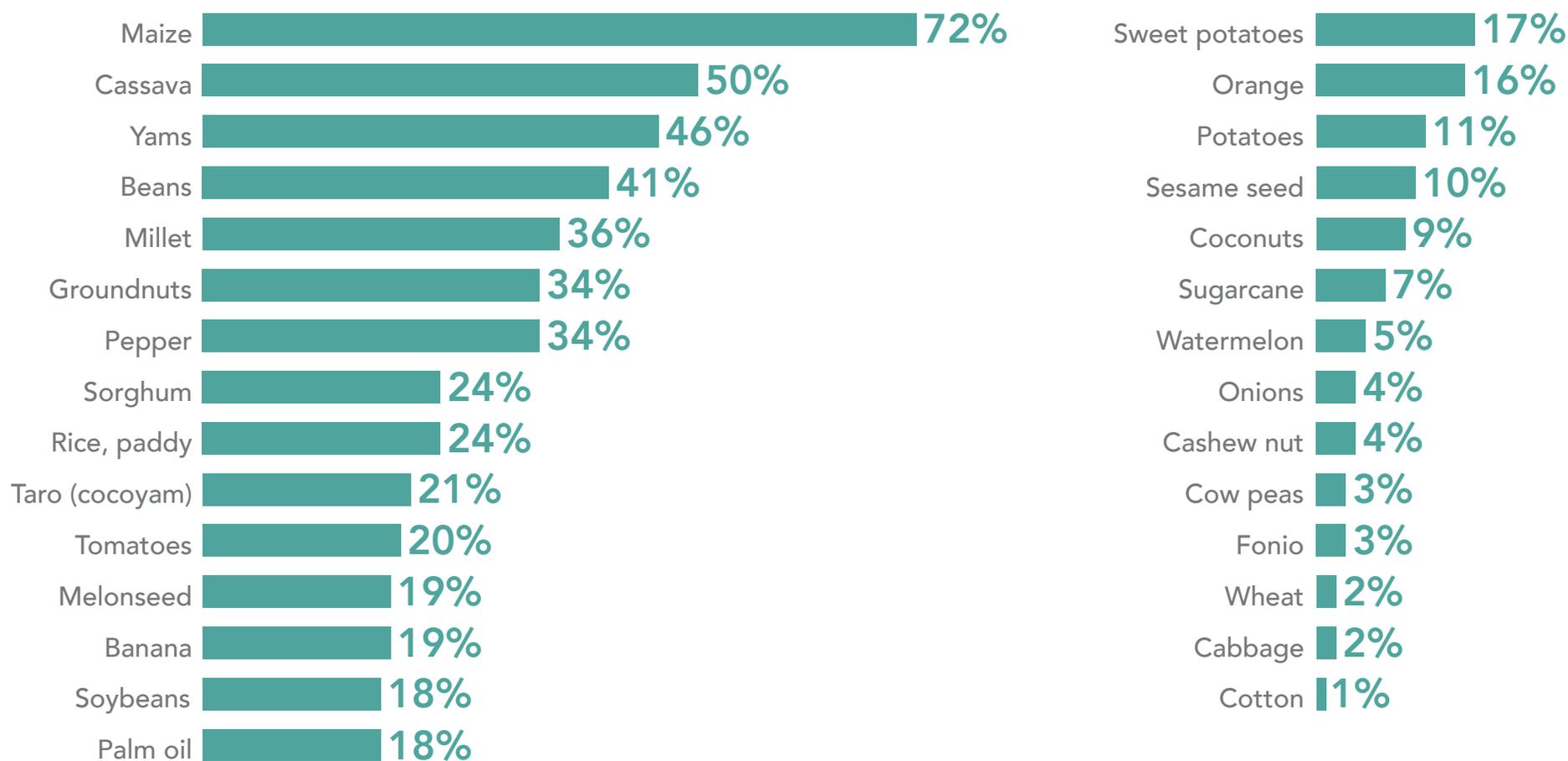
How many hectares (ha) of agricultural land do you own/rent?



Growing a diverse mix of crops...

Which of the following crops do you grow?

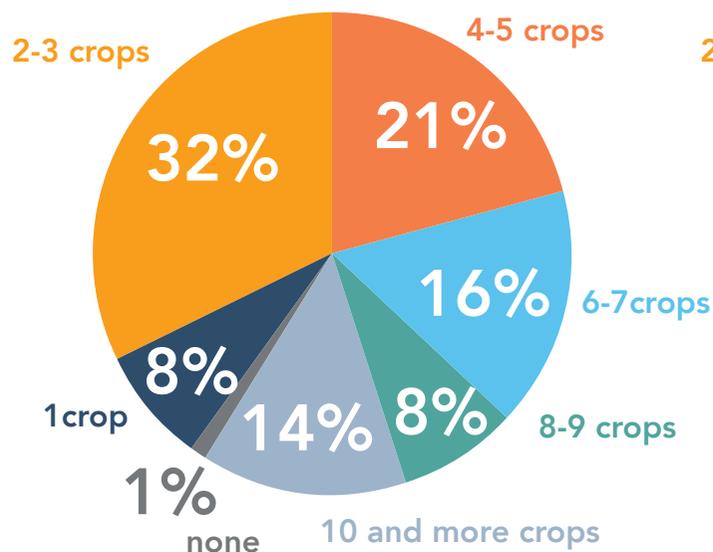
Sample: Smallholder farmers who participate in agricultural activities, n=4,532.



...smallholder families largely consume and sell their output.

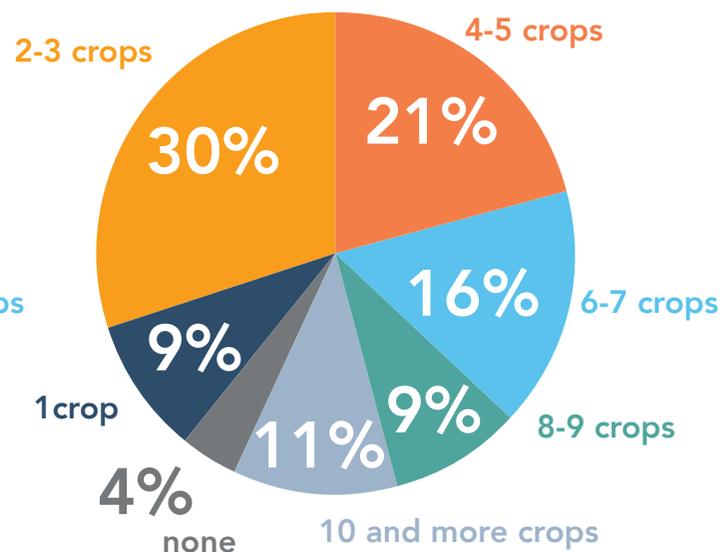
Number of crops grown for consumption

Sample: Smallholder farmers who grow crops, n=4,446.



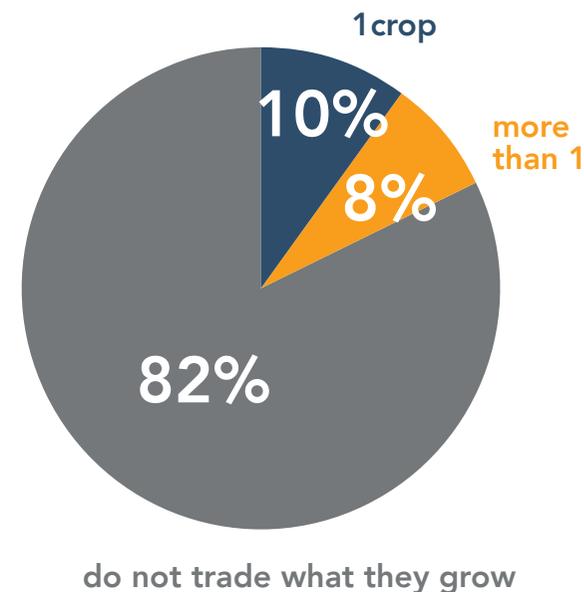
Number of crops grown for selling

Sample: Smallholder farmers who grow crops, n=4,446.



Number of crops grown for trading

Sample: Smallholder farmers who grow crops, n=4,446.

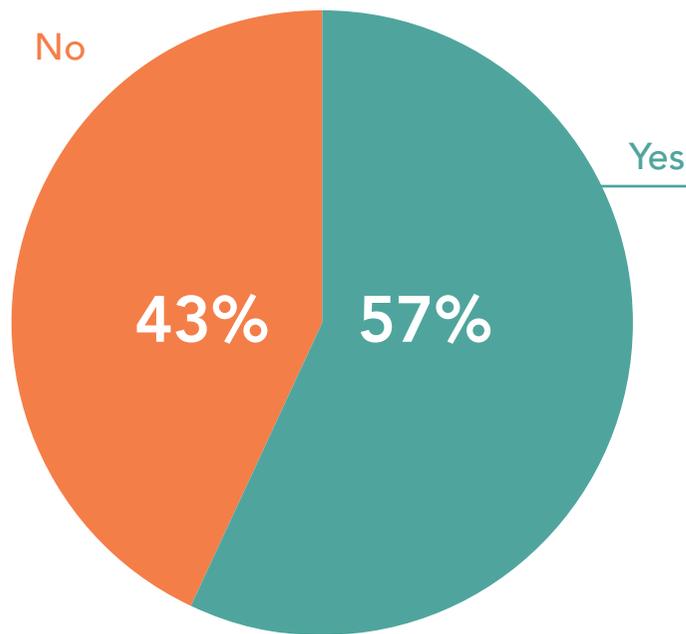


Most households use their agricultural outputs in multiple ways. About two-thirds of families grow upwards of 4 crops both to eat at home and to sell. The median number of crops grown both to consume at home and to sell is also 4.

Over half of smallholders also raise livestock.

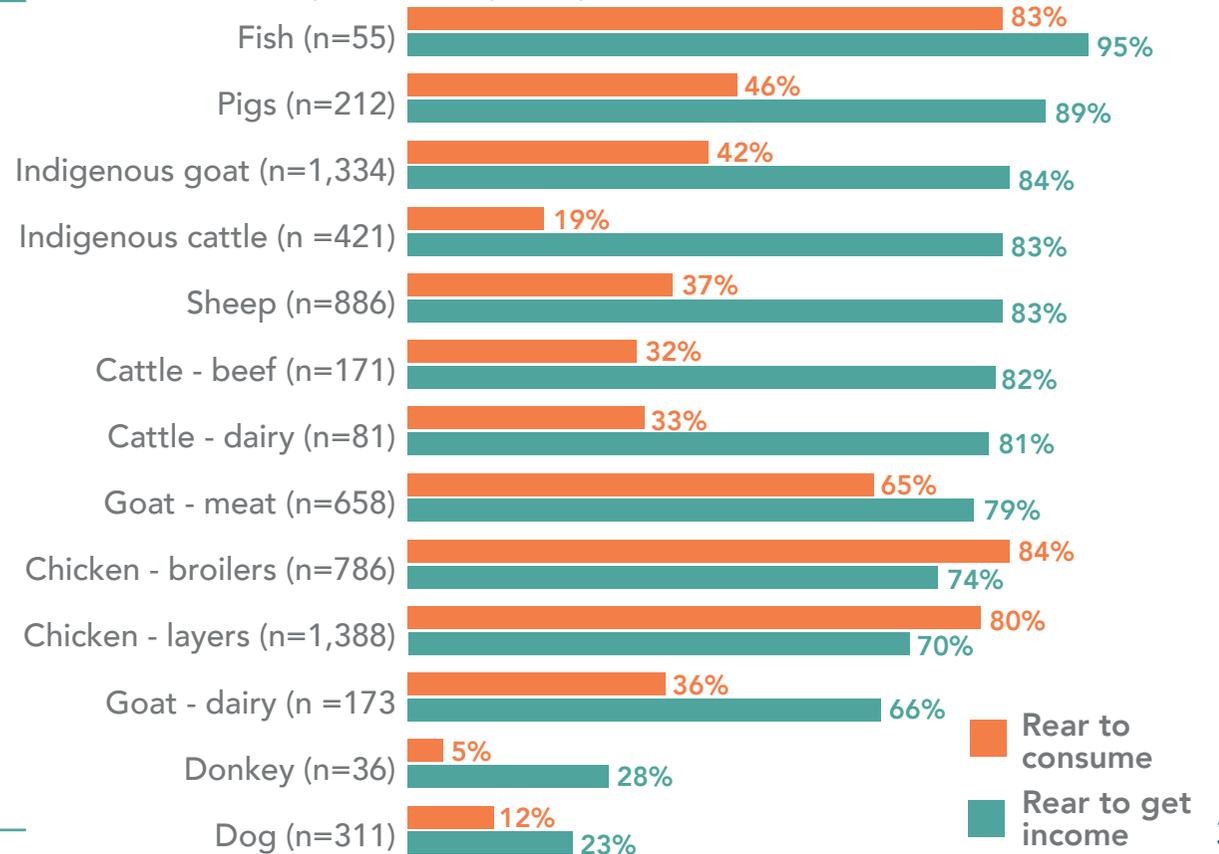
Do you have any livestock, herds, other farm animals, fish or poultry?

Sample: Smallholder farmers who participate in agricultural activities, n=4,532.



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

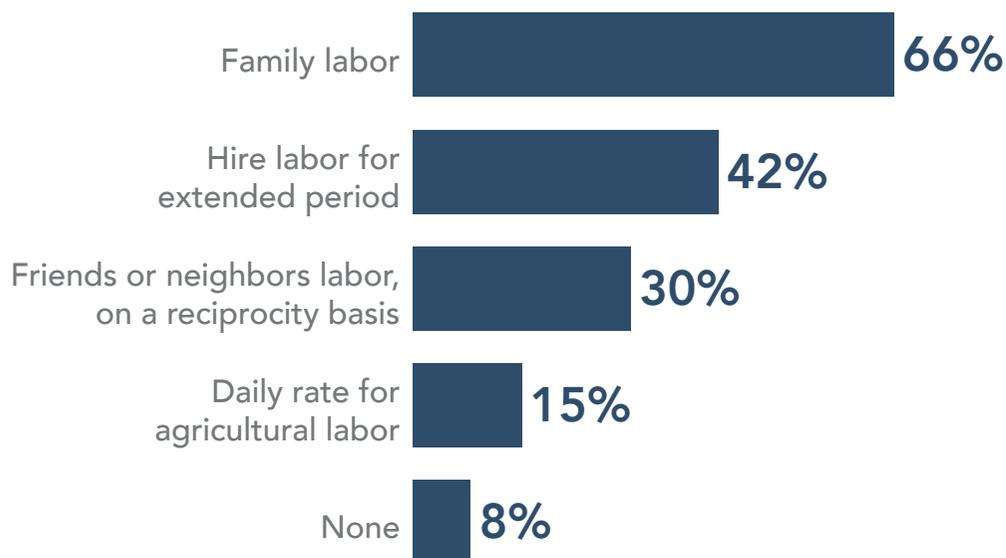
Sample: Smallholder farmers who have any livestock, herds, other farm animals or poultry. Multiple responses allowed.



Family labor powers the farm.

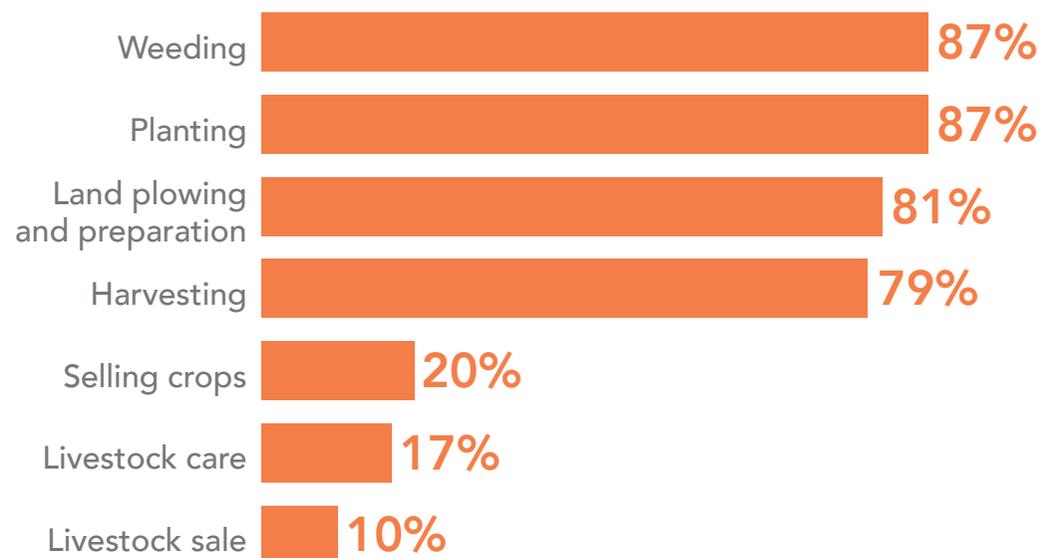
For managing the land and livestock, what types of labor do you use?

Sample: Smallholder farmers who participate in household's agricultural activities, n=4,532.
Multiple responses allowed.



What do you use the labor for?

Sample: Smallholder farmers who use labor for managing land and livestock n=4,254.
Multiple responses allowed.

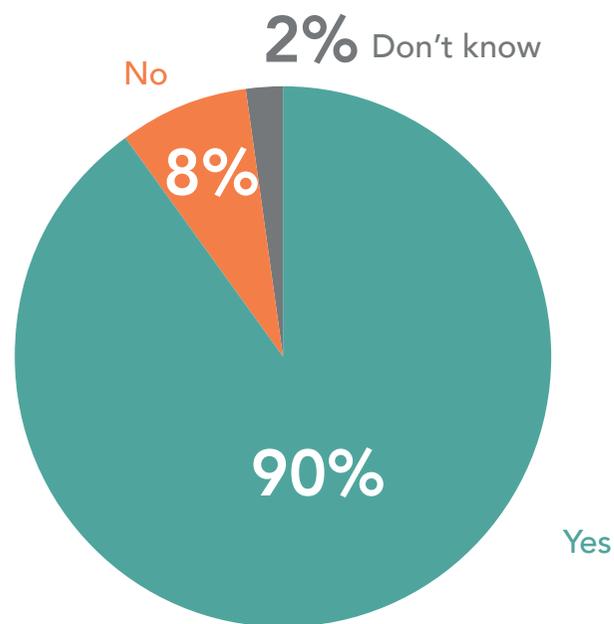


Smallholder farmers in Nigeria rely on their family for farm labor. Two in five also hire labor to support their agricultural activities, and few use no labor at all.

Smallholders are committed to agriculture.

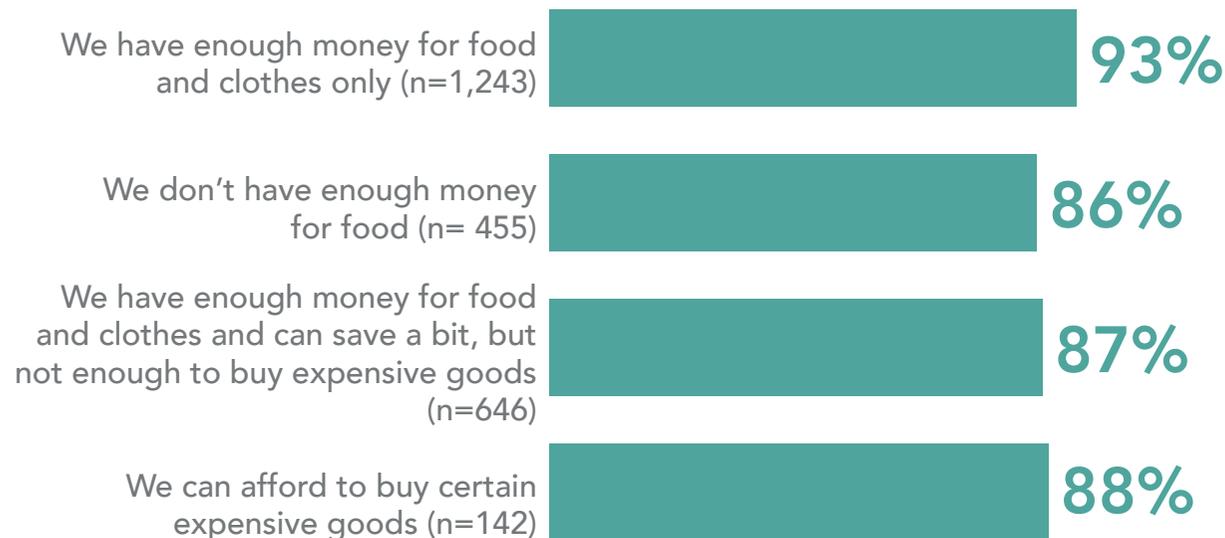
Do you intend to keep working in agriculture?

Sample: Smallholder farmers who participate in household's agricultural activities, n=2,502.



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.



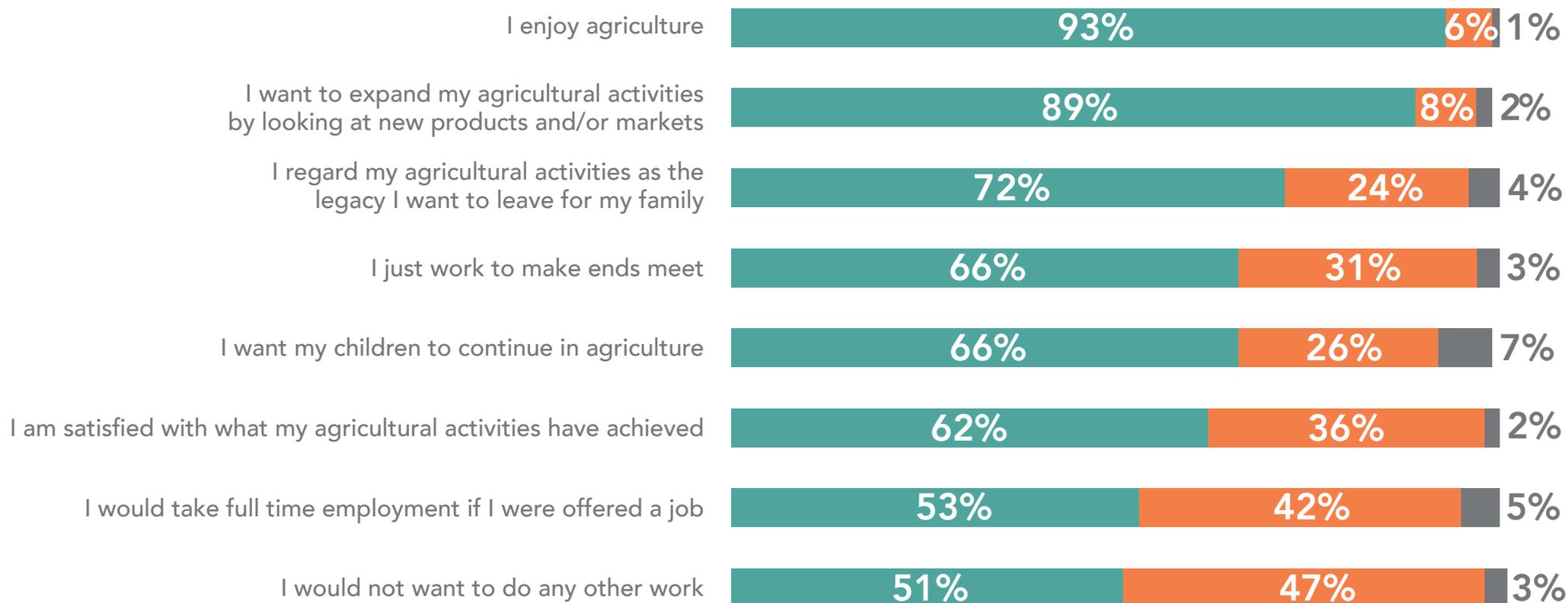
Across smallholder households in Nigeria, agriculture emerges as a key part of their livelihood and identity. Nearly all smallholder farmers intend to keep working in agriculture, no matter their number of years in farming, gender, or self-reported poverty level (above).

Smallholders enjoy working in agriculture.

Do you agree or disagree with the following statements?

■ Agree
 ■ Disagree
 ■ Don't Know

Sample: Smallholder farmers who participate in household's agricultural activities, n=2,502.

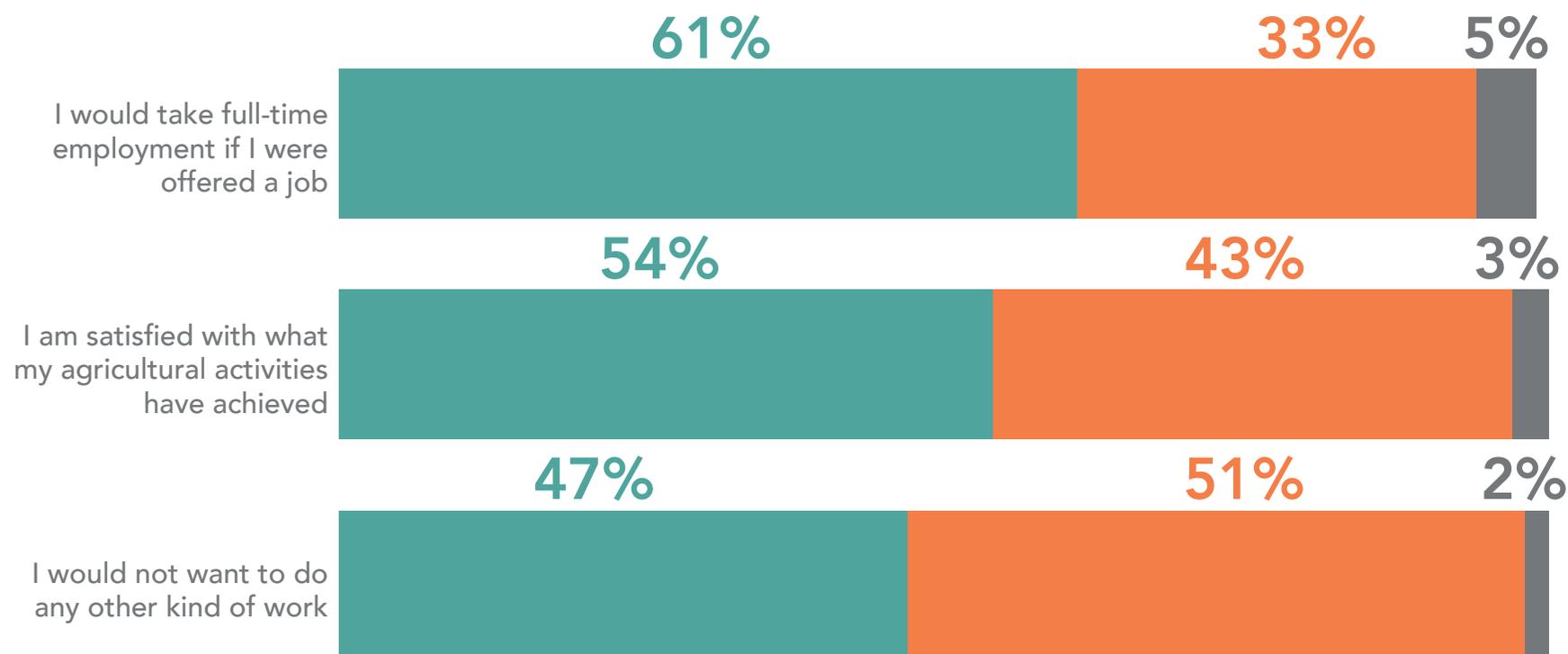


Younger smallholders show interest in other employment too.

Do you agree or disagree with the following statements?

■ Agree ■ Disagree ■ Don't Know

Smallholder farmers aged 15-29 who participate in household's agricultural activities, n=642.



What does the data teach us?

Smallholders in Nigeria take pride in their agricultural activities. It contributes an important part of their identity and a legacy for future generations.

- Smallholders often own small plots of land. Maize, cassava, yams, and beans are the most commonly grown crops and over half of smallholders raise livestock as well.
- Smallholders share a strong commitment to agriculture and want to expand. They see their agricultural activities as the legacy they will leave behind for their family, and many hope that their children continue in agriculture too. About half of smallholders would not want to do any other work.
- But at the same time, about half would take full-time employment if the opportunity arose, perhaps recognizing the challenges of farming and their own limits as they get older. Smallholders might not want to leave agriculture, but they may be prepared for other options.



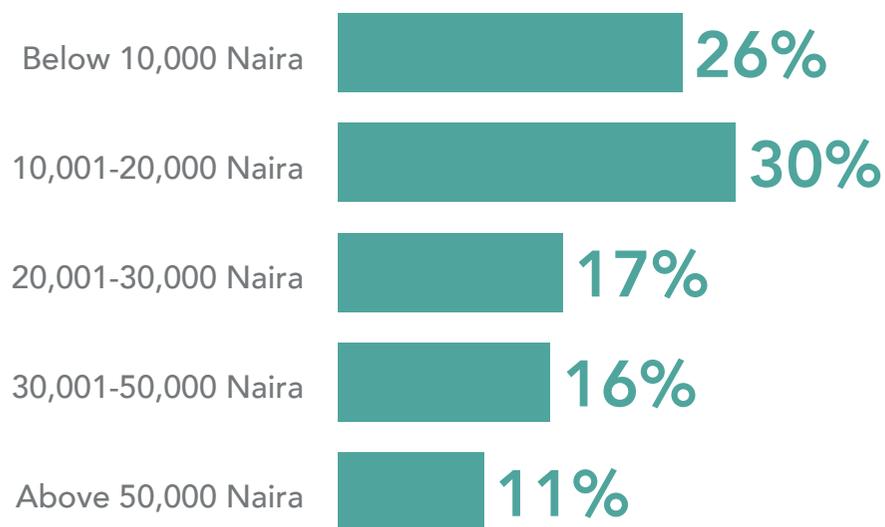
3

**Income and
expenses**

Income needs in smallholder households vary.

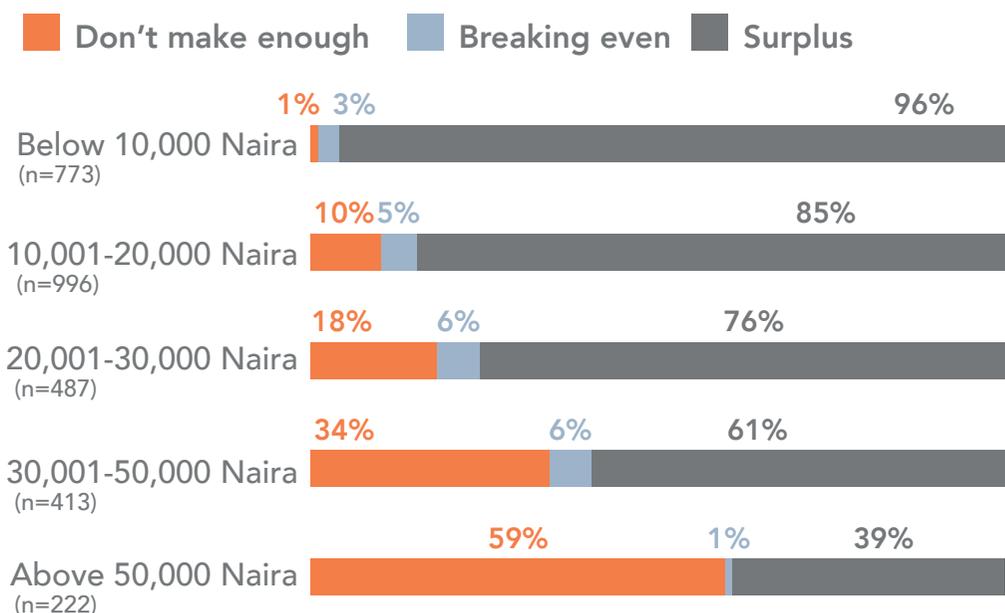
What is the minimum amount your household needs to survive per month (for personal expenses)?

Sample: Smallholder households who gave a minimum amount for households' survival n=2,918. Quintile.



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

Sample: Smallholder households, n=3,019.

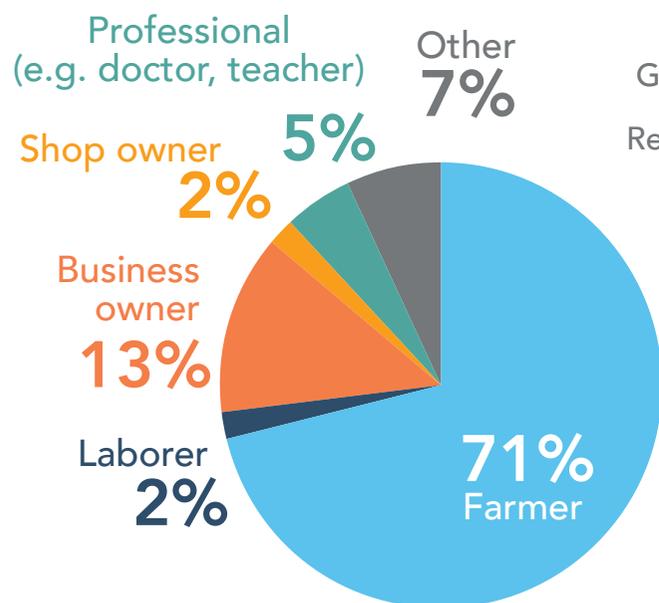


For most of the lower-income quintiles among smallholder families in Nigeria, household income usually surpasses expenses; they have a surplus every month. Households with higher income needs struggle to meet them.

Smallholders identify as farmers, but agriculture may not be their main source of cash income.

What is your primary job?

Sample: Smallholder farmers, n=5,128.



Do you generate income from any of the following sources?

Sample: Smallholder farmers, n= 5,128. Multiple responses allowed.

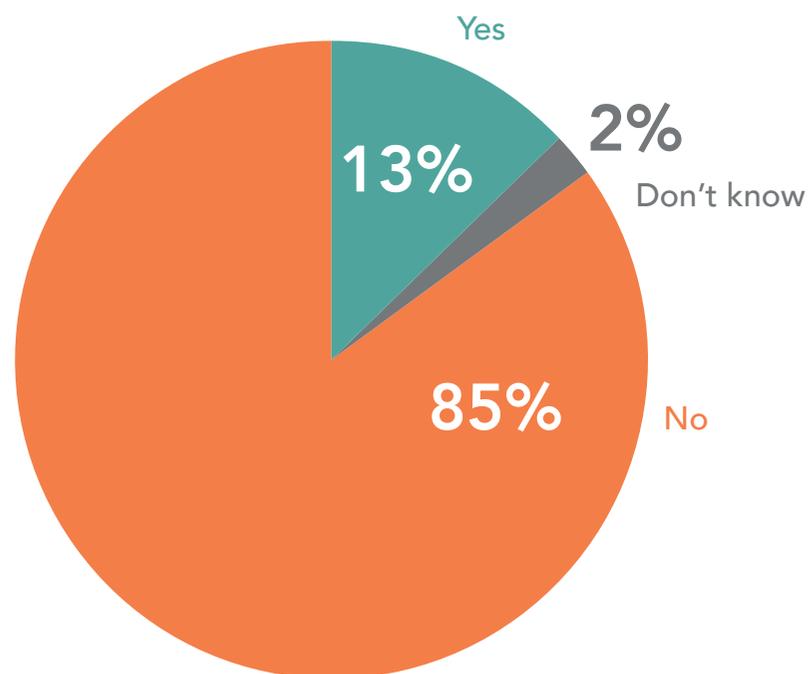


Smallholders see agriculture as their primary job, though they are also generating income from a number of sources unrelated to their crops and livestock.

Smallholders sell without contracts and get paid in cash.

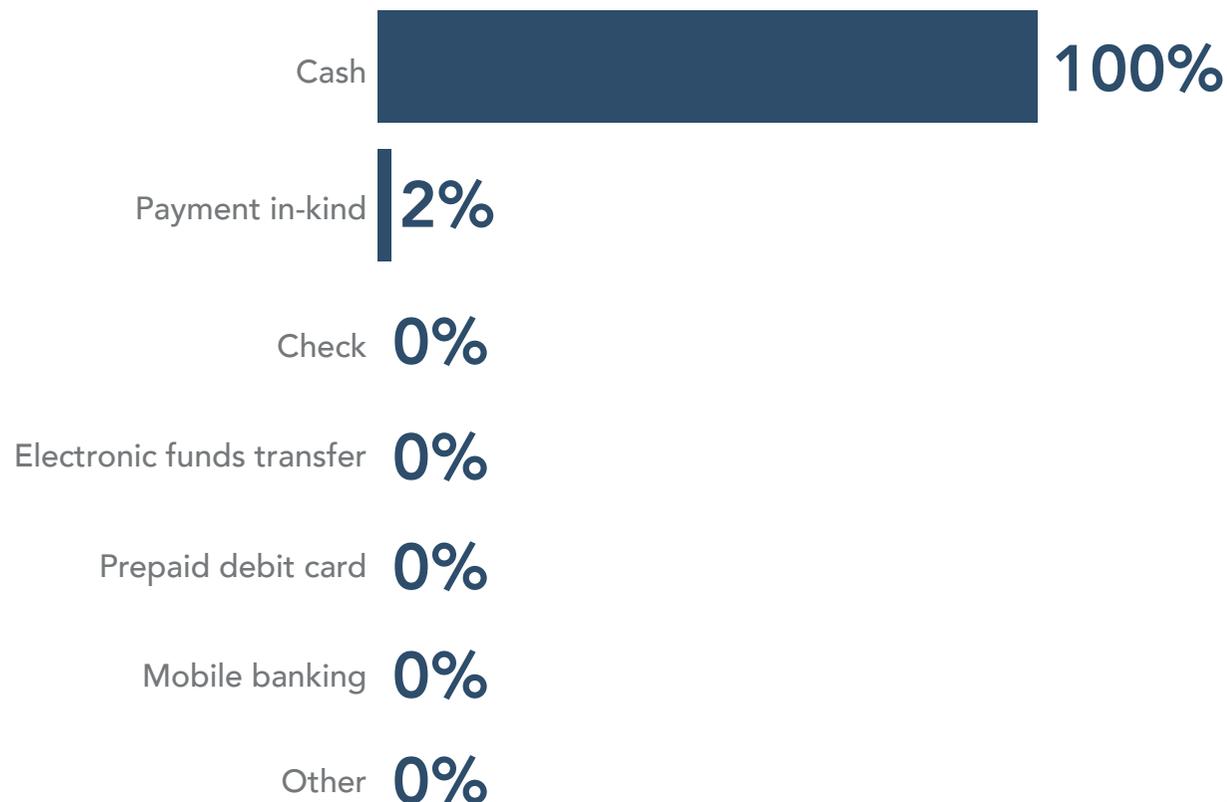
Do you have a contract to sell any of your crops or livestock?

Sample: Smallholder farmers who grow and sell crops, n=4,236.



How do you usually get paid for what you sell?

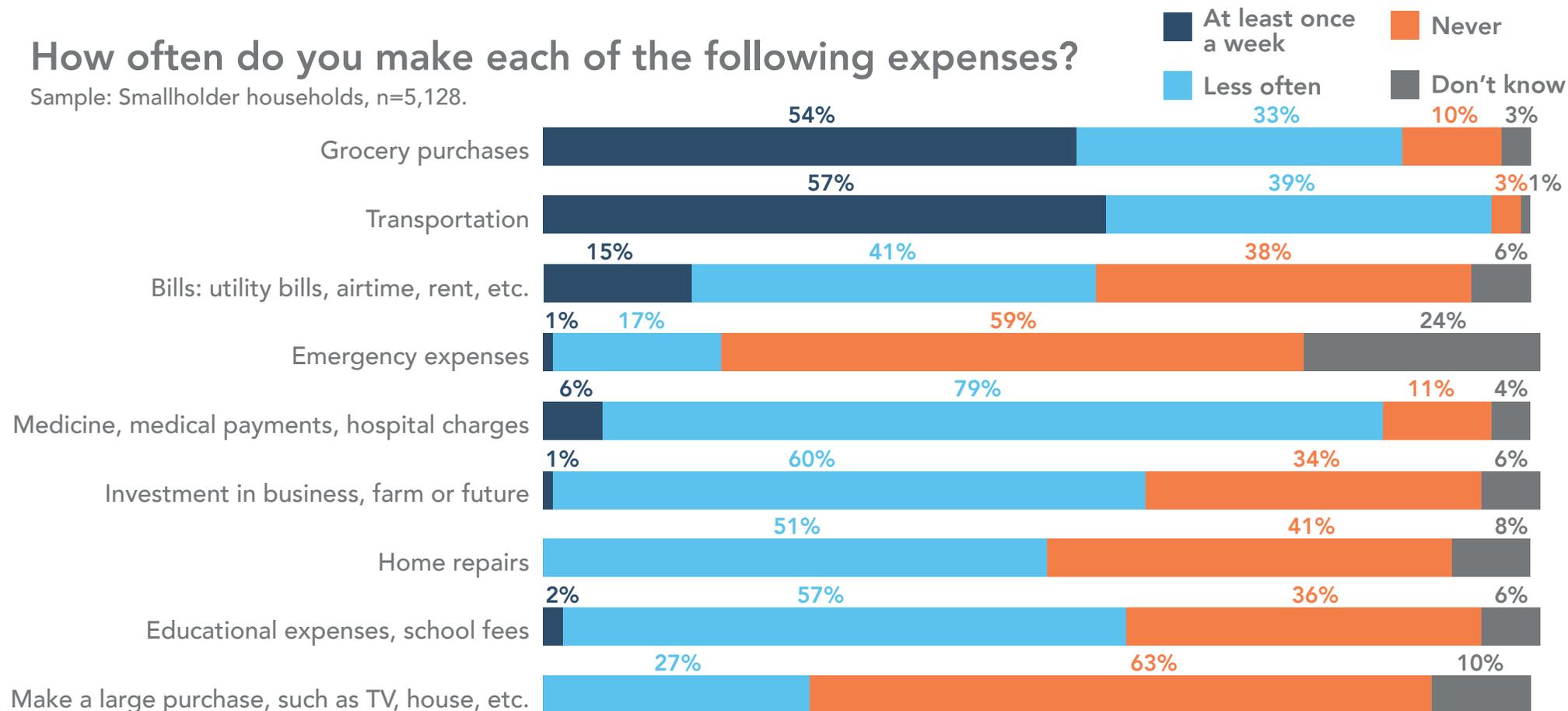
Sample: Smallholder farmers who grow at least one crop for selling, n=4,236. Multiple responses allowed.



Groceries and transportation are the most frequent expenses.

How often do you make each of the following expenses?

Sample: Smallholder households, n=5,128.

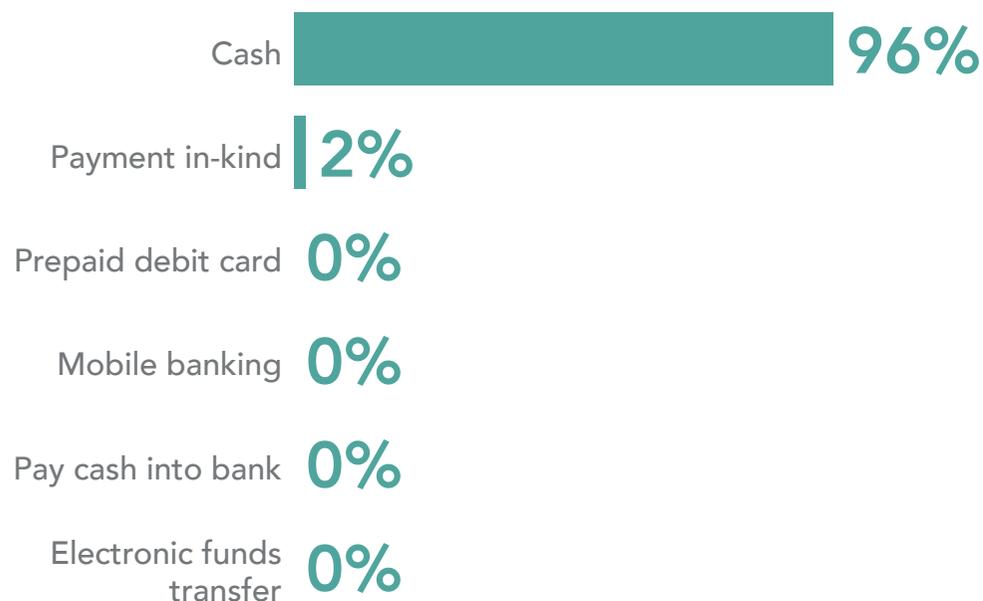


Smallholder households incur smaller expenses more regularly than larger expenses, as is common. The most frequent expenses are for groceries and transportation, which could offer channels to expand the digital financial ecosystem.

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

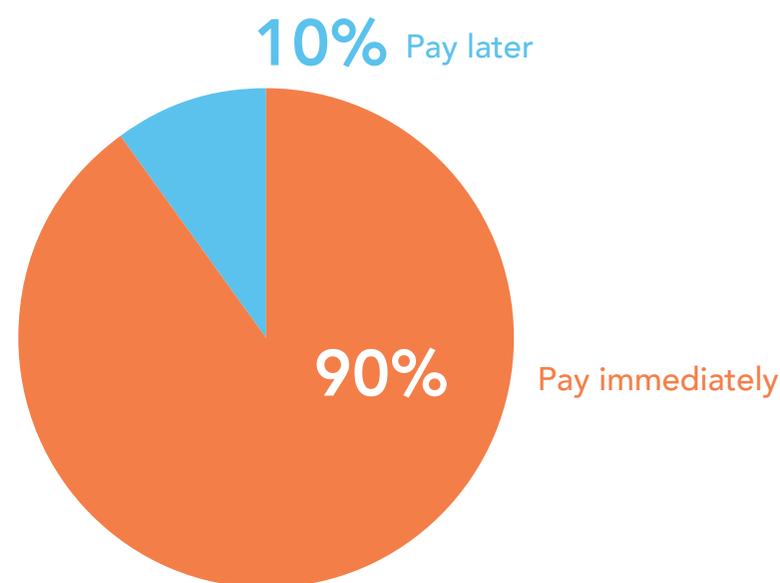
How do you usually pay your suppliers of inputs?

Sample: Smallholder farmers who purchase main agricultural and livestock inputs, n=3,978. 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=3,863.



Nine in ten (88%) of smallholders in Nigeria 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 have an option to pay later, which can strain household budgets and explain 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.
- Smallholders identify their primary job as farmers and see agriculture as driving household income. They also generate income from many other sources too, including earning regular wages and running their own businesses. Their consumption of the crops and livestock they grow also plays an important role in overall household income.
- Smallholders sell their output largely outside of contracts and for cash. Their most frequent expenses are for groceries and transportation. Almost all smallholders buy inputs, which they pay in cash, on the spot.



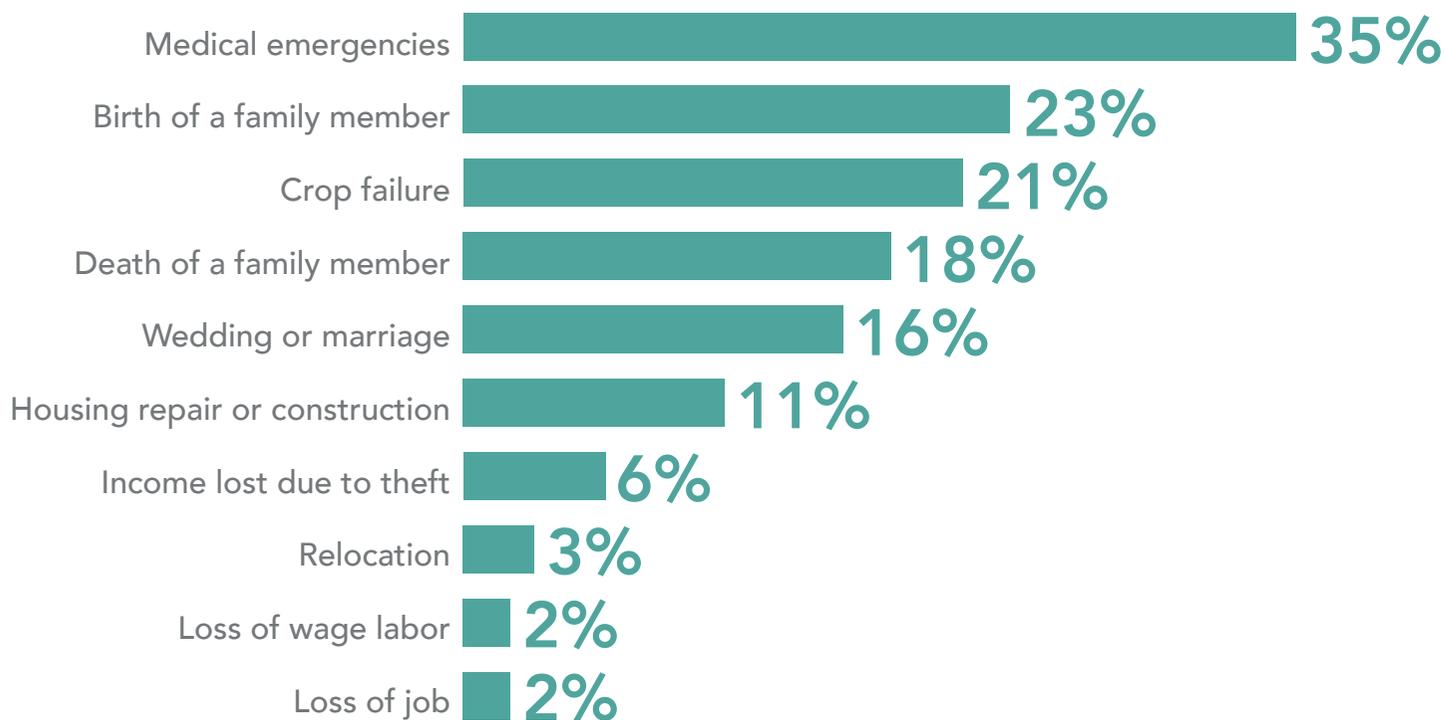
4

Risk management

Medical emergencies are the most frequent shock.

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

Sample: Smallholder farmers, n=2,773. Multiple responses allowed.



Over one-third of smallholder families in Nigeria had experienced a medical emergency in the past 12 months.

Pests and diseases pose the greatest threat to their agricultural activities.

What poses the most significant risk to your agricultural activities?

Sample: Smallholder farmers who participate in household's agricultural activities, n=2,502.



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

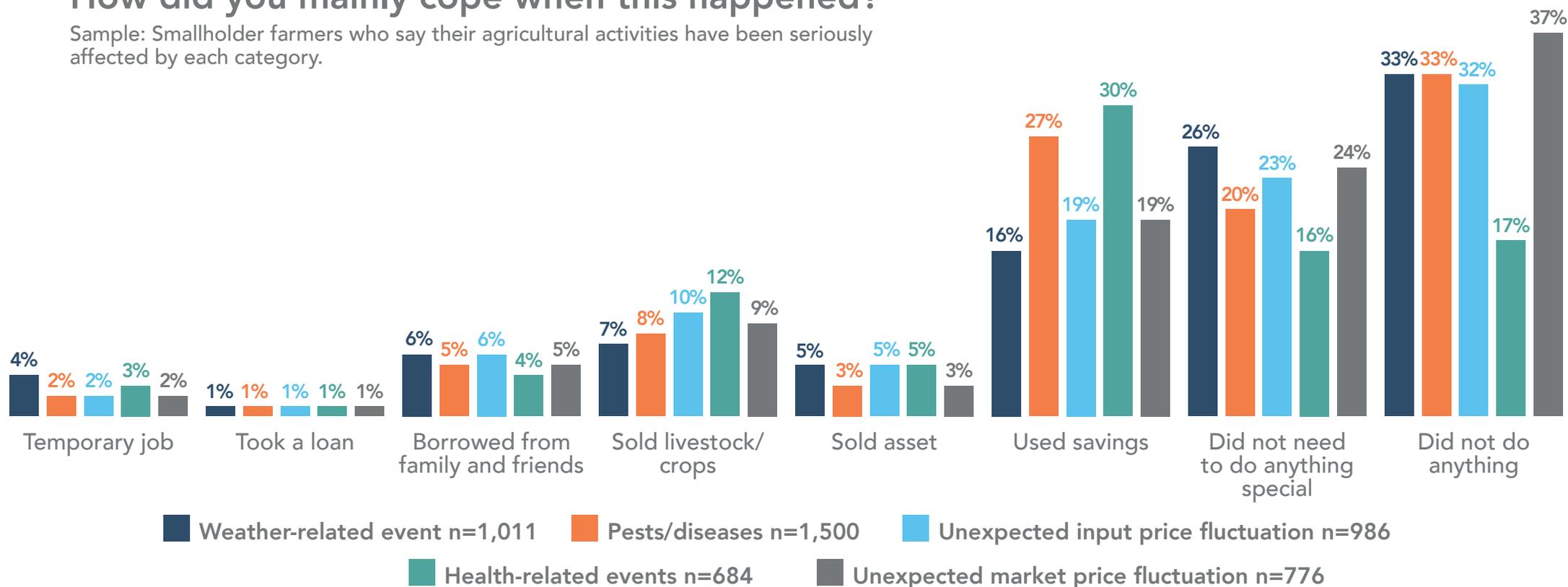
Sample: Smallholder farmers who participate in household's agricultural activities, n=2,502.



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.

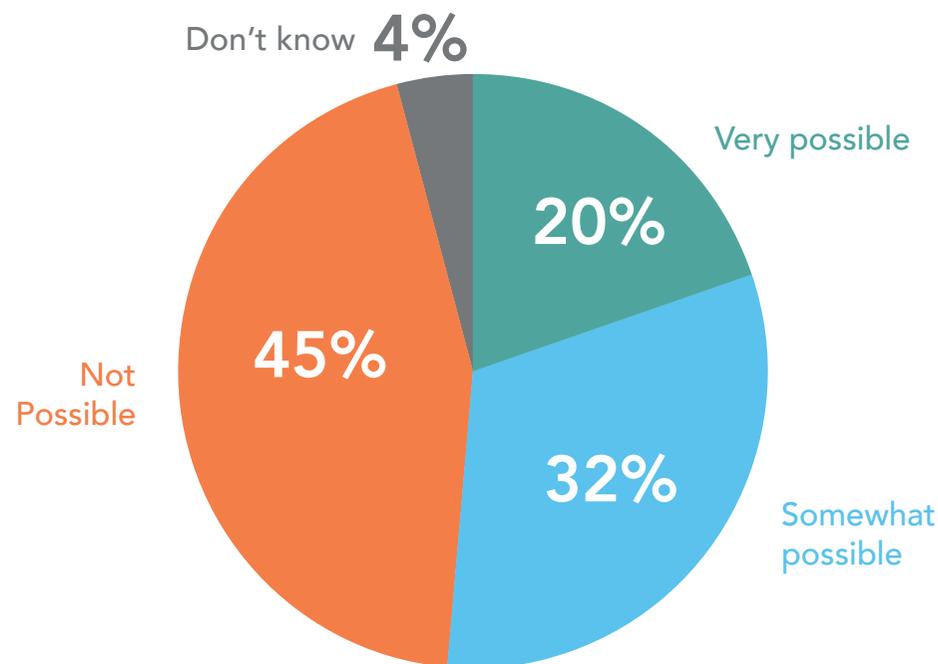


Two-thirds (64%) of smallholder families in Nigeria indicate that pests and diseases had “seriously affected” their agricultural activities in the three years prior to the survey. To cope, some drew on their savings, but over half did nothing in response.

Coping with emergencies is a struggle.

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

Sample: Smallholder farmers, n=2,773.

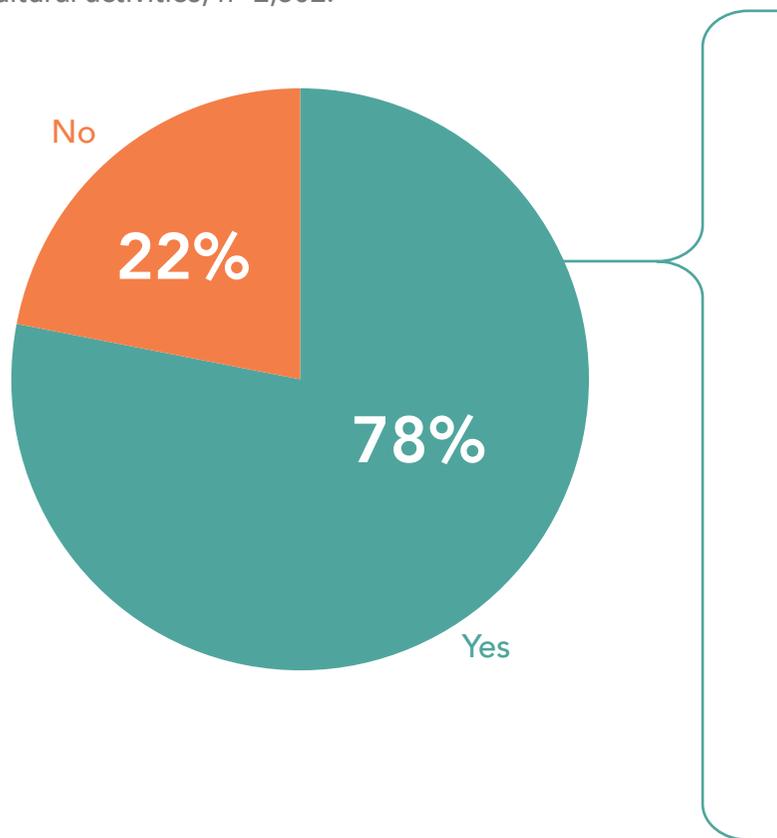


When emergencies happen, coming up with some money to respond is not always possible. Almost half of smallholders said they could not access 100,000 Naira (about USD 280) within a month. For those who thought they could mobilize this money, they would turn to their family or friends, or draw from their limited savings.

Most smallholders store their crops, one way to mitigate risk.

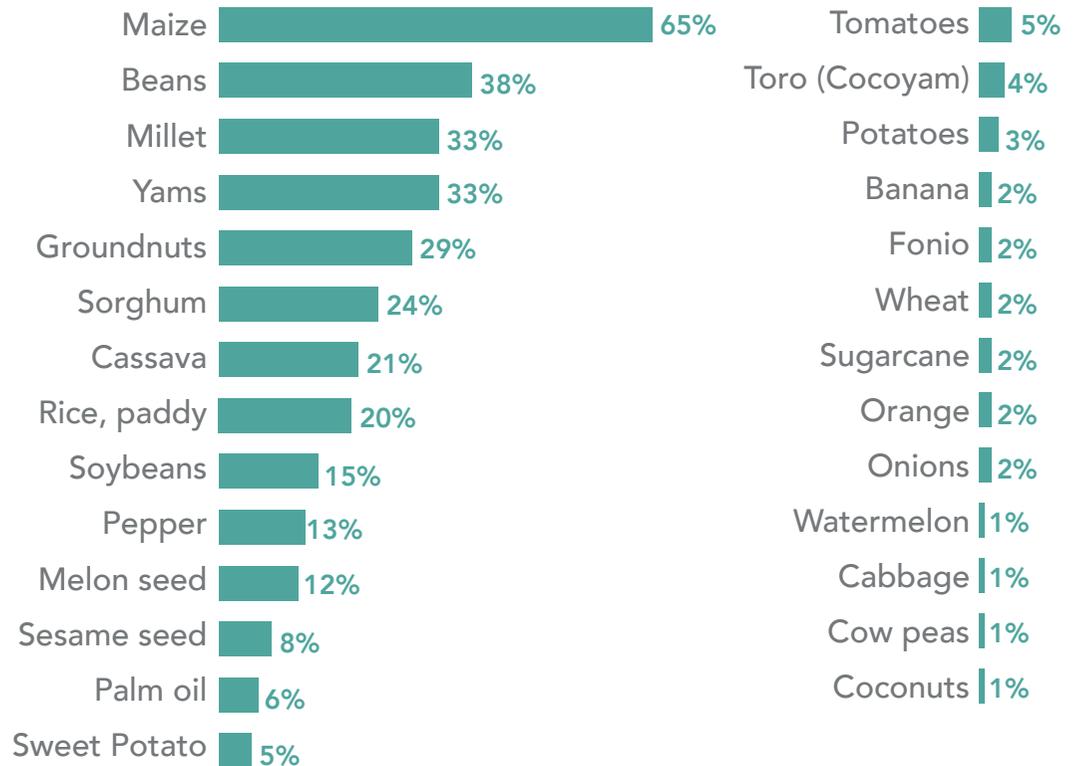
Do you currently store any of your crops after the harvest?

Sample: Smallholder farmers who participate in household's agricultural activities, n=2,502.



Which crops do you normally store?

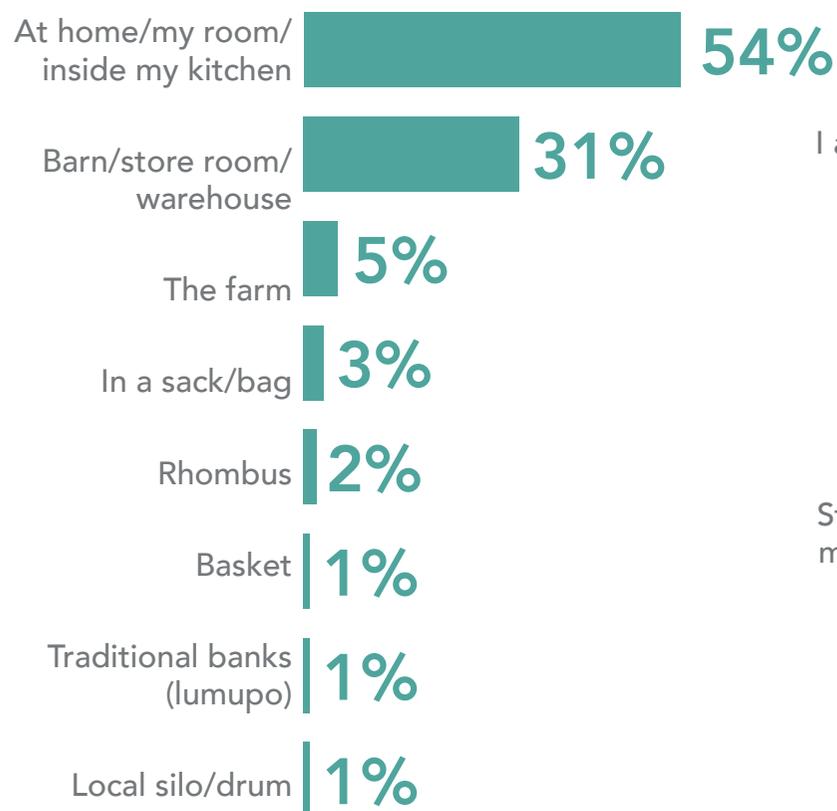
Sample: Smallholder farmers who currently store any crops after harvest, n=1,843. Multiple responses allowed.



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=1,843. Multiple responses allowed.



Why do you currently store any of your crops?

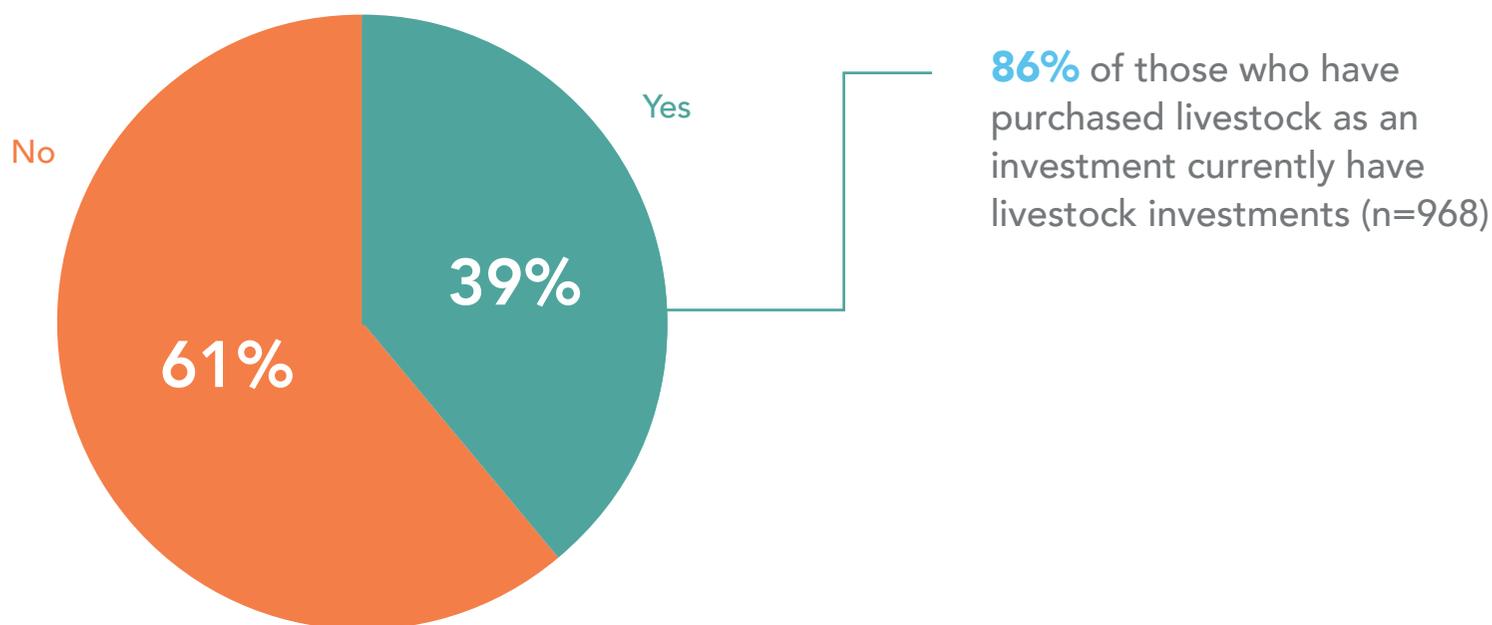
Sample: Smallholder farmers who currently store any crops after harvest, n=1,843. Multiple responses allowed.



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=2,502.



Investing in livestock also helps smallholder households mitigate risk. Two in five smallholders in Nigeria have purchased livestock as a kind of investment.

What does the data teach us?

Mitigating risk is a priority for smallholders

- Medical emergencies are the most frequent shock for smallholder families in Nigeria. Pests and diseases pose the greatest risk to their agricultural activities.
- When facing shocks, smallholders often have no specific response. They may not see a specific response as needed, or they may not have any tools with which to respond.
- Most smallholders in Nigeria purchase inputs to improve agricultural production. Crop storage and livestock purchases are common methods of savings and risk mitigation among smallholders.



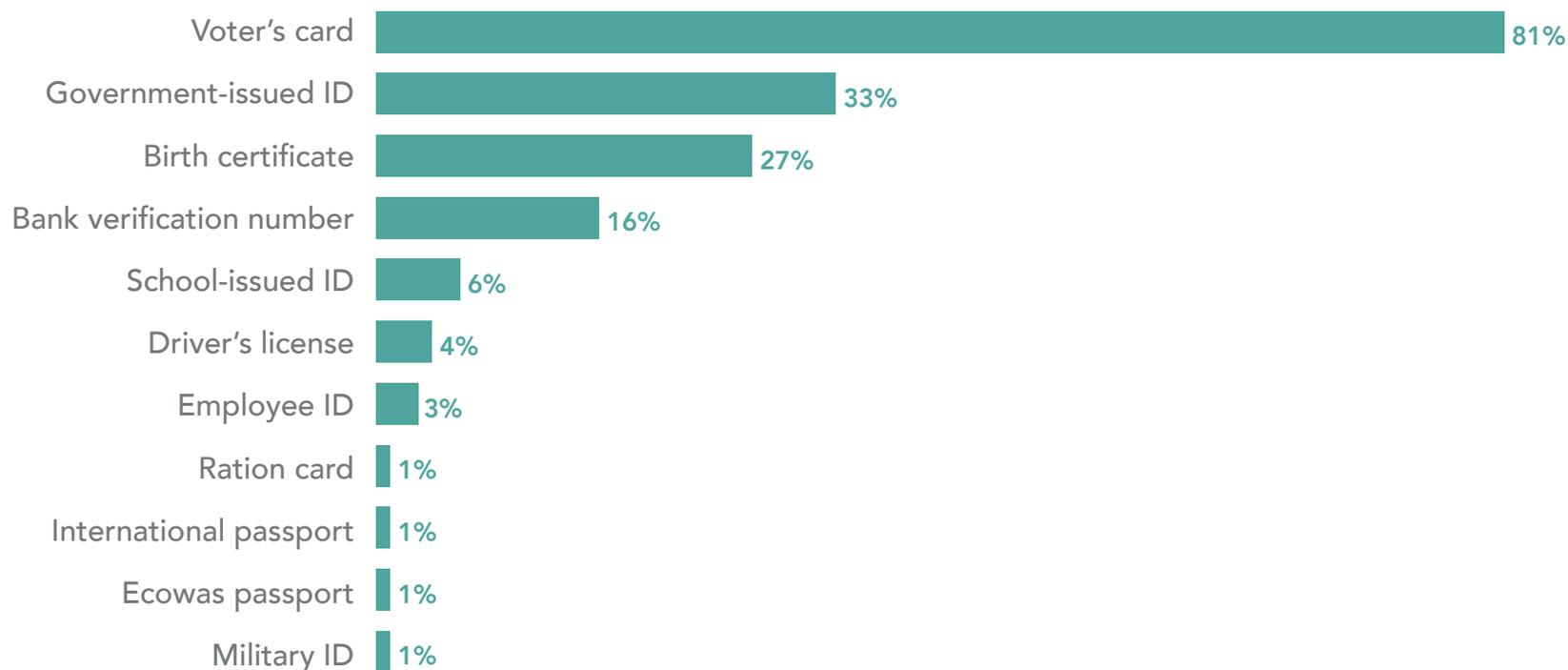
5

Financial tools

Almost all smallholders have a voter's card.

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

Sample: Smallholder farmers, n=5,128. Multiple responses allowed.

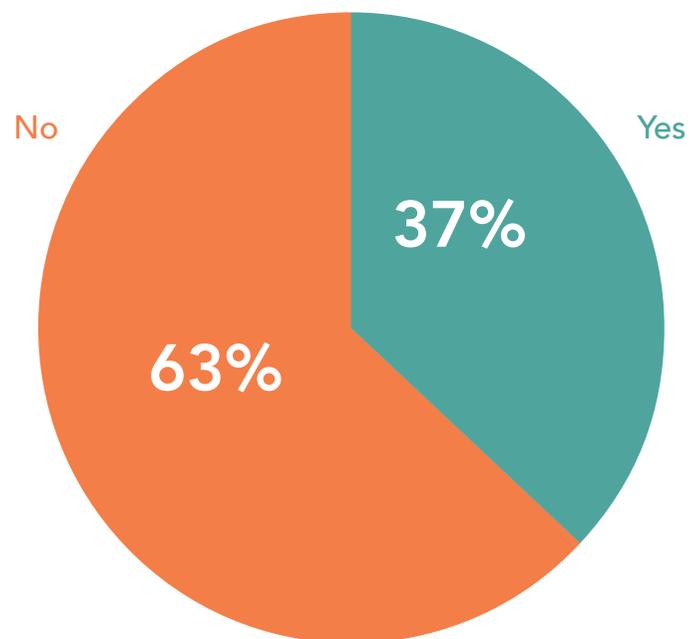


Eight in 10 smallholders in Nigeria have a voter's card, which can also be used to open accounts or engage in financial transactions, including mobile money transactions.

About one-third of smallholders have ever been inside a bank.

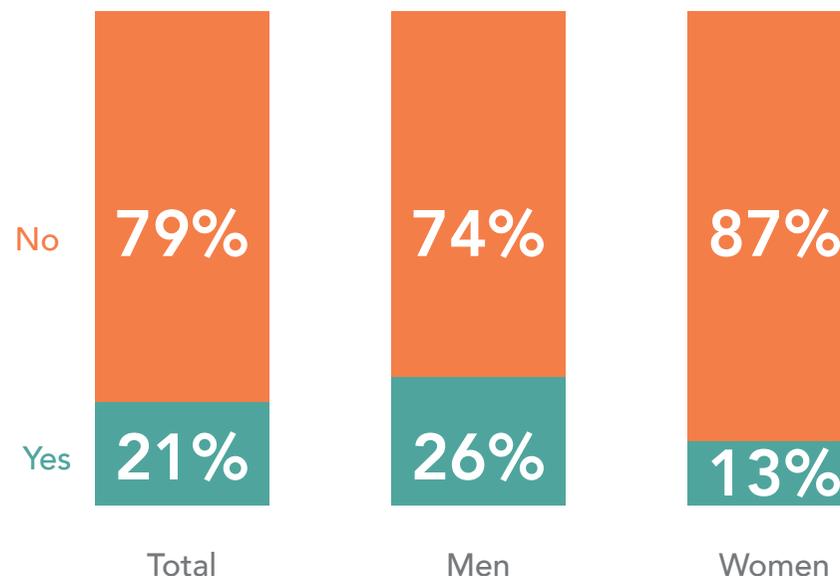
Have you ever been inside a bank?

Sample: Smallholder farmers, n=2,773.



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

Sample: Smallholder farmers, n=2,773.



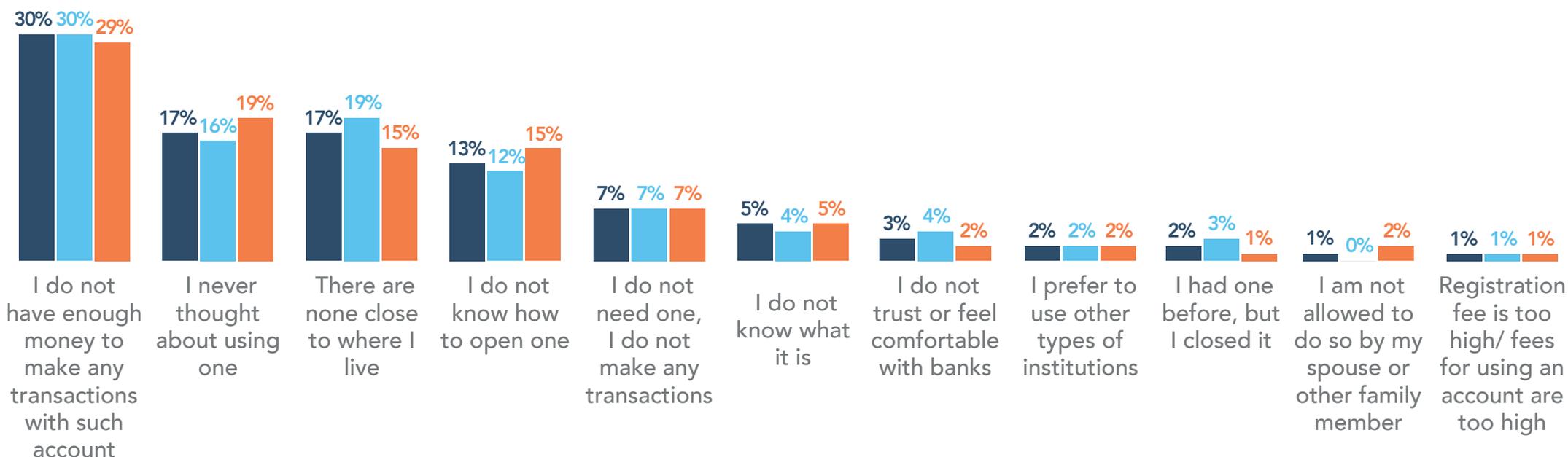
Two in five smallholders in Nigeria have a bank account registered in their name.

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=2,235.

■ Total ■ Men ■ Women

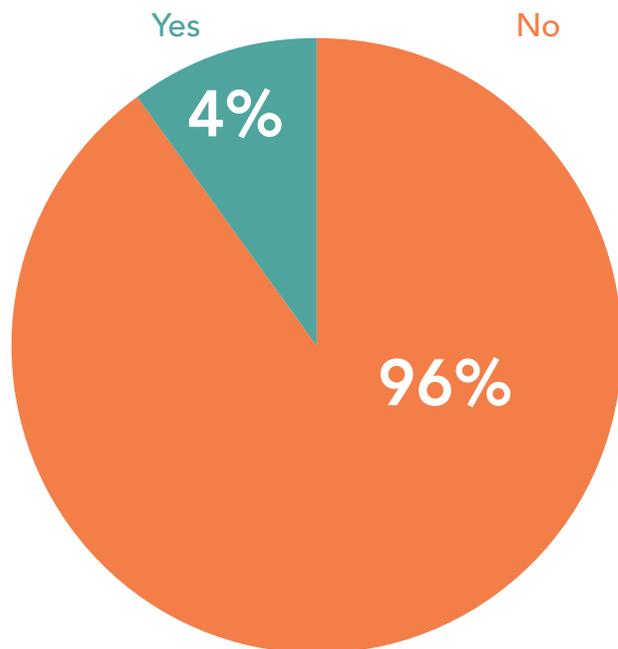


Perceived lack of money, distance to a bank, and never considering the use of an account were reported as the main reasons for not having a bank account.

Very few smallholders have an outstanding loan.

Do you currently have any loans?

Sample: Smallholder farmers, n=2,773.



What would be the main reasons for borrowing money?

Sample: Smallholder farmers, n=2,773. Multiple responses allowed.

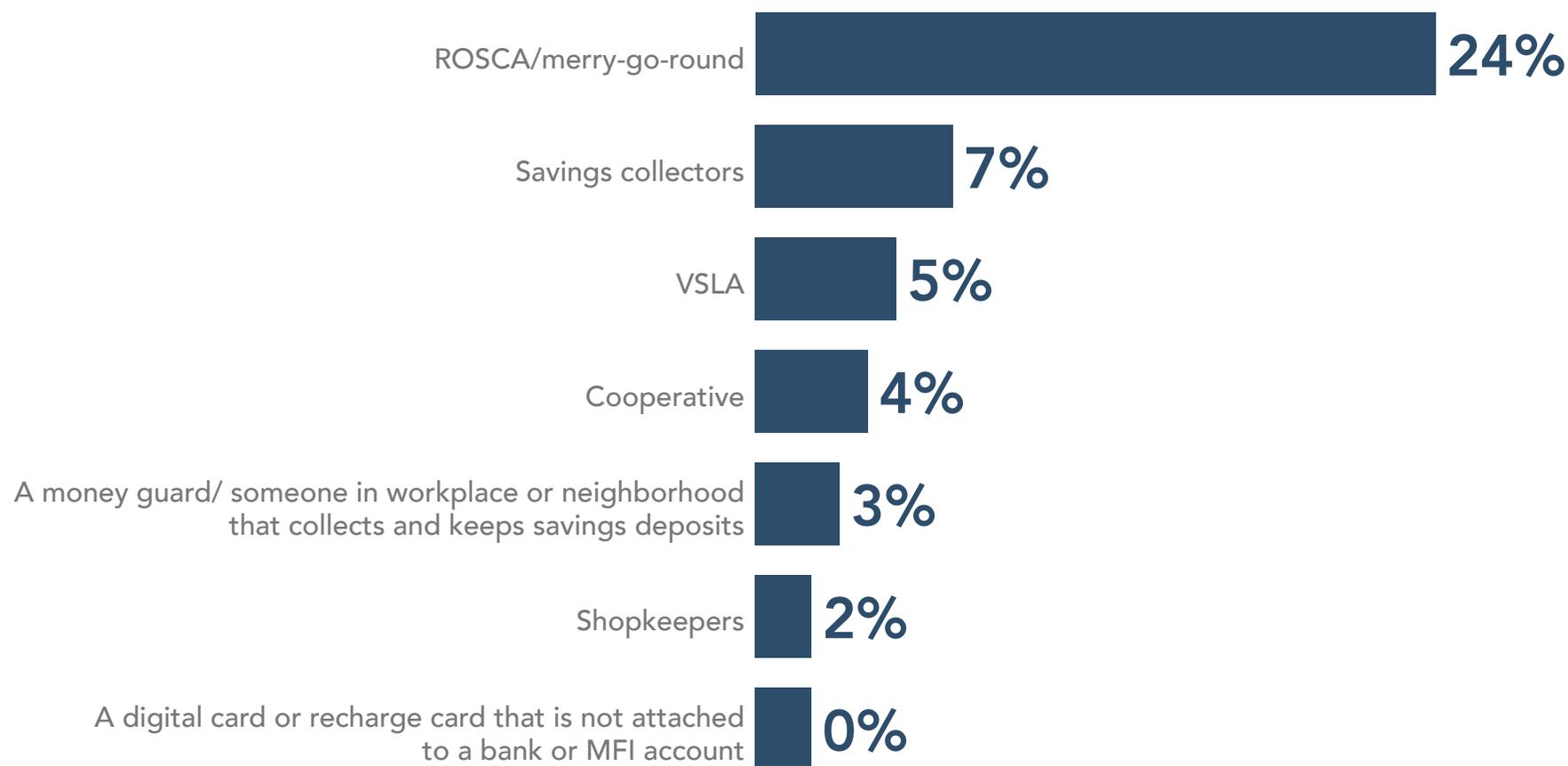


Some smallholders show interest in credit to support their agricultural activities, to start or expand a business, to cope with emergencies, or to buy inputs.

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

Have you ever used any of the following?

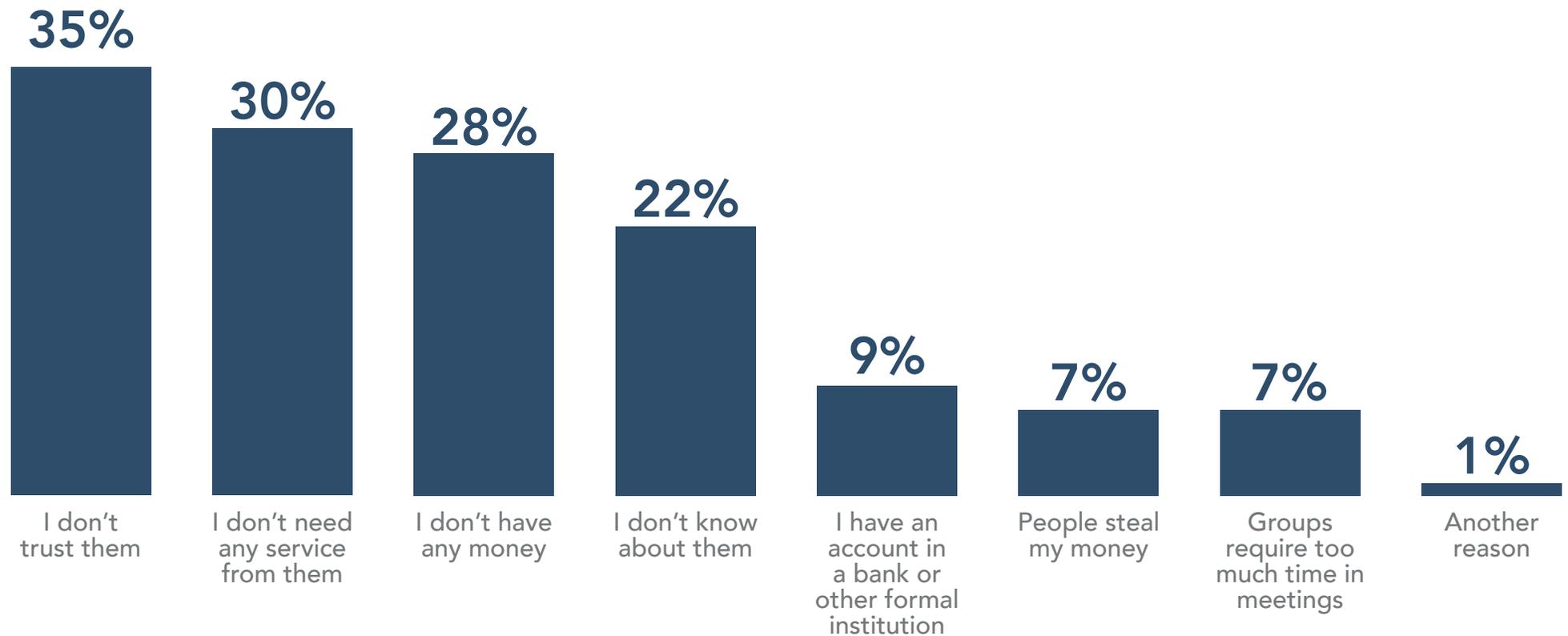
Sample: Smallholder farmers, n=2,773.



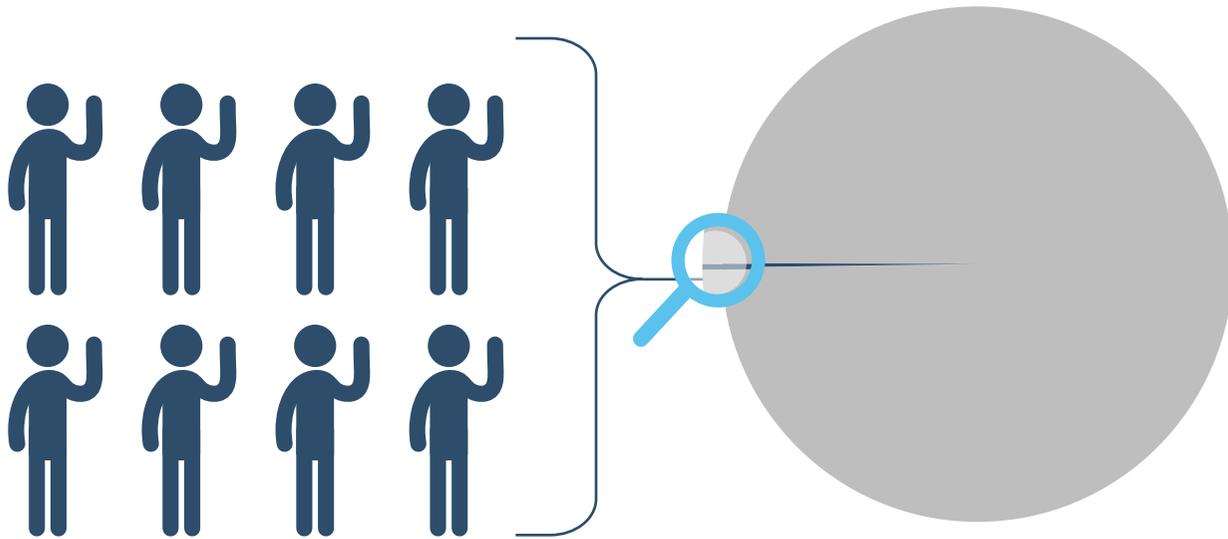
Lack of trust limits the use of informal financial service providers.

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

Sample: Smallholder farmers who have never used informal financial services, n=1,956. Multiple responses allowed.



Almost no smallholders in Nigeria use mobile money.



Only **eight** respondents to the smallholder household survey in Nigeria reported having a mobile money account.

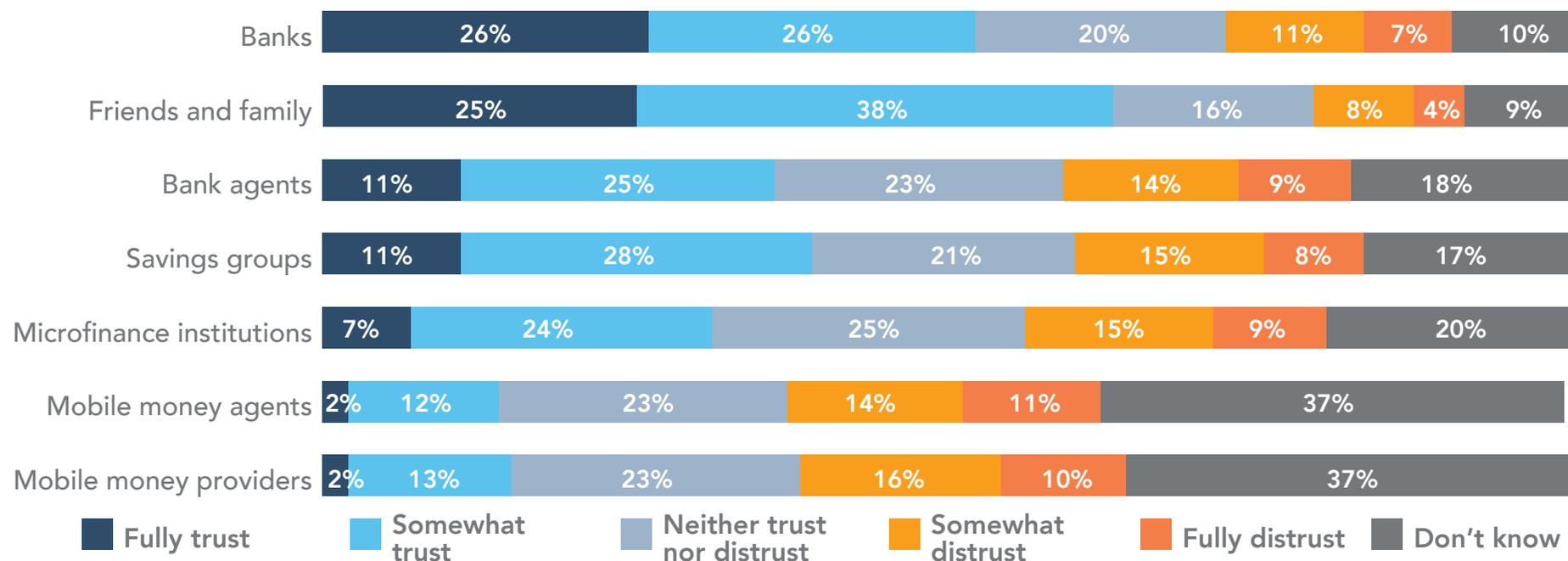
These respondents account for **0.3%** of the sample, which is within the survey margin of error and therefore statistically equal to **zero**.

The use of mobile phones is further explored in the next section.

Trust in financial service providers is relatively low.

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

Sample: Smallholder farmers, n=2,773.

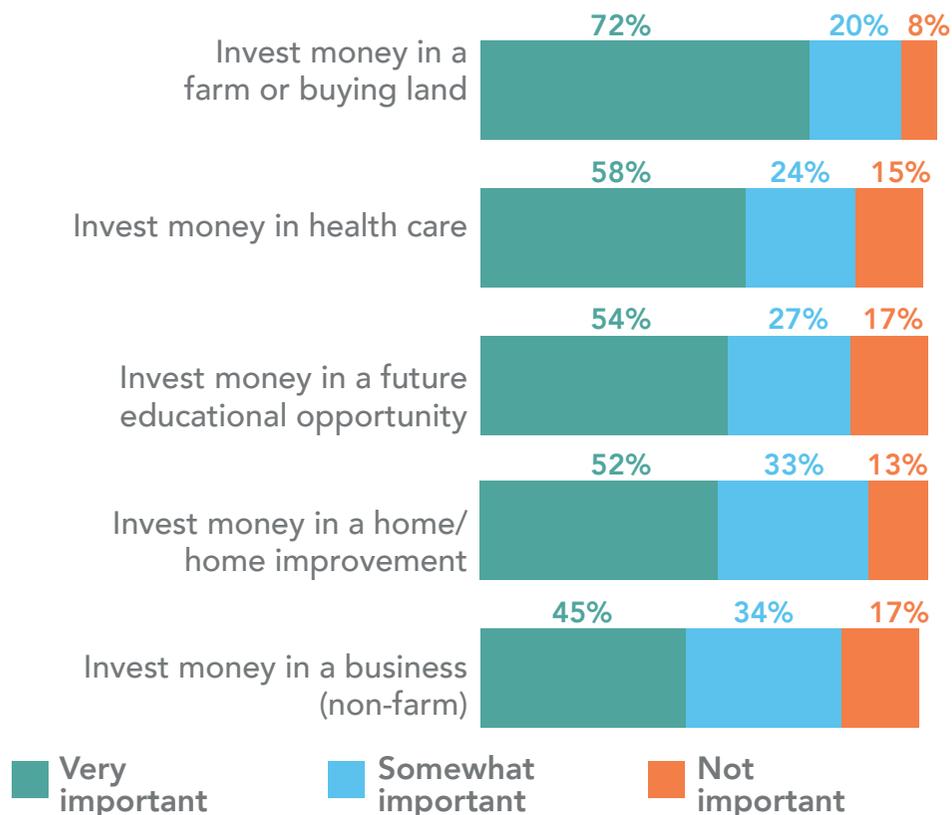


Only about a quarter of smallholders in Nigeria fully trust banks and their friends and family as financial sources. Trust in other financial service providers is even lower. But over one-third of smallholders had no experience with mobile money agents or providers and no opinion on if they could trust them.

Investing in the farm is the priority.

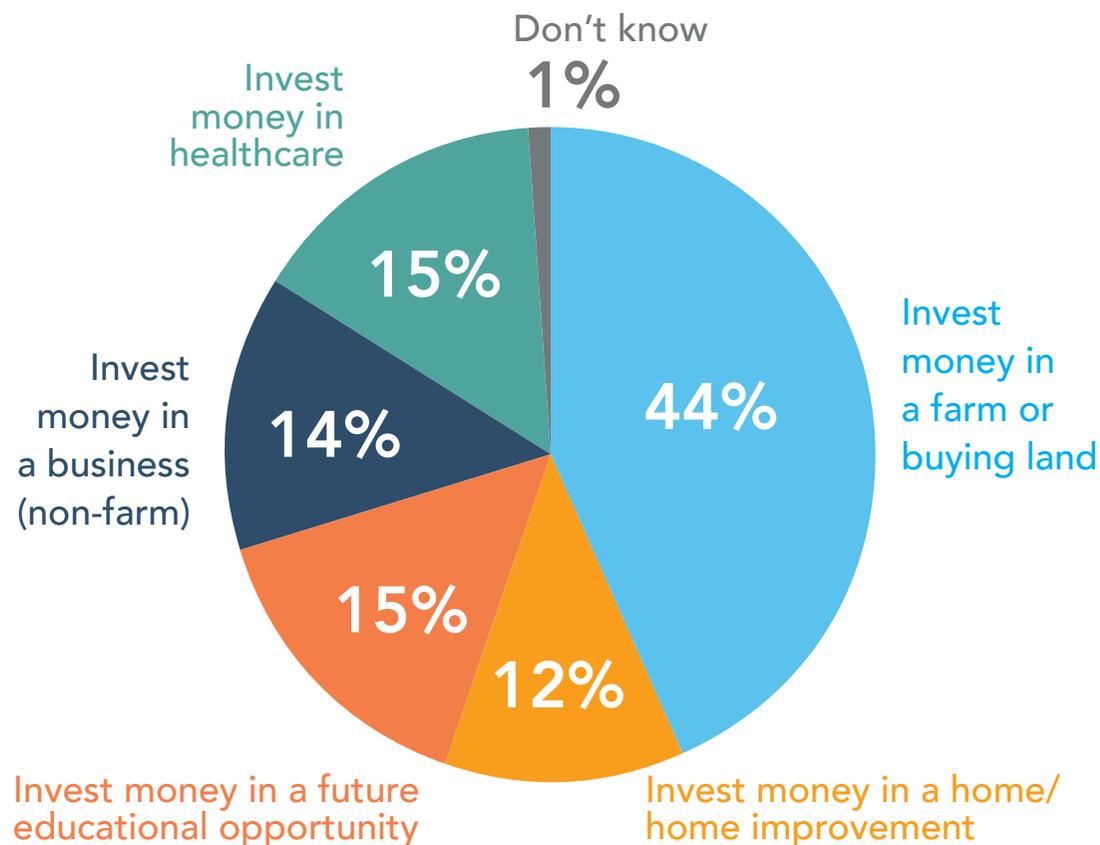
How important is it for your household to invest in each of the following?

Sample: Smallholder farmers, n=2,773.



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

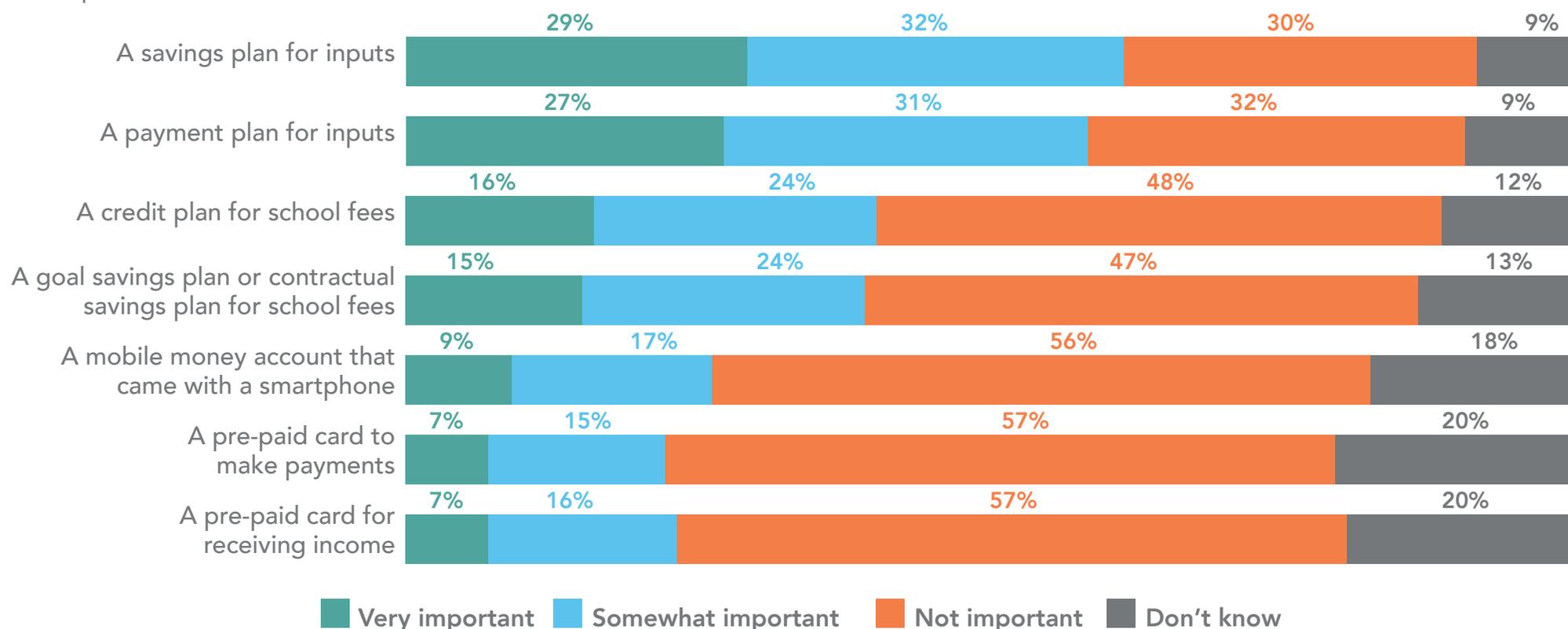
Sample: Smallholder farmers who say any investments are important, n=2,707.



Financial tools for agricultural activities spark interest.

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

Sample: Smallholder farmers, n=2,773.

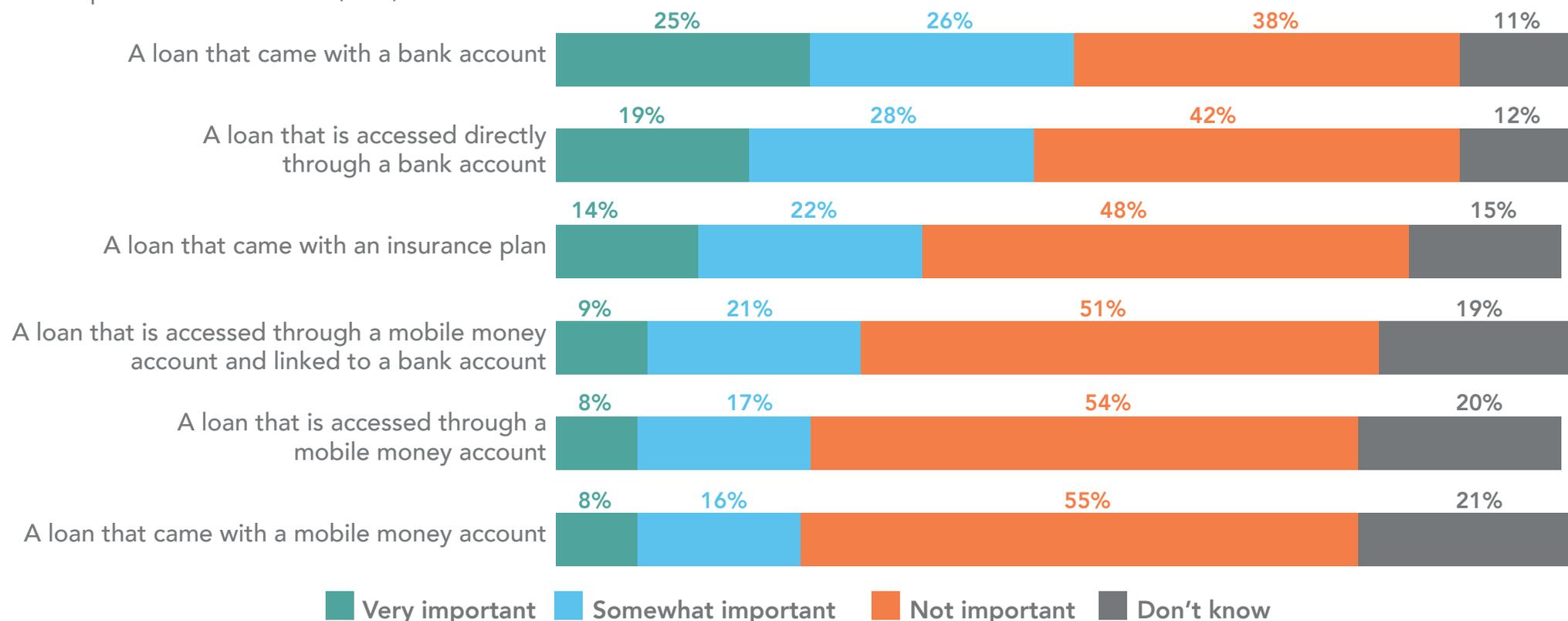


Smallholder farmers in Nigeria consider savings and payment plans for inputs important to their agricultural activities.

Bundled loans generate limited interest.

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

Sample: Smallholder farmers, n=2,773.



One quarter of smallholders in Nigeria see access to a loan that comes with a bank account as very important to their agricultural activities.

What does the data teach us?

Bank accounts drive financial inclusion among smallholders in Nigeria

- A quarter of smallholder farmers (26%) in Nigeria are financially included, meaning they have a formal financial account registered in their name at a bank, nonbank financial institution (NBFI), or mobile money operator.
- Bank accounts are the most common among smallholders in Nigeria (21%), followed by NBFI accounts (8%).
- There are almost no smallholders in Nigeria with a mobile money account.
- Smallholders prioritize investments in their agricultural activities. They show interest in various savings and payment plans to pay for inputs, and loans that come with a bank account.



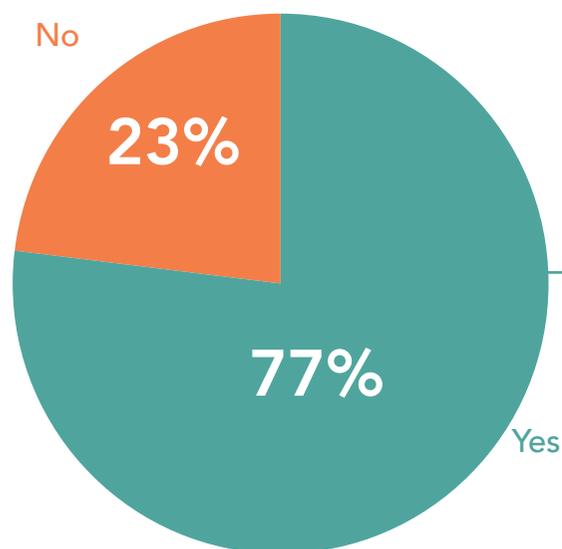
6

Digital financial services

Most smallholders use basic phones.

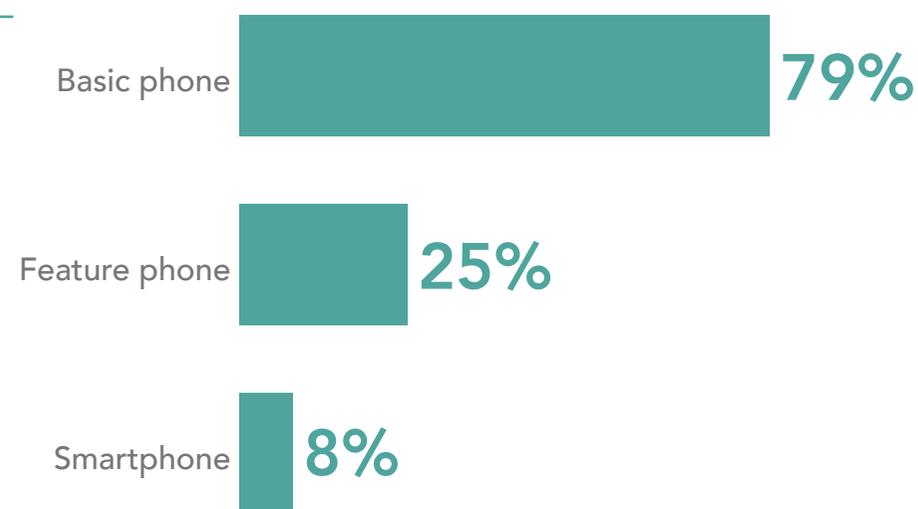
Have you ever used a mobile phone?

Sample: Smallholder farmers, n=2,773.



What type of phone have you used?

Sample: Smallholder farmers who have ever used a mobile phone, n=2,119.

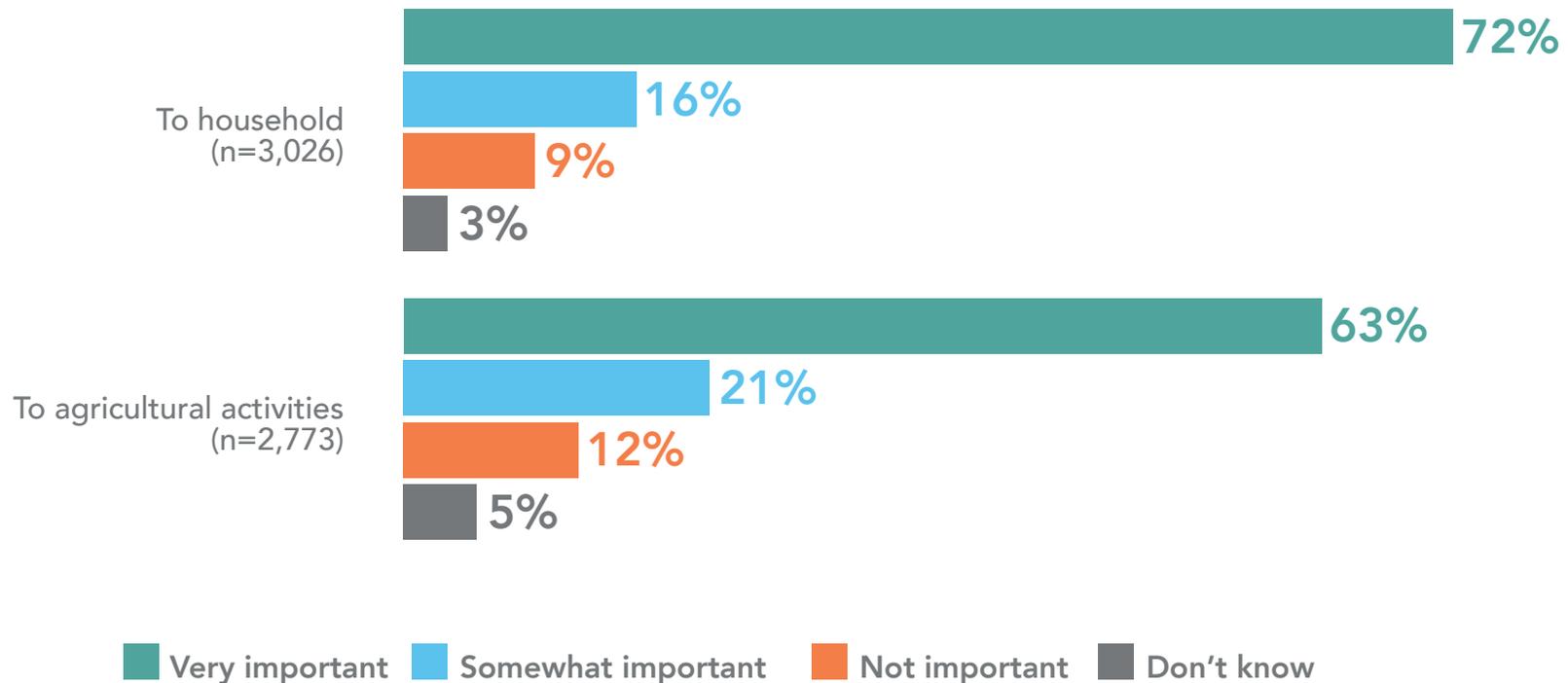


Over three-quarters of smallholder farmers in Nigeria have used a mobile phone, and 61% own their own mobile phone. A majority of smallholders who have ever used a mobile phone have used a basic phone without internet capability.

Mobile phones are considered important to the household.

Regardless of the type of phone you have, how important is it to your household/agricultural activities to have a mobile phone?

Sample: Smallholder households, n=3,026; Smallholder farmers, n=2,773

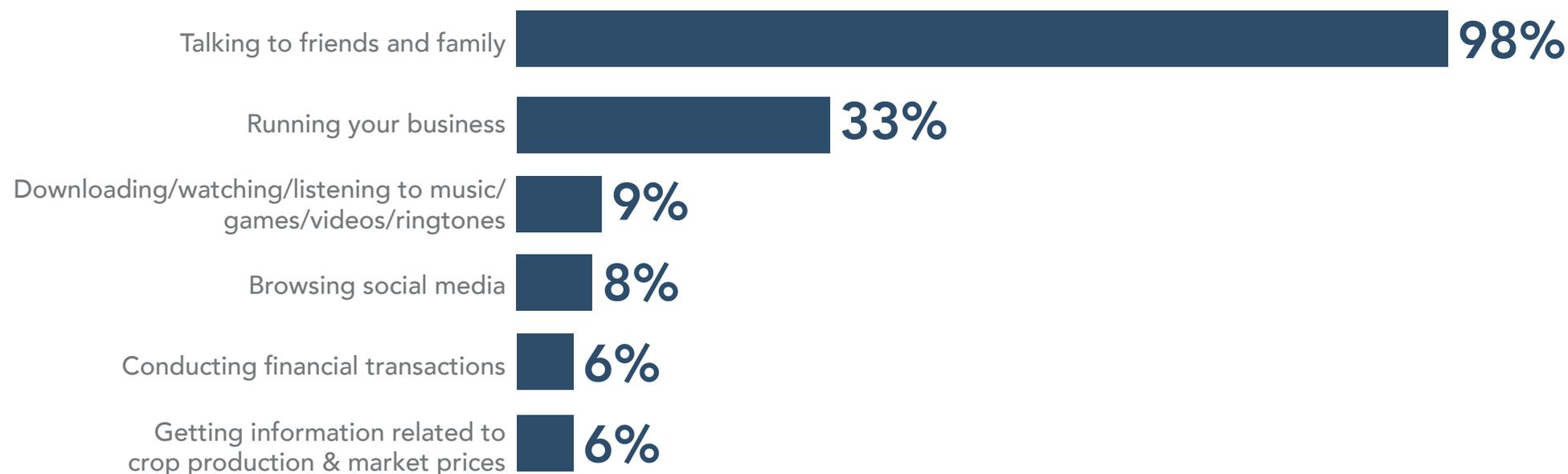


Smallholders see having a mobile phone as relatively less important to their agricultural activities.

Communicating with friends and family is named the top benefit.

What are the benefits to having your own mobile phone or SIM card?

Sample: Smallholder farmers who have ever used a mobile phone, n=2,119. Multiple responses allowed.

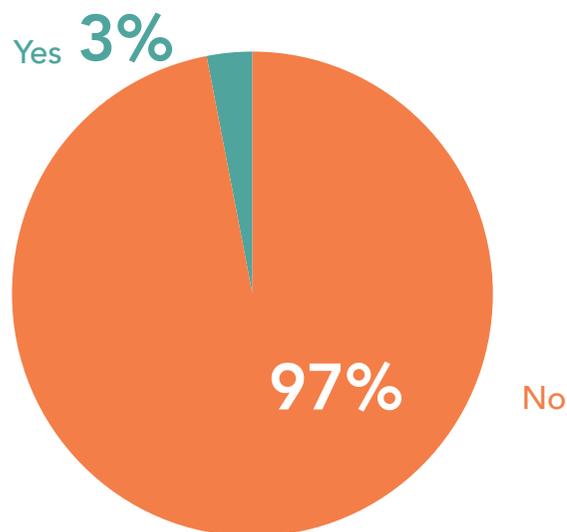


The most important benefit of a mobile phone or SIM card to smallholders in Nigeria is talking with friends and family. One-third also see value in mobile phones to run their business. Other uses of a mobile phone, like making financial transactions, were recognized by relatively few smallholders.

Awareness of mobile money is very low, and use nonexistent.

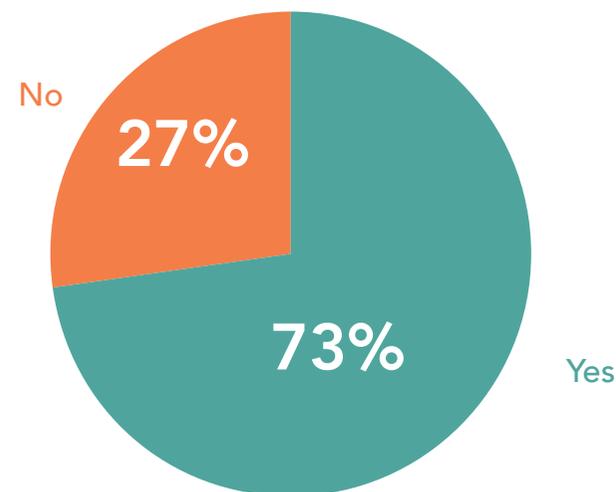
Have you ever heard of something called mobile money?

Sample: Smallholder farmers, n=2,773.



Are there benefits to having a mobile money account?

Sample: Smallholder farmers who are aware of mobile money, n=84.



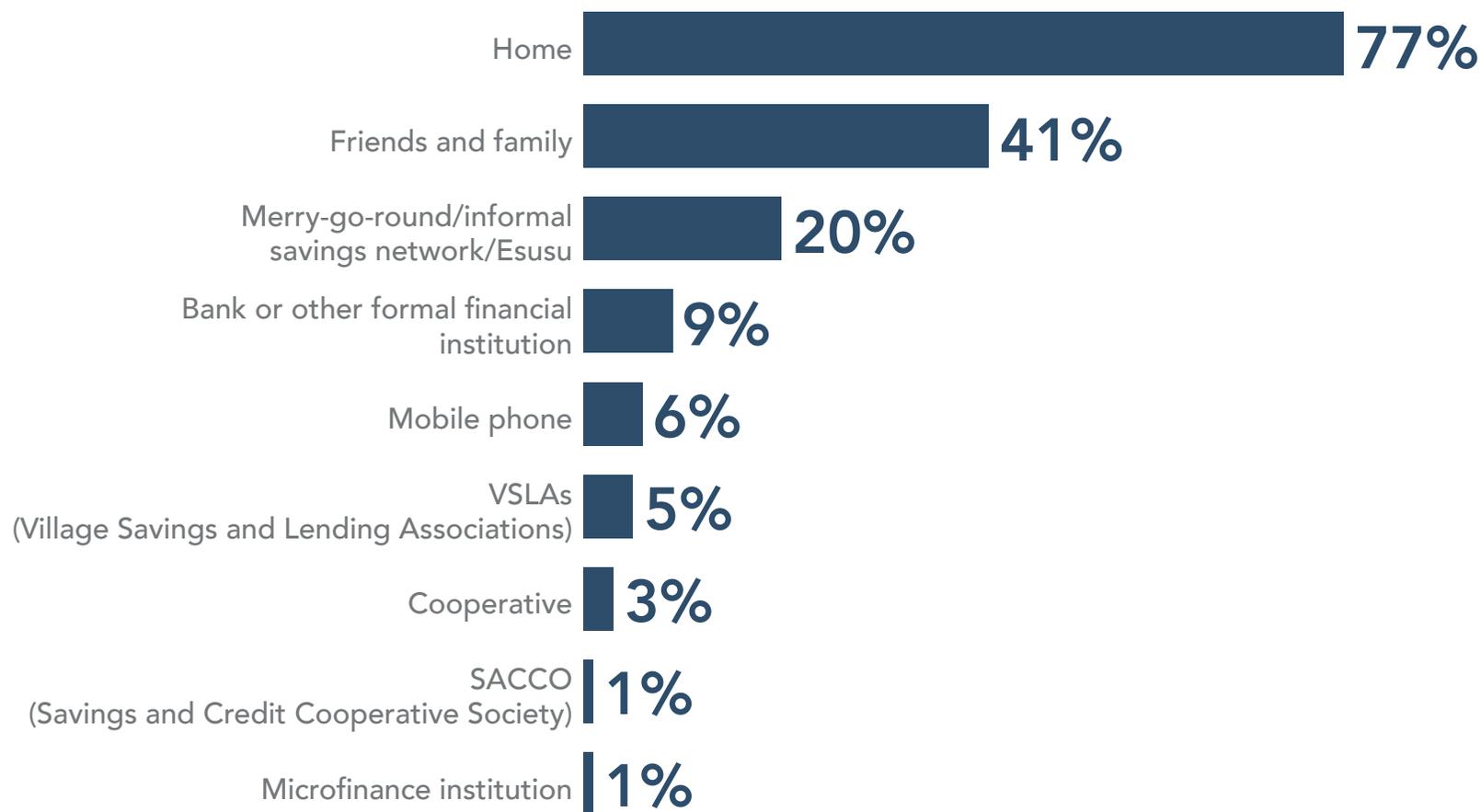
Almost none of the smallholder farmers in Nigeria had heard of mobile money. The few that were aware of mobile money see benefits to a mobile money account.

Eight survey respondents reported having a mobile money account, which is within the survey margin of error, and therefore statistically equal to zero.

Most saving is done at home or with friends and family.

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

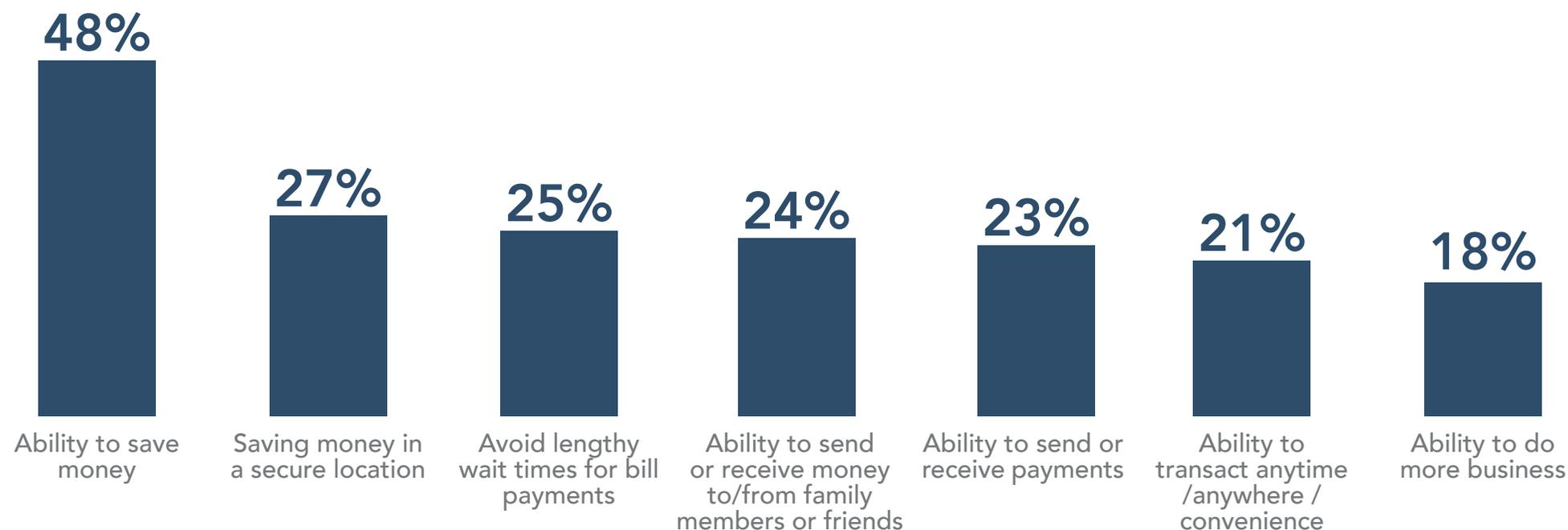
Yes answers. Sample: Smallholder farmers, n=2,773.



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=51. Multiple responses allowed.

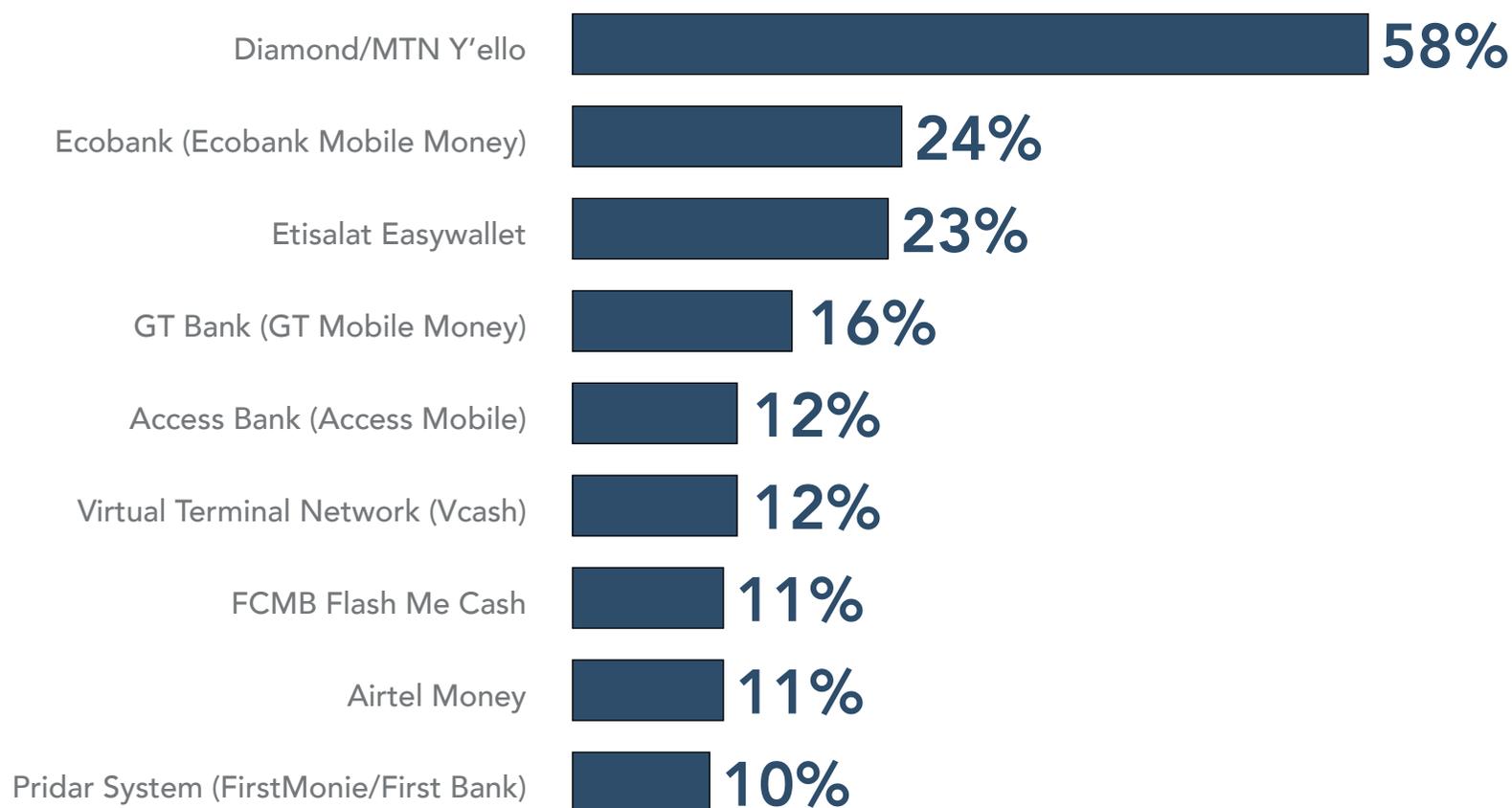


To the few smallholders in Nigeria who were aware of mobile money, the ability to save money is an important benefit of a mobile money account.

Awareness of Diamond/MTN Y'ello stands out

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

Sample: Smallholder farmers who are aware of mobile money, n=84. Multiple responses allowed



What does the data teach us?

Smallholders are not aware of mobile money and not using digital financial tools.

- Three in five smallholders in Nigeria own their own mobile phone. Most use a basic phone without internet capability.
- Smallholders see the mobile phone primarily as a tool for talking with friends and family. One-third of smallholders see a mobile phone or SIM card as helpful to running a business, but there is little recognition for other uses like financial transactions, accessing information, or engaging in social media.
- Mobile money is almost entirely unfamiliar to smallholders in Nigeria. Almost no smallholders in Nigeria have a mobile money account.



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

50%
never attended school

15%
completed primary

26%
secondary or more

POVERTY LEVEL

13%
above \$2.50 ppi

87%
below \$2.50 ppi

ACCESS TO EMERGENCY FUNDS

13% very possible
53% not possible

30% somewhat possible

MOBILE PHONE OWNERSHIP

60%
have at least one mobile phone in their household

ATTITUDES

58% agree the future will take care of itself
37% disagree the future will take care of itself

EXPERIENCED AN UNEXPECTED EVENT

35% none
65% at least one

Four segments of smallholder households in Nigeria

Farming for sustenance

- Dependent on the farm for day-to-day survival, and the most vulnerable segment
- Mostly spans the northern geopolitical zones
- Lowest household income and least likely to leave agriculture
- Least financially included and least likely to own a mobile phone

Battling the elements

- The largest segment, and found in all geopolitical zones
- Most live in poverty
- They intend to remain in agriculture, but are more open to other full-time work
- Least likely to think a savings account is important for their agricultural activities
- Most are financially excluded

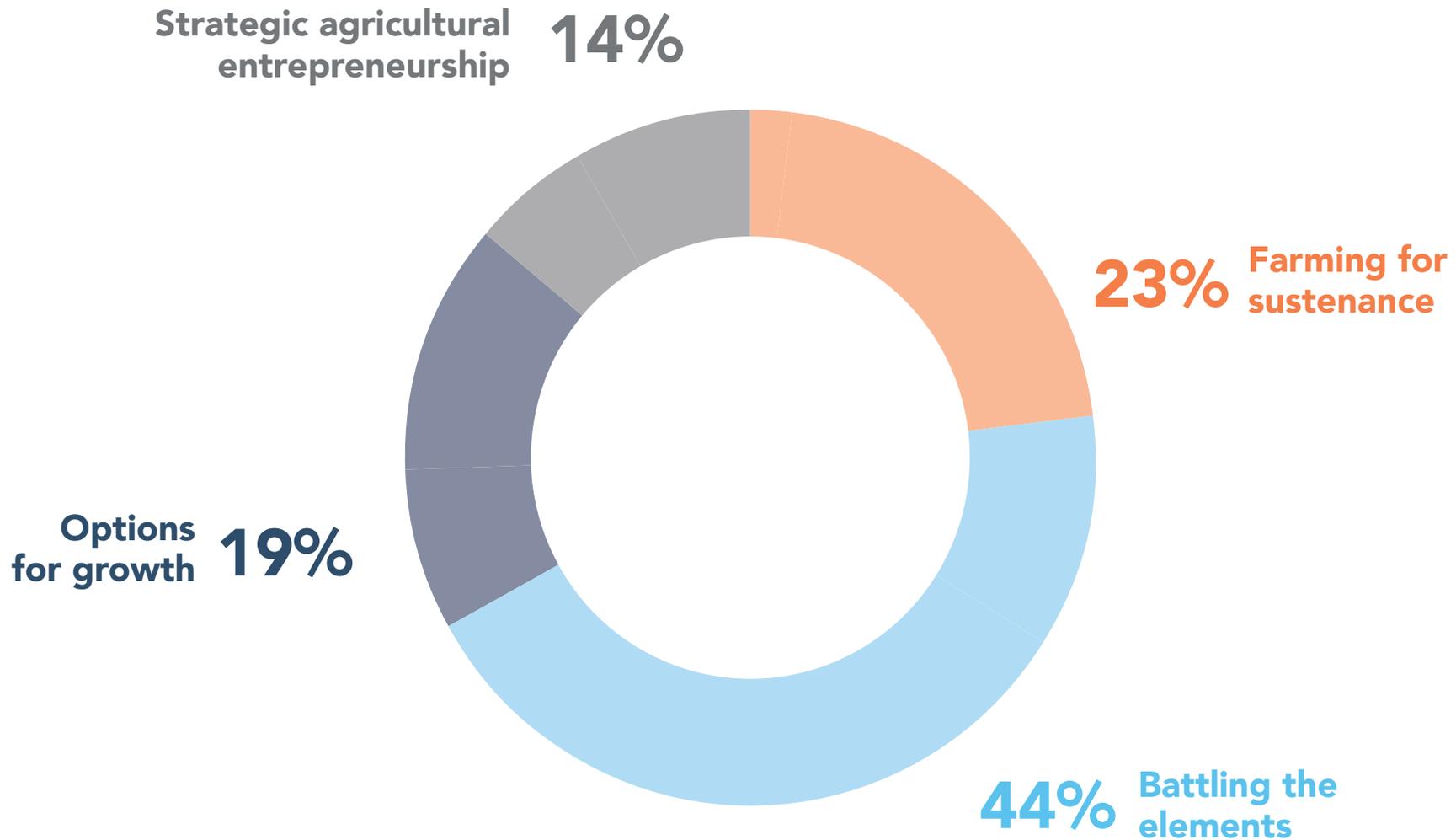
Options for growth

- Most educated segment
- Relatively new to farming and the least satisfied with their agricultural achievements
- Tend not to store crops and are less interested than others in accessing agricultural information on mobile phone
- Have relatively more access to financial tools

Strategic agricultural entrepreneurship

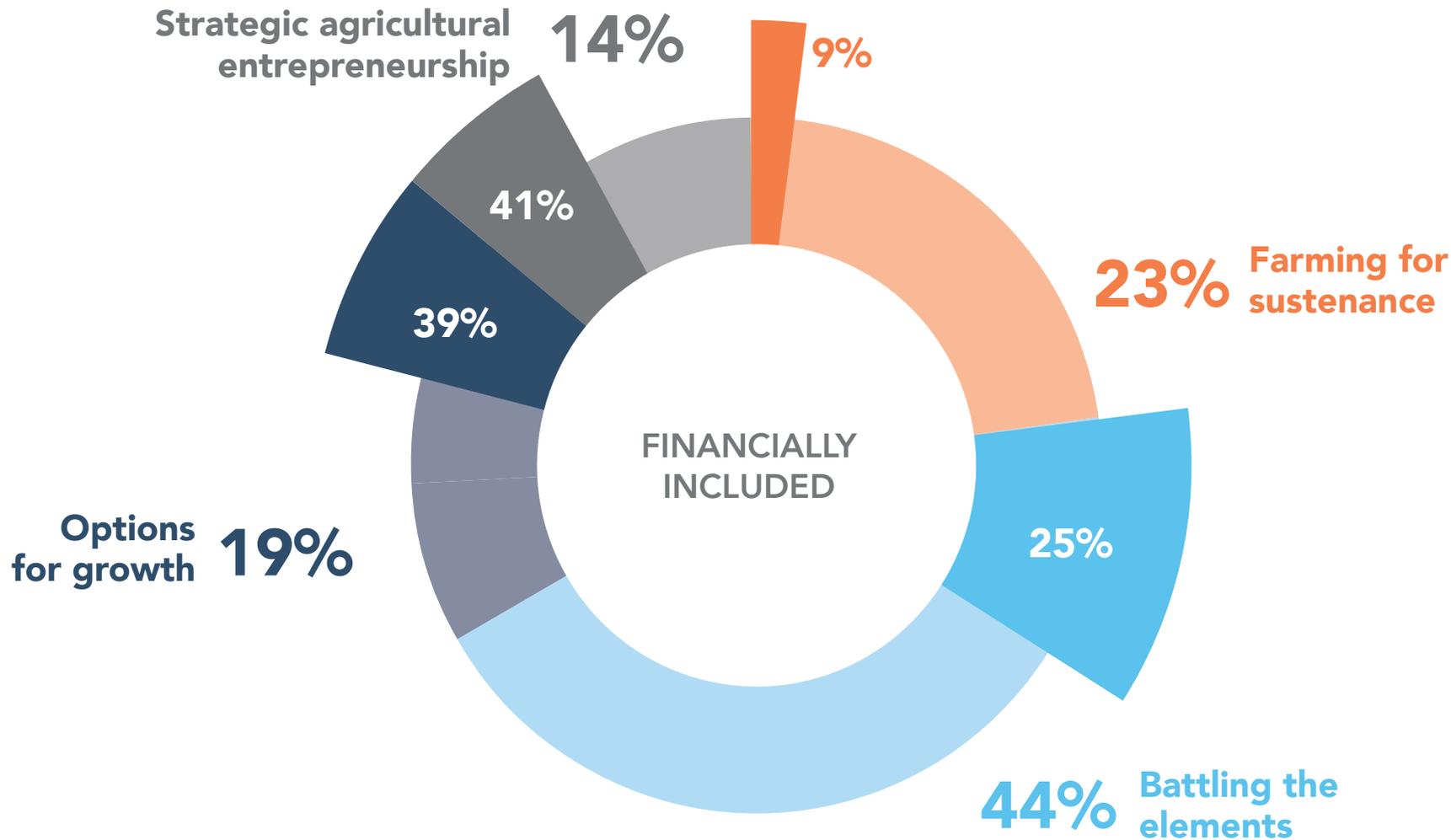
- Household heads are relatively younger and more educated
- Relatively less poor
- Most likely to leave farming for full-time employment, and most likely to want their children to continue in agriculture
- Most seriously affected by weather, pest, price and other shocks
- Most financially included

Four segments of smallholder households in Nigeria



Four segments of smallholder households in Nigeria

Percentage of segments financially included



What does the data teach us?

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

- Looking at the key drivers of financial inclusion, four segments of smallholder households emerge. The four segments characterize the different circumstances, behaviors, and attitudes that prevail across different groups within the smallholder population across Nigeria.
- These four segments range from low income, highly vulnerable families engaged in subsistence farming and without financial tools, to better-educated, better-off smallholder households with a wider portfolio of financial tools.
- Understanding the distinct profiles of smallholder households and designing tailored solutions is key to creating customer value and expanding financial inclusion.
- The Battling the Elements segment dominates the landscape (44%) followed by the Farming for Sustenance segment (23%). Therefore to have an impact in the marketplace, more financial solutions should be tailored to these two large groups of smallholders in Nigeria.



IMPLICATIONS

82

The mix of an older and younger generation of farmers presents an opportunity for cross-generational learning

- The Farming for Sustenance segment contains a balance of younger and older heads of household. Options for Growth and Strategic Agricultural Entrepreneurs also have relatively younger household heads.
- With all the segments reporting their interest in and commitment to agriculture, this mix of the younger and older smallholder household heads presents an opportunity to learn and share across generations.
- The younger generation, which is more educated and tech savvy, can transfer knowledge gained in agricultural best practices and financial education to the older generation. The elders, in turn, can pass on their experiences and insights to the new generation.

Risk planning and mitigation is critical for agricultural sustenance among smallholders in Nigeria.

- Weather-related events (e.g., drought, floods, late rains), pests, diseases, and unexpected fluctuations in input and market prices have taken a toll on smallholder farmers in all four segments in Nigeria.
- There is an acute need for risk planning and risk mitigation at both the micro (household) and macro (stakeholder/government) levels to help smallholders cope with tough times in the agricultural cycle.
- The Farming for Sustenance segment has the greatest need for products that help to mitigate risk, such as improved crop storage, savings, and crop insurance. Smallholders generally are not able to acquire insurance because they have minimal resources and sources of information, but access could improve as more satellite and remote sensing data becomes available to providers.
- Increasing access to information, particularly on good agricultural practices and financial solutions, could also help reduce vulnerability among smallholder families. New mobile information services more relevant to smallholder agriculture could also be introduced to help mitigate risk.

Integration of the mobile phone into financial and agricultural activities is critical to improve smallholder livelihoods.

- Mobile phones are important tools for communication among smallholder farmers in Nigeria, but their integration into financial and agricultural activities has been limited to date.
- Phone ownership is relatively high across all segments except Farming for Sustenance. High rates of phone ownership suggest that mobile technology presents the most viable channel to promote financial inclusion. Specific products, such as crop insurance, delivered digitally could promote resilience.
- The Options for Growth smallholders are the least interested in the ability to access agricultural information on a mobile phone. About half of Options for Growth smallholders do not want to have access to information on weather, market price, or farming via a mobile phone.
- The Strategic Agricultural Entrepreneurs segment has shown the most interest in solutions and products that use mobile phones. This segment can drive financial product adoption and be the entry point for smallholder households in other segments.

Savings presents an opportunity to increase both agricultural sustainability and financial inclusion.

- Smallholders across all the segments recognize saving in financial institutions or at home as important for various reasons, including to mitigate agricultural risks. The Strategic Agricultural Entrepreneur segment views saving through various channels as “very important” more so than the other three segments; financial institutions are particularly valued and trusted by this segment of smallholders.
- Options for Growth and Battling the Elements smallholders value saving at home more than saving in a financial institution. Battling the Elements smallholders do not view saving as important for their agricultural activities, but their experience of risk might make them more open to buying insurance.
- The Farming for Sustenance segment has the lowest proportion of smallholders who trust banks and the highest proportion of those who do not perceive the importance of bank accounts. These smallholders pose the greatest challenge to financial services providers. This segment, however, does recognize the importance of savings to pull through difficult times. In addressing the perceived need for savings, providers may want to look at digitizing savings channels or products or to offer a bundle of products that optimize the use of mobile phones.

Nigeria presents both challenges and key opportunities to improve financial education for smallholder households

- Nigeria presents significant challenges in increasing financial inclusion and improving levels of financial well-being. These challenges include the high poverty rate, lack of product offerings, very limited uptake of mobile money and other financial solutions accessible via basic phones, limited understanding of how financial services are used, and high exposure to risk.
- That said, smallholders in Nigeria have high levels of access to and ownership of mobile phones. Mobile phones can be strategic tools to support the different segments of smallholder households.
- Financial services providers can tailor solutions to struggling segments and drive financial inclusion. They can also work to meet the more complex needs of more stable segments that are already financially included.
- In Nigeria, multiple strategies for the meaningful uptake and use of financial solutions will be required. Ultimately, this will give providers the opportunity to better plan their approaches and calculate potential returns. And stakeholders that are shaping this sector will have the knowledge necessary to better direct resources to the targeted needs of these smallholder household segments.



RESOURCES

88

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](#)

CGAP Contacts

Financial Innovation for Smallholder Households

Emilio Hernandez

ehhernandez@worldbank.org

Corinne Riquet

corinne.riquet.cgap@gmail.com

Jamie Anderson

janderson12@worldbank.org

www.CGAP.org