
Welcome
MERCY CORPS

FARMERS' BENCHMARK STUDY

Zambia First Round of Data Collection

PRESENTER'S NAME

Collins Marita
Samantha Malambo
Christabell Makokha

Overview of research conducted to-date

The farmer-centric research explored a total of 15 studies targeting various themes – demographics, financial inclusion, other services, etc. (1/2)

Report	Sponsors	Year	Topics covered
FinScope	FSD Zambia	2015	Survey measuring financial inclusion in Zambia, including usage of, demand for, and behavior towards financial services amongst adults in Zambia
FinScope FOCUS Paper 1: Women and Financial Inclusion in Zambia	FSD Zambia	2016	Survey of the state of women's financial inclusion in comparison to men's, including access to financial services and financial behavior and management
FinScope FOCUS Paper 2: Women Smallholder Farmers: Managing their Financial Lives	FSD Zambia	2016	Report combining qualitative and quantitative data from FinScope 2015 survey to consider the status of financial inclusion for women smallholder farmers, including challenges and opportunities for increasing their participation in agriculture and financial institutions
Zambia Financial Diaries: Interim Repot	FSD Zambia	2015	Year-long panel study of 352 individuals to tracking weekly transactions to gain deeper understanding of transaction behavior and use of financial services
Agent Network Accelerator Survey: Zambia Country Report	Helix Institute of Digital Finance	2016	A research report considering the factors leading to success in agent network management from agent demographics, business model, operations, float management and provider support
Consumer Behaviors in Zambia: Analysis and Findings	Intermedia	2016	A secondary research assessment of the FinScope 2015 study to identity the behaviors, interests and barriers to financial services access to optimize digital product adoption for banks, mobile network operators (MNO) etc.
ICTs and Agricultural Information Service Delivery	Infobridge	2016	A summary of the digital information platforms available for smallholder farmers
Profile of Zambia's Smallholders	World Bank	2008	A research paper synthesizing various qualitative and quantitative analyses on different smallholder livelihoods

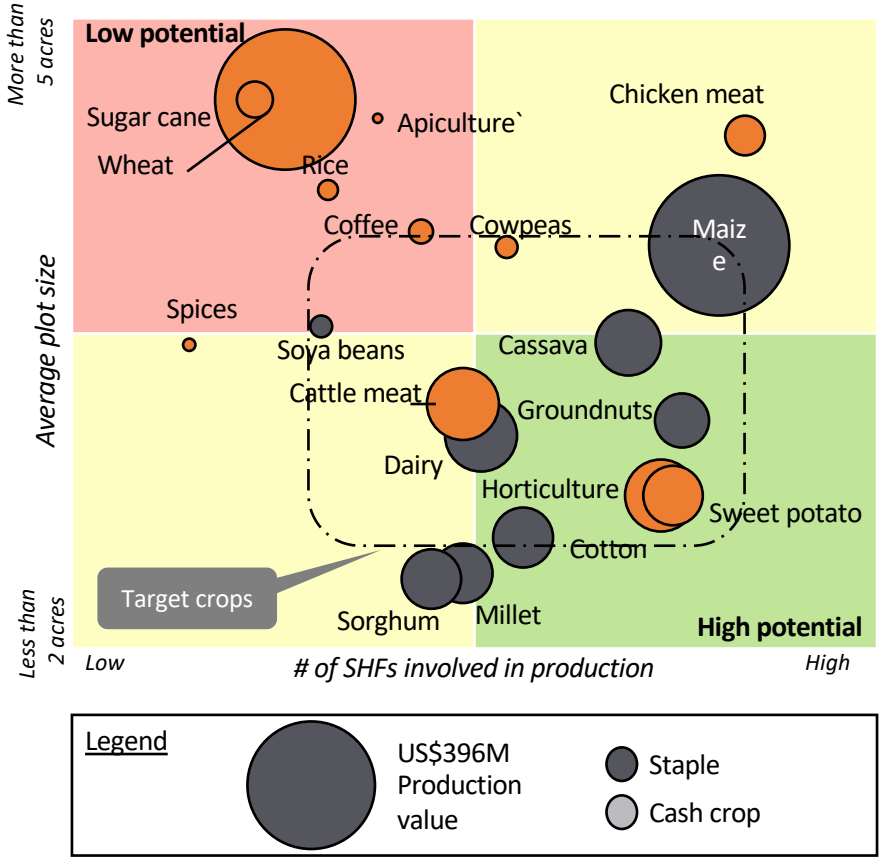
The farmer-centric research explored a total of 15 studies targeting various themes – demographics, financial inclusion, other services, etc. (2/2)

Report	Sponsors	Year	Topics covered
Real Mobiles: Kenyan and Zambian Smallholder Farmers' Current Attitudes Towards Mobile Phones [Susan Wyche, Melissa Densmore and Brian Geyer}	World Bank and Facebook Inc.	2015	A qualitative study considering the attitudes of smallholder farmers to mobile phones include barriers that limit proper dissemination of information to farmers through mobile phones
Determinants of Smallholder Farmers' Access to Agricultural Finance [Christopher Sebatta, Mukata Wamulume, Chibamba Mwansakilwa]	University of Zambia, Makerere University and Palm Associates Ltd. Zambia	2014	A household survey of 1,326 households in 5 provinces investigating the factors that influence smallholders decision to take part in financial sectors
An Investigation into Zambia's Agriculture Development Framework and its impact on smallholder farmers	Oxfam	2013	A research study analyzing the impact of Zambia's Agricultural Framework to improve smallholders' livelihoods.
Briefing on Zambian Agriculture	Indaba Agricultural Policy Research Institute (IAPRI)	2016	An overview of the agricultural sector in Zambia, including the geography, demography of farmers, market actors and government engagement
Major Institutions Providing Extension/Advisory Services in the Country (Zambia)	Global Forum for Rural Advisory Services	2016	An overview of the agricultural landscape in Zambia including extension providers, digital platforms, and statistical information
Rural Agricultural Livelihoods Survey: 2015 Survey Report	Indaba Agricultural Policy Research Institute (IAPRI)	2016	A panel study examining the small and medium scale farming sector through the 2010 census sampling frame
Does Gender Matter When Evaluating the Economic Impacts of Land Titling in Zambia?	Indaba Agricultural Policy Research Institute (IAPRI)	2015	A policy brief drawn from a national household survey that examines how land titling impacts financial outcomes for women in male-headed vs. female headed households
ICT Survey Report – Households and Individuals	Zambia Information and Communications Technology Authority (ZICTA)	2015	A survey investigating the extent of access to ICT devices such as mobile phones, computers, etc.

AFA research to-date

Research	Methodology	Objective	Output
Zambia ecosystem study (June 2016)	Desk review (qualitative)	Understand the Zambian ecosystem as relates to agriculture and agriculture finance	White paper (AFA website)
FinScope 2015 in-depth analysis	Desk review (quantitative)	Understand segmentation of smallholder farmers in Zambia	Internal report
Research on women smallholders farmers and VSLAs	Human-centered design research (qualitative)	Understand needs of women farmers	Blog series
Shared agent networks	Desk review and interviews (qualitative)	Research models to expand agent networks in Zambia	Case studies
Benchmark study	Quantitative research	Profile smallholder farmers and understand their interaction with advisory and information services	Technical Deck

Target / high priority value chains
Value chains with significant output value and smallholder participation include maize, cassava, cotton, pulses, oil seeds and horticulture



Prioritization criteria:
Due to limited availability of data this value chain mapping is based on a mix of qualitative and quantitative assessment

- SHF concentration (x-axis): indicates the number of SHFs involved in production
- Average plot size (y-axis): distinguishes crops based on the typical plot size that SHFs dedicate to it. Crops grown on smaller plot sizes are higher potential as they are likely to have higher numbers of low income farmers
- Value of production (bubble size): defines the potential size of the opportunity
- Type of crop (color of bubbles): distinguishes between cash crops and staples, which has an implication with respect to the value of the crop and the attractiveness of investing in it

AgriFin Accelerate (AFA) Ecosystem Study, Dalberg 2016

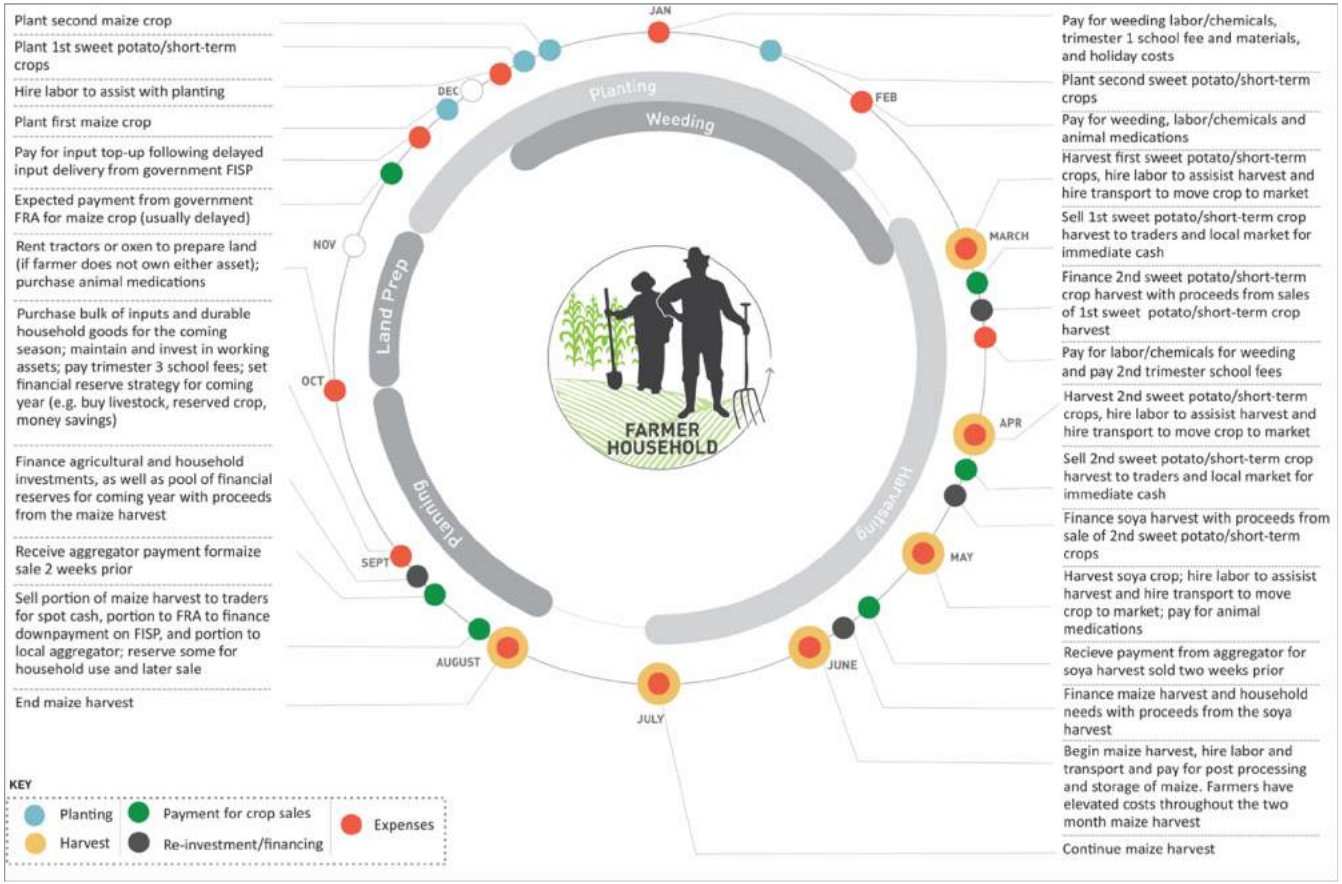
Farmers can be segmented into 4 groups based on socio-demographic patterns from within the FinScope data (land size, type of household, household size, PPI, education level, age etc.)

	 Traditional male-headed households (n=356)	 Struggling families (n=369)	 Rising 30s (n=298)	 Market gardeners (n=618)
Demographics	**Demographics** • 100% male headed household • Similar demographics to the struggling families, except relatively smaller family size (average of 4.9)	**Demographics:** • Very poor – PPI score of 1.1 i.e., poorest across all segments • Large households (average family size of 9)	• Youngest segment (average age of 30 years) • Largest land size (~8.4 acres) • Slightly better off than other segments – PPI score of 2.2 • Better educated	• Primarily female (72%) • Highly unlikely to keep livestock (only 2% do) • Smallest land size (~5.2 acres)
Geographic location	• Primarily found in rural areas (100%) • Majority found in Eastern Province (40%)	• Primarily found in rural areas (99%) • Evenly distributed across all provinces but less likely to be found in Lusaka and Western Provinces (11% and 16%, respectively)	• Primarily found in rural areas (89%) • Majority found in Lusaka (38%)	• Primarily found near to major cities (53% urban) • Majority found in Luapula (41%), Southern (41%), Western (49%)
Level of access to financial services	• Over half totally excluded from formal and informal financial services (51%)	• Over half totally excluded from formal and informal financial services (52%)	• ~40% are using formal financial services • Most likely to have received remittances • Most likely to be within an hour of financial access points, but still majority are more than an hour from services	• ~75% already use formal financial services • Most ikely to be within an hour of financial access points, but still majority are more than an hour from services

AgriFin Accelerate (AFA) Ecosystem Study, BFA analysis of FinScope 2015 data

Data source: 2015 FinScope

Smallholder farmers (SHF) Seasonal Map



FARMER NEEDS: JANUARY

- Bridging loans for household costs
- Labor and input financing loans to support weeding activities

FARMER NEEDS: APRIL

- Timely payments to support re-investment and household needs
- Bridging loan to support household expenses
- Labor and input financing loan to support weeding activities

FARMER NEEDS: AUGUST

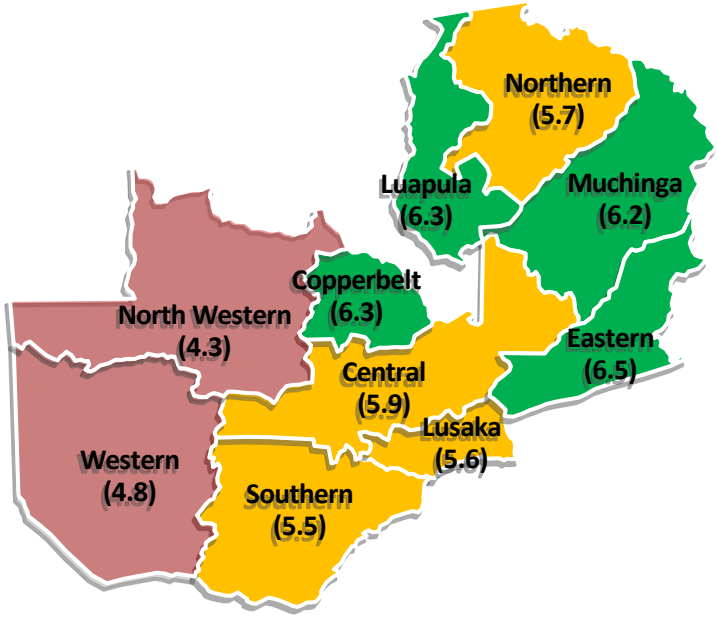
- Market information and forecasts to inform planting decisions
- Access to inputs and input credit to prepare for planting
- Trainings to prepare farmer for coming season

FARMER NEEDS: NOVEMBER

- Training refreshers
- Input credit to support input top-up
- Labor financing loan to support planting activities

Target populations for DFS

Farmers in Copperbelt, Luapula, Muchinga, and Eastern have a higher Mobile Money Readiness Index, hence more likely to be early adopters of DFS and DIS products



Key:

<5	Scores between 0 – 5 | low mobile money readiness
5-6	Scores between 5-6 | medium mobile money readiness
>6	Scores greater than 6 | high mobile money readiness

Mobile Money Readiness Index (MMRI) scores for top 22 districts (> 6 out of 10)

1. Eastern	6.5
Nyimba	8.0
Mambwe	7.3
Chipata	6.5
Katete	6.2

2. Copperbelt	6.3
Kalulushi	8.4
Ndola	7.9
Luanshya	7.8
Chingola	6.5
Kalomo	6.1

3. Luapula	6.3
Kawambwa	6.9
Nchelenge	6.8
Mansa	6.5

4. Muchinga	6.2
Mpika	7.0
Isoka	6.8
Mafinga	6.5
Nakonde	6.1

5. Central	5.9
Kabwe	7.6

6. Northern	5.7
Mpulungu	6.4
Kasama	6.2
Mungwi	6.2

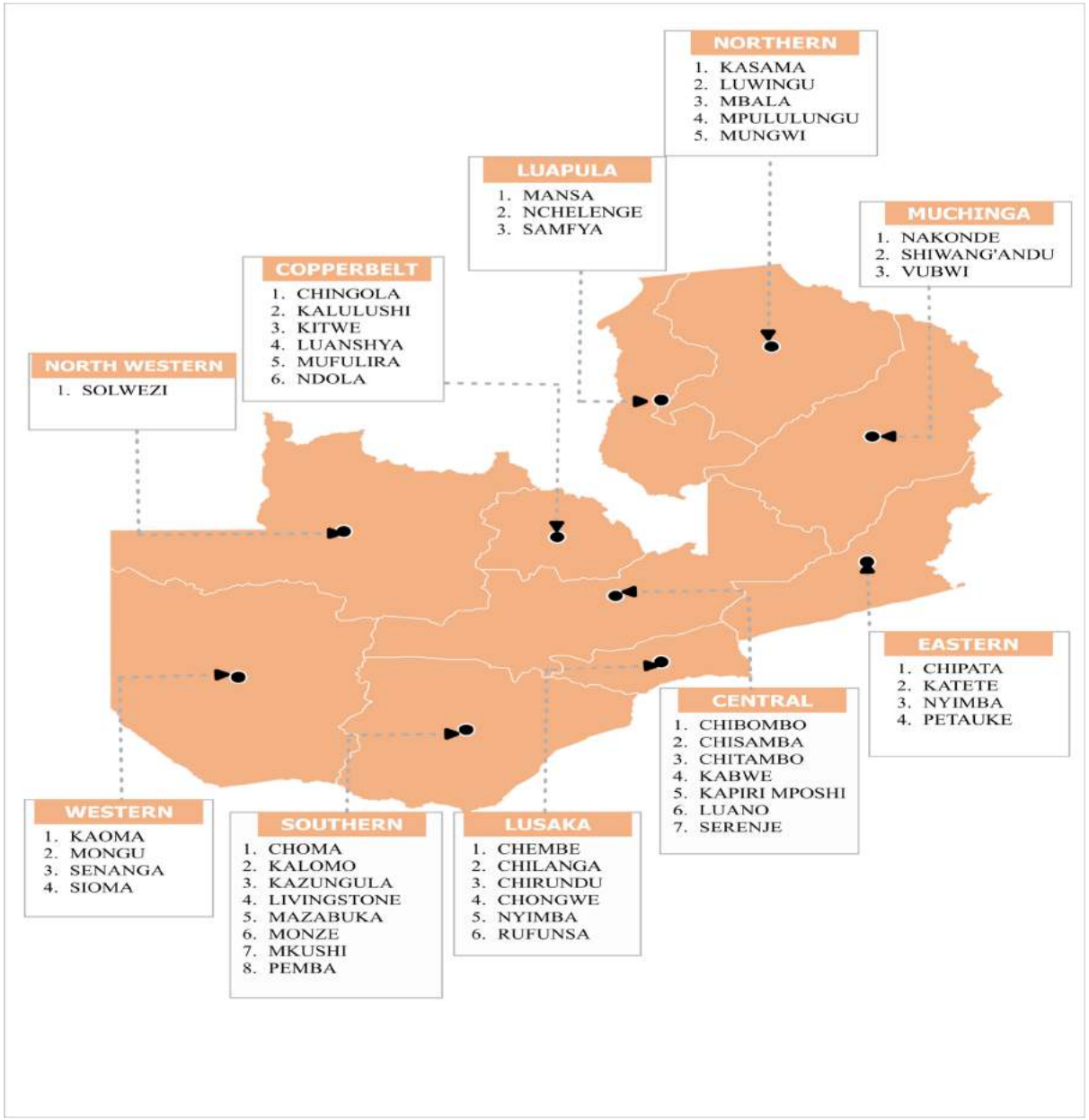
7. Lusaka	5.6
Chongwe	6.2

8. Southern	5.5
Siavonga	7.4

AgriFin Accelerate (AFA) Ecosystem Study, BFA analysis of FinScope 2015 data

Methodology

Nationally representative survey of smallholder farmers



- A total of 1,200 smallholder farmers were randomly selected for the benchmark study
- Sampling was done in all the 10 provinces of Zambia

Defining Smallholder Farmers

Selection Criteria

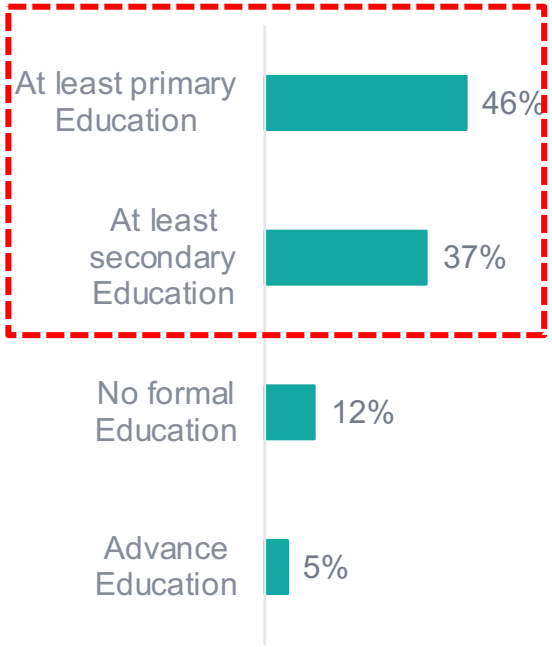
Land Size	Land size cultivated in the last 12 months is between 0.1 and 10 acres
Activities	Households involved in any of the below activities: • Crop farming • Livestock farming • Both crop and livestock farming • Buying and selling farm produce
Contribution to Household Income	Agriculture provides a meaningful contribution to the households' livelihood, income or consumption (Self Identified)

- **Individual respondents were selected randomly in households qualifying as smallholder farmers. The criteria for selection of individual respondents were**
  - **18 years and above**
  - **Involved in making financial decisions**
  - **Involved in making agricultural decisions**

Who are they?

Demographics

Education level



Gender and Age of Respondents

Gender Segregation

	Count	%
	614	51%
	601	49%

Age Segregation

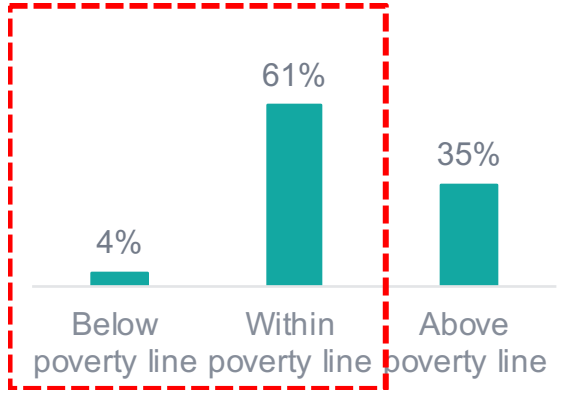
Years	Count	%
18-30	374	31%
31+	818	67%

Marital status and Income levels

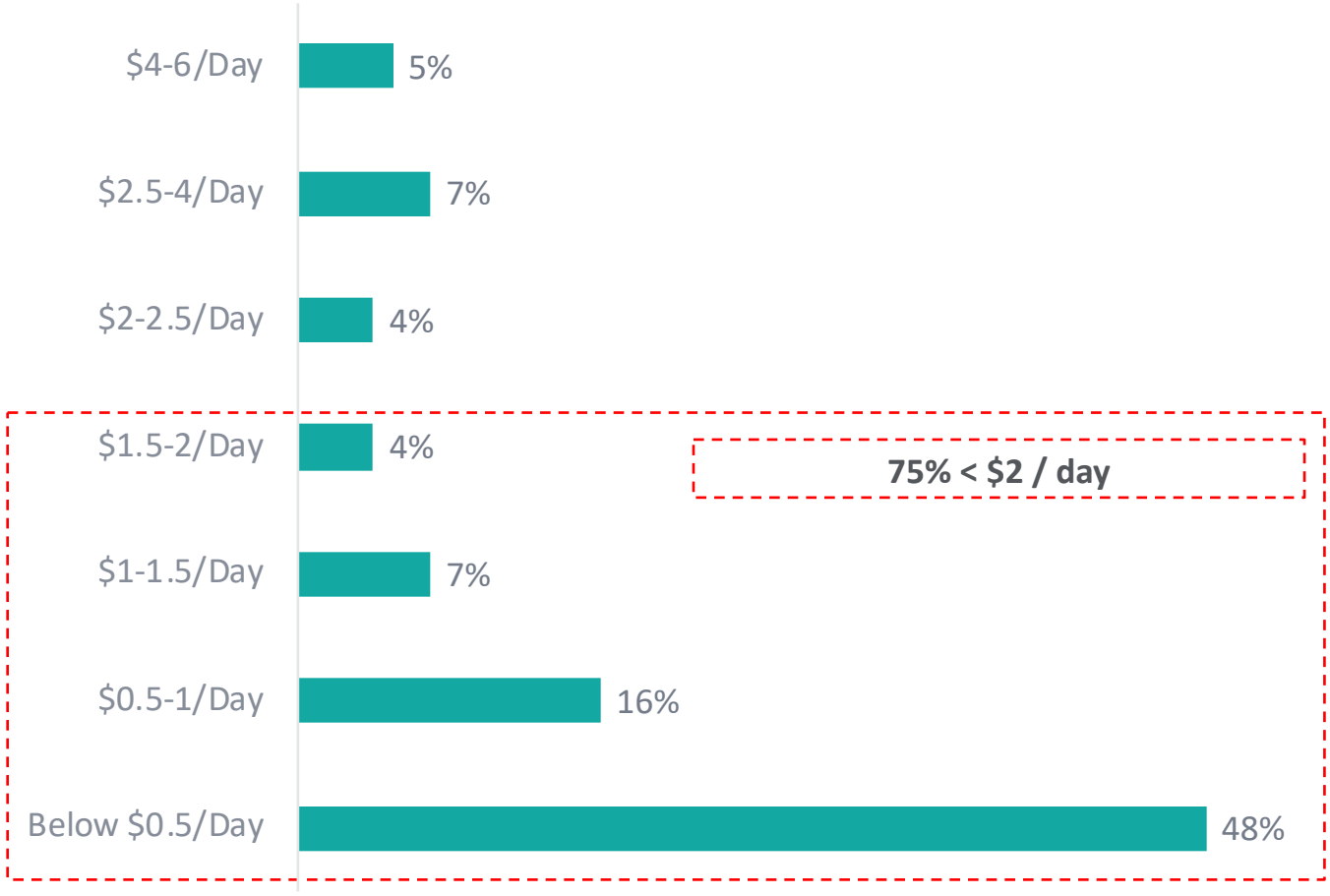
Marital Status

Marital status	%
Monogamously married	59%
Single/ Never married	10%
Widowed	10%
Polygamously Married	6%
Divorced	5%
Separated	3%

Income Levels



Zambia smallholder farmers show unequal income distribution, 48% of Zambian farmers live below $0.5/day.



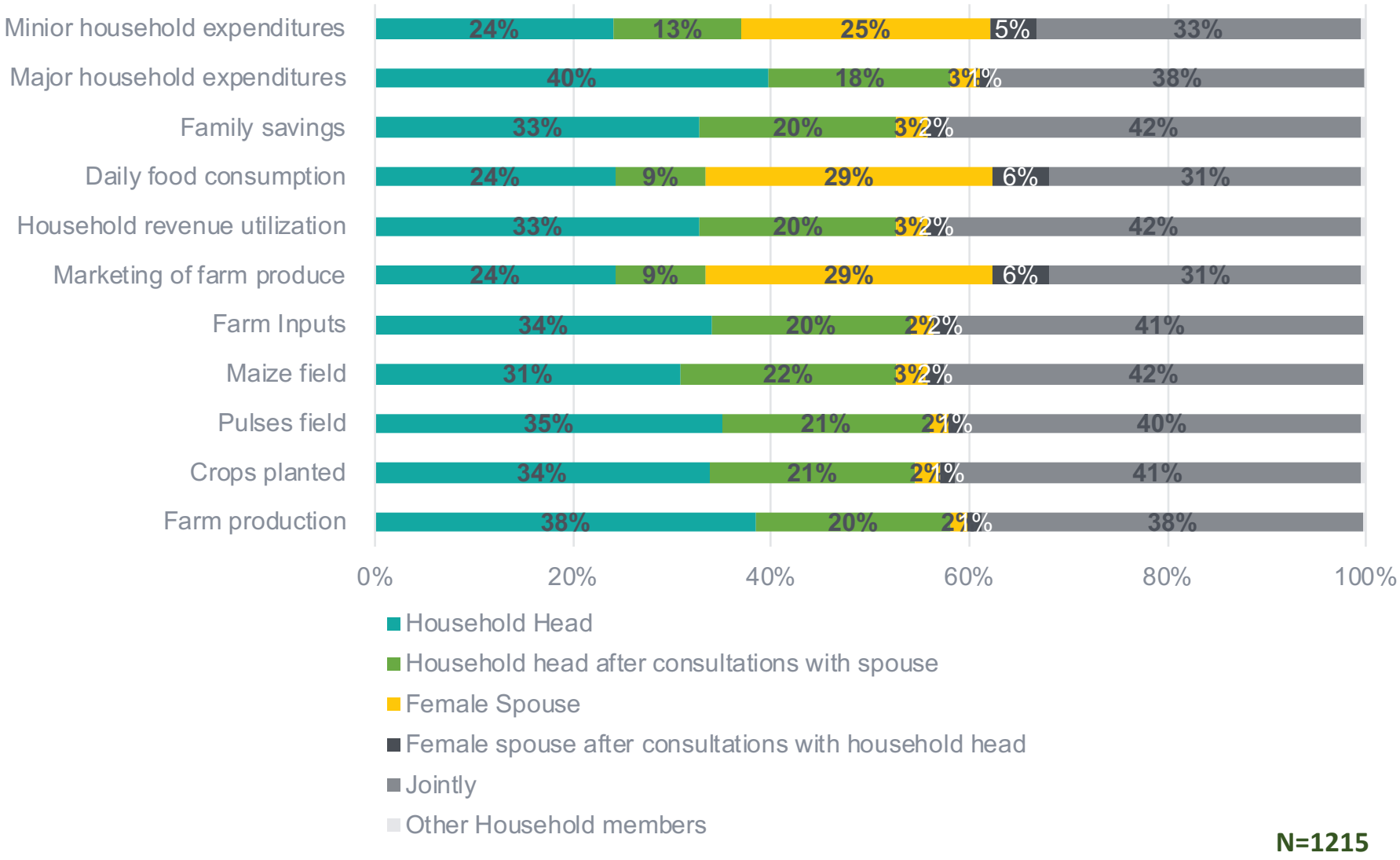
Size of land cultivated in the past 12 months appear to be constant regardless of the gender and age of the respondent

		Average Size of land Cultivated in the last 12 months (Acres)					
		Parcel 1	Parcel 2	Parcel 3	Parcel 4	Parcel 5	Parcel 6
Age	18-30 Years	3.16	1.98	1.69	1.00	1.00	1.00
	31+ Years	3.32	1.90	1.58	1.30	3.06	0
Gender	Male	3.39	1.89	1.51	1.28	2.57	1.00
	Female	3.13	1.95	1.66	1.11	1.00	1.00

- On average, farmers cultivated one parcel of land and the average size is **3.26** Acres, however they only earned on average **$ 9/Month**

N=1215

Household decisions are made jointly between the head of the household and female spouse



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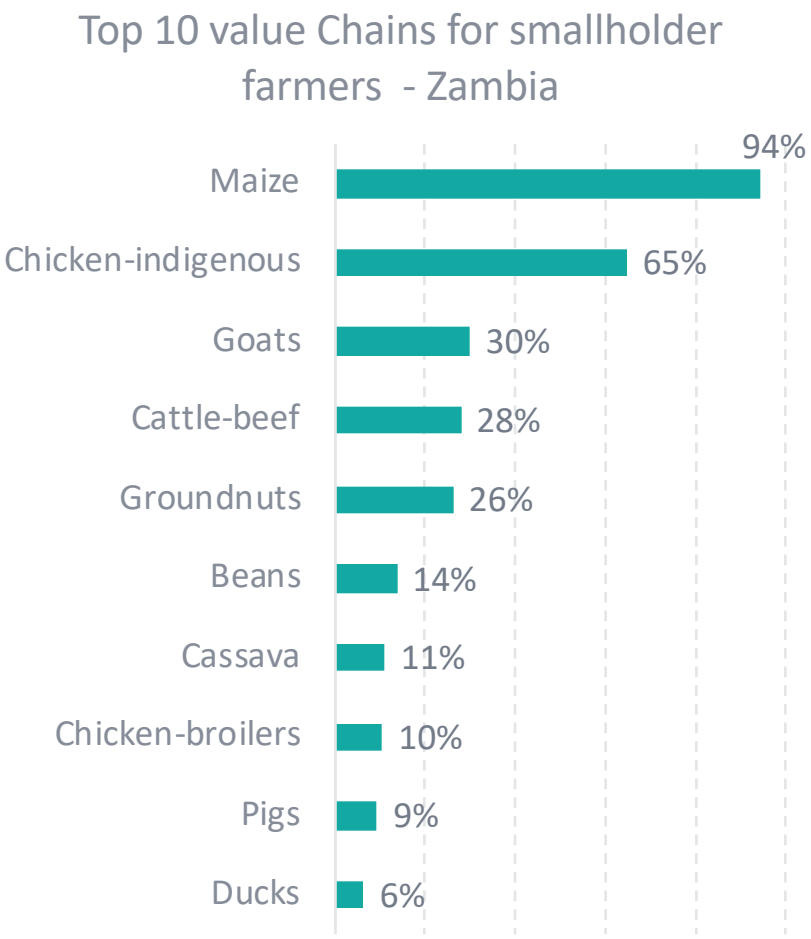
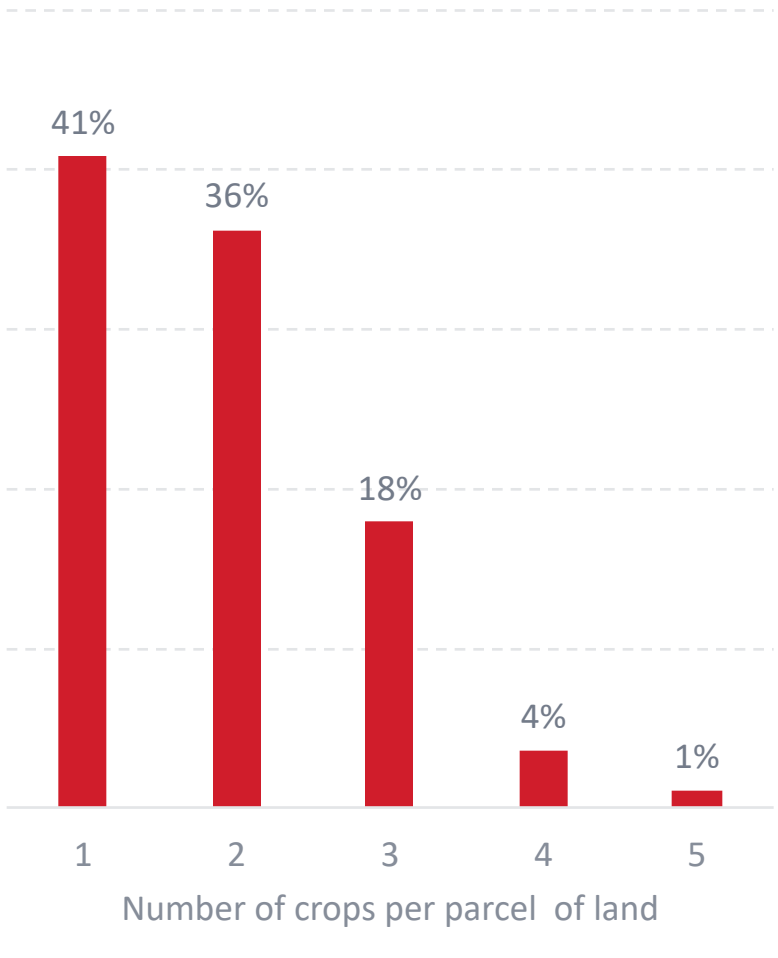
59% of the interviewed farmers engage in multiple value chains





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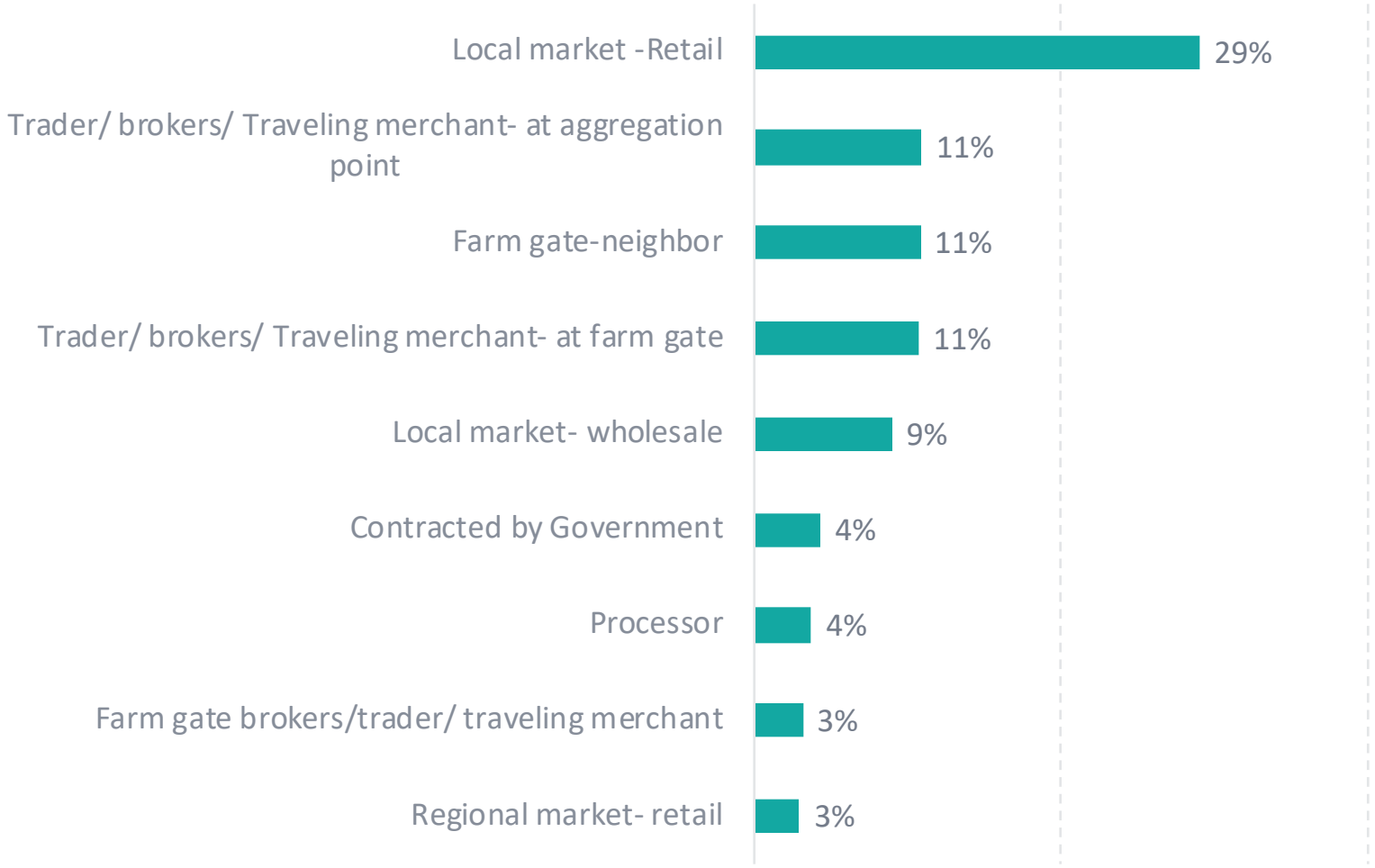
Local retail markets are the most common in terms of access and sales



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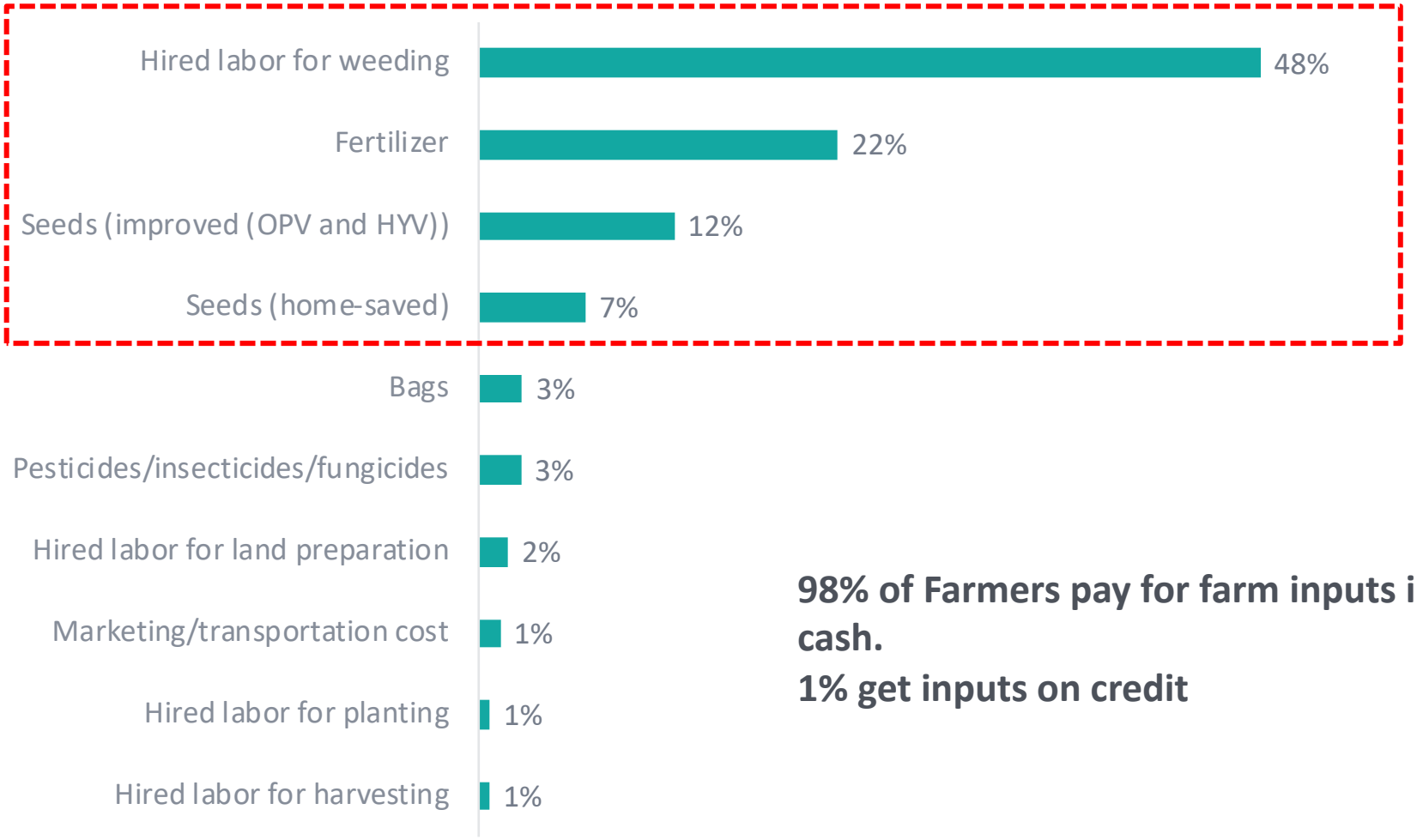
Farmers spend more on farm inputs and labor



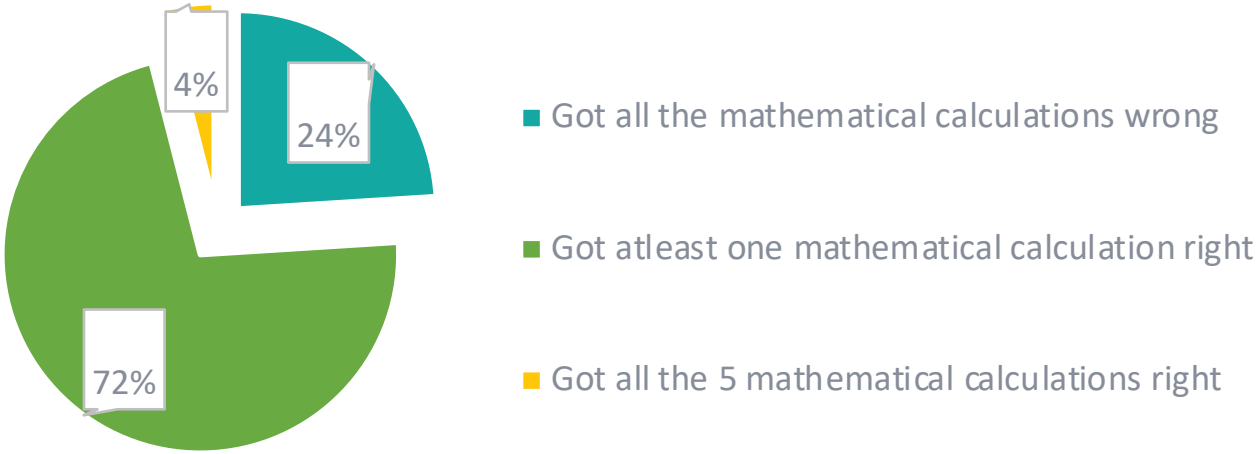
98% of Farmers pay for farm inputs in cash.
1% get inputs on credit

N=1204

Readiness for Financial Inclusion

Numeracy and Literacy

7 in ten can perform at least one mathematical computation, however, close to 3 in ten could not get an individual mathematical computation

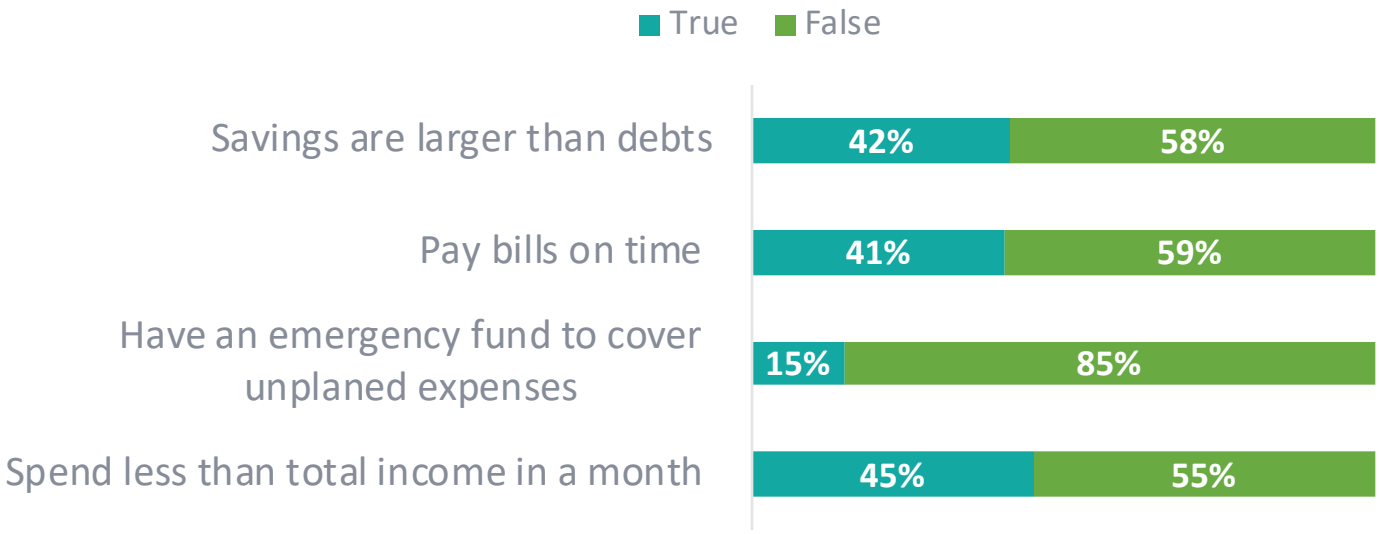


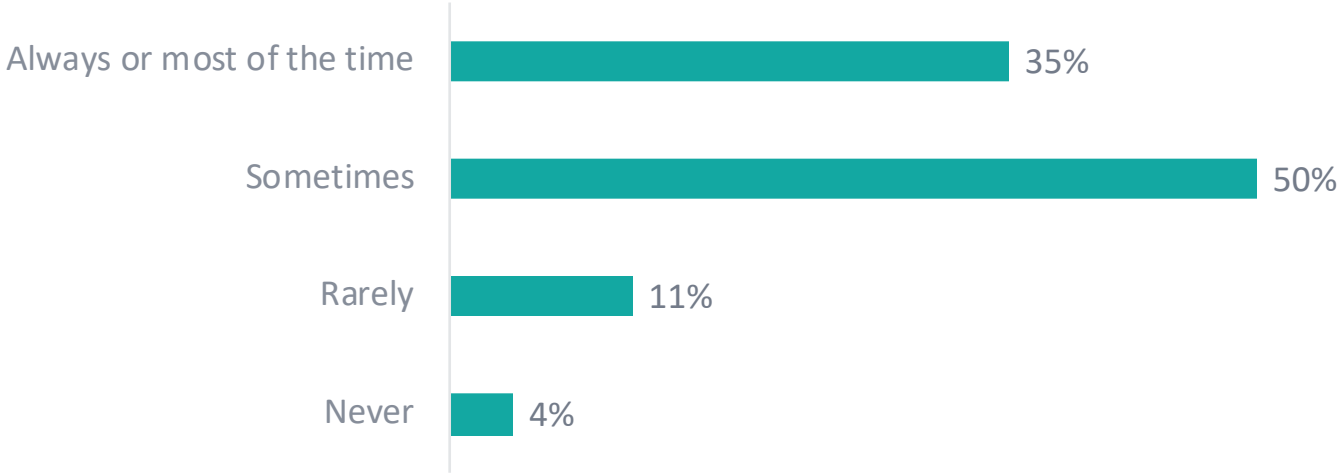
More than 7 in ten need assistance to read and understand

		Overall	Male	Female	18-30 Years	31+ Years
Ability to read	Respondent read fluently without any help	29%	18%	12%	10%	19%
	Respondent struggled to read	32%	17%	15%	11%	20%
	Respondent was unable to read	39%	15%	24%	10%	27%
Ability to understand	Respondent fully understood without any help	31%	19%	12%	9%	21%
	Respondent struggled to understand	32%	16%	16%	12%	20%
	Respondent was unable to understand	37%	14%	23%	10%	26%

N=1215

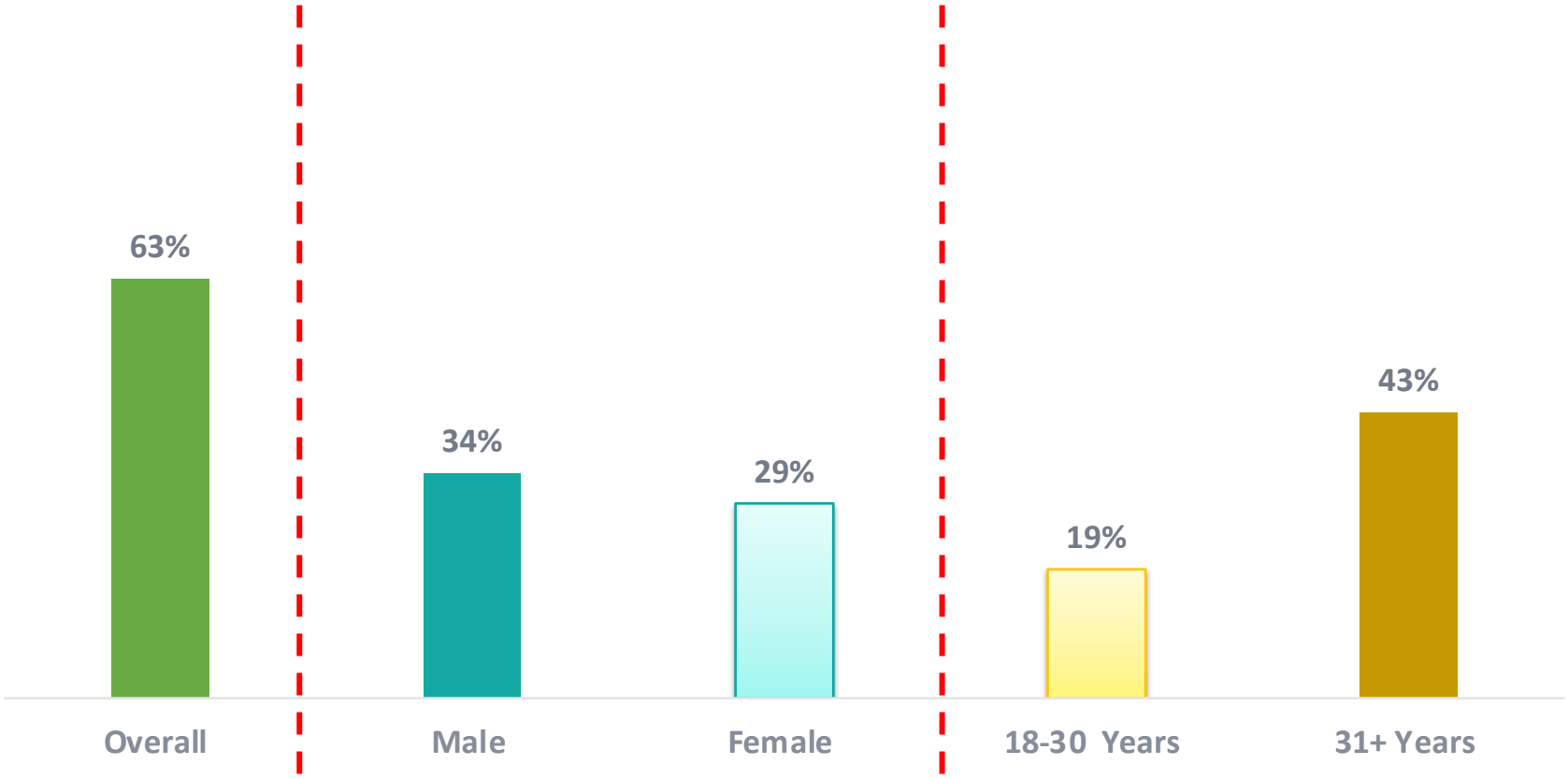
With the exception of funds for emergencies, Smallholder farmers exhibit fair Financial behavior, they make plans and try to stick to them





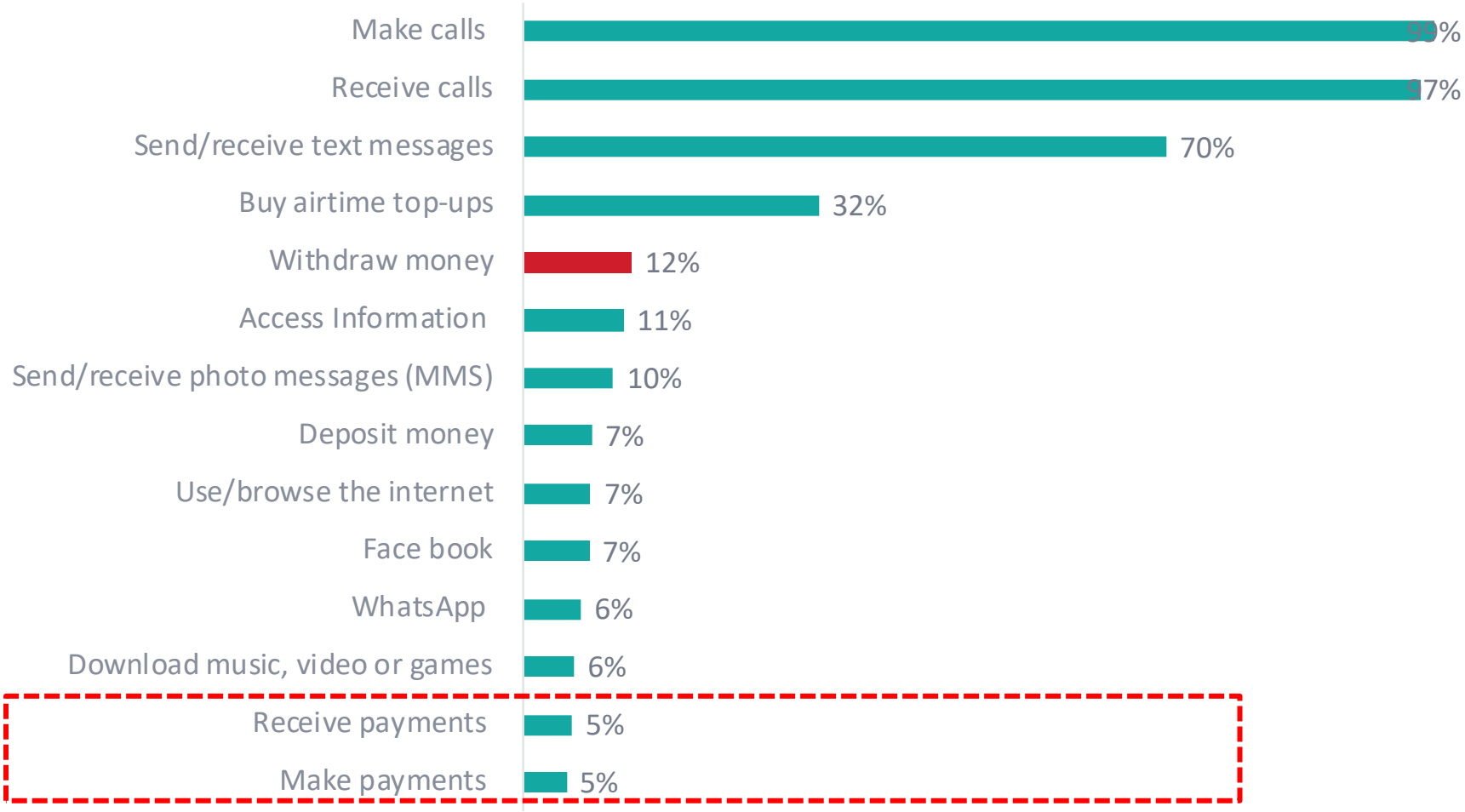
N=1215

More than six in 10 report to owning a working mobile phone, the youth exhibit low levels of ownership



N=1215

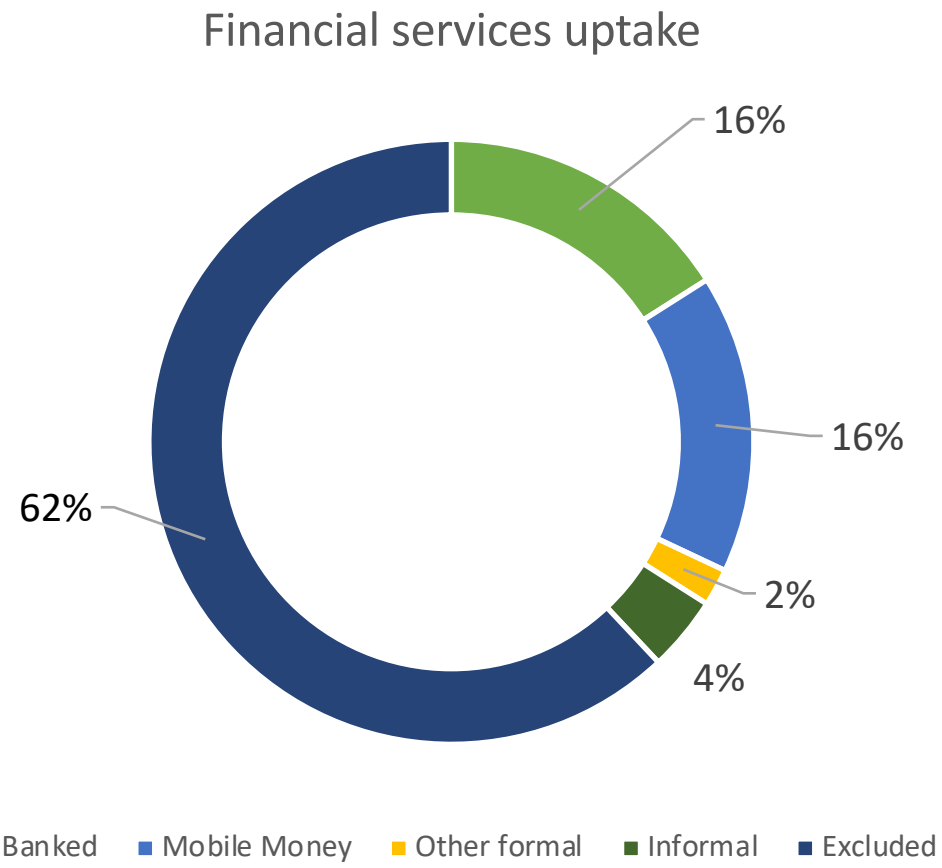
Farmers mainly use the phones for communication, with few farmers receiving and making payments using their phones



N=991

Financial Inclusion of Smallholder farmers

Six in 10 Smallholder farmers are financially excluded, Banks and Mobile money equally driving financial inclusion



Base: All SHFs

Defining Digital Financial Inclusion

1 Access to Savings

- Access savings account through ATM
- Access savings account through mobile banking
- Access savings account through a bank website/ Internet banking
- Access savings account through mobile money

2 Access to Credit

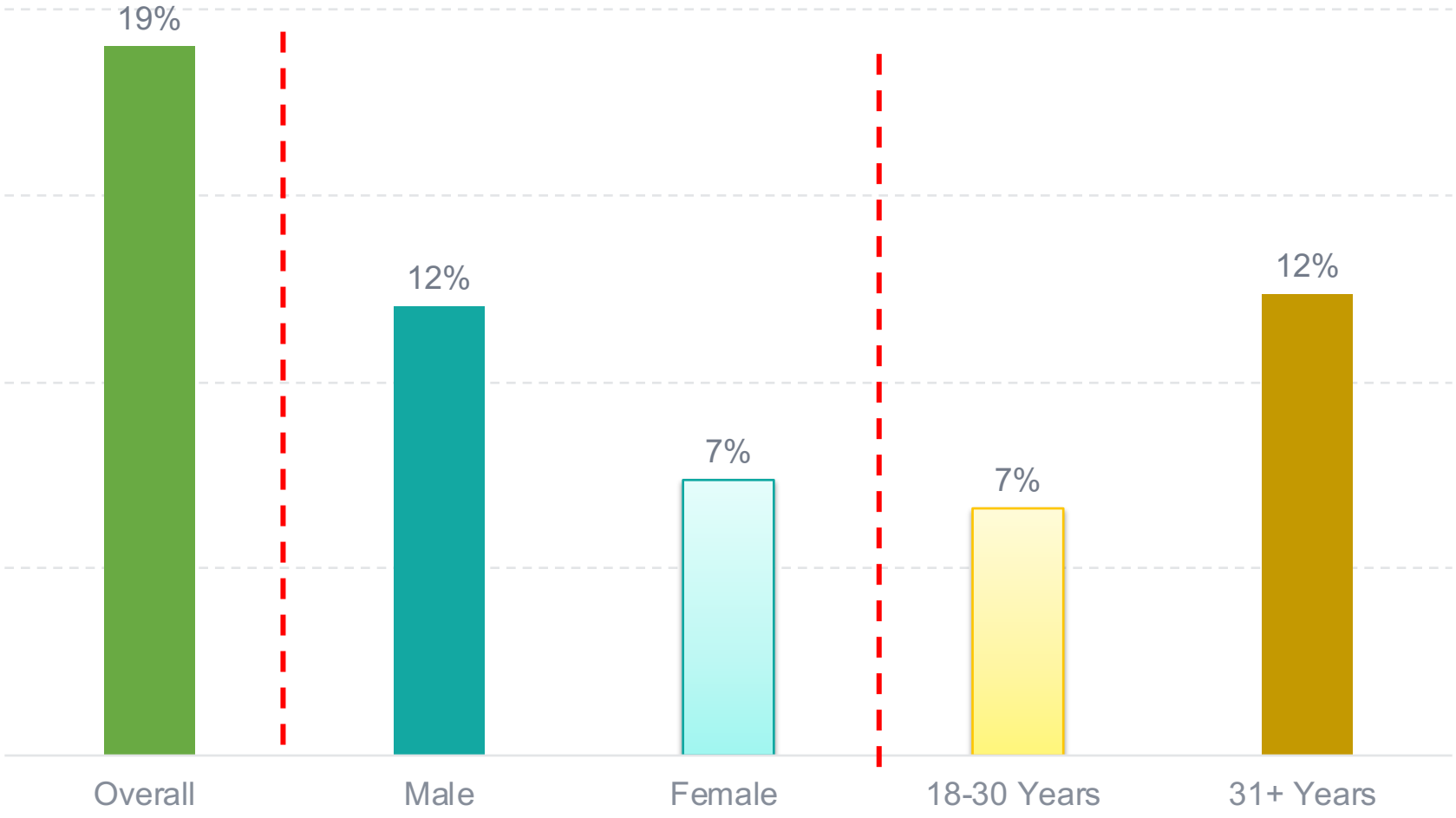
- Loan disbursed through EFT
- Loan disbursed through Mobile money
- Loan repayment through EFT
- Loan repayment through mobile money

3 Remittances

- Sent money in the last 12 months using mobile money

Fulfillment of any of the above criteria was considered in identifying respondents who are Digitally Financially Included

19% of the interviewed farmers are Digitally Included



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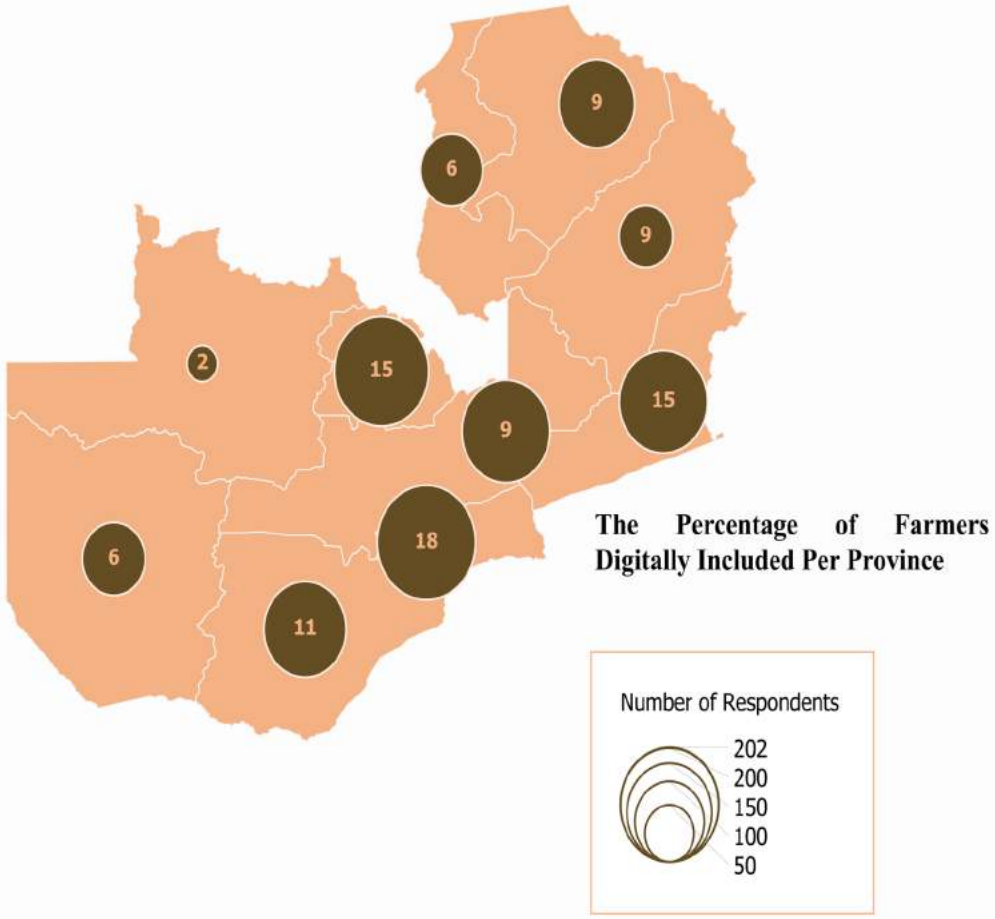
Distribution of Digitally Included Farmers



- Lusaka province recorded the highest number of farmers who are digitally included
- In Zambia, SHFs of all age groups have similar mobile money uptake.
- Maize is the main crop grown in all the provinces.
- A high percentage of the digitally included farmers use ATM to access their savings accounts

Mobile money readiness Index, We find that despite higher mobile phone ownership likelihood, Zambia's SHFs score is low in terms of the mobile money readiness index.

1) Mobile phone ownership

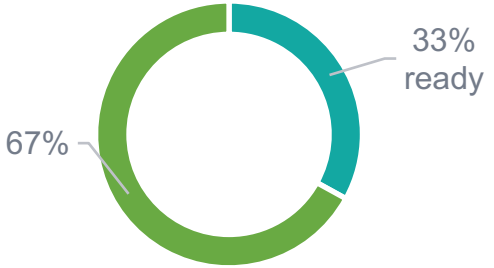
2) Literacy

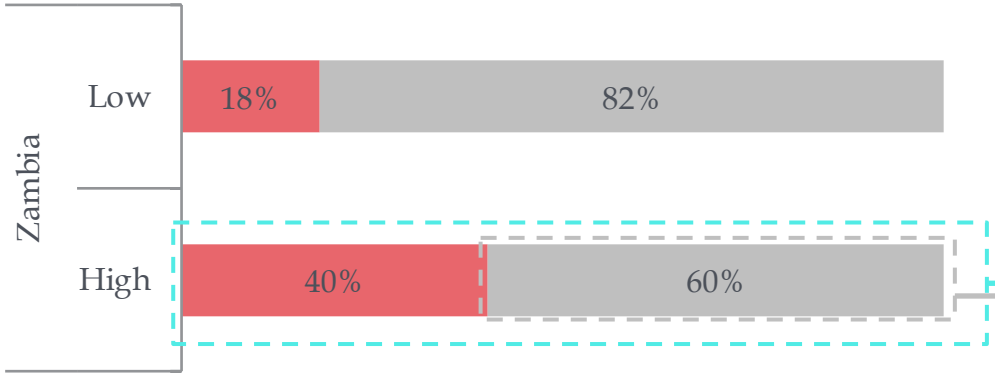
3) Numeracy

4) Smart or featured phone

5) Access to internet

Next we apply Ward's Linkage clustering method to segment the sample into two groups:

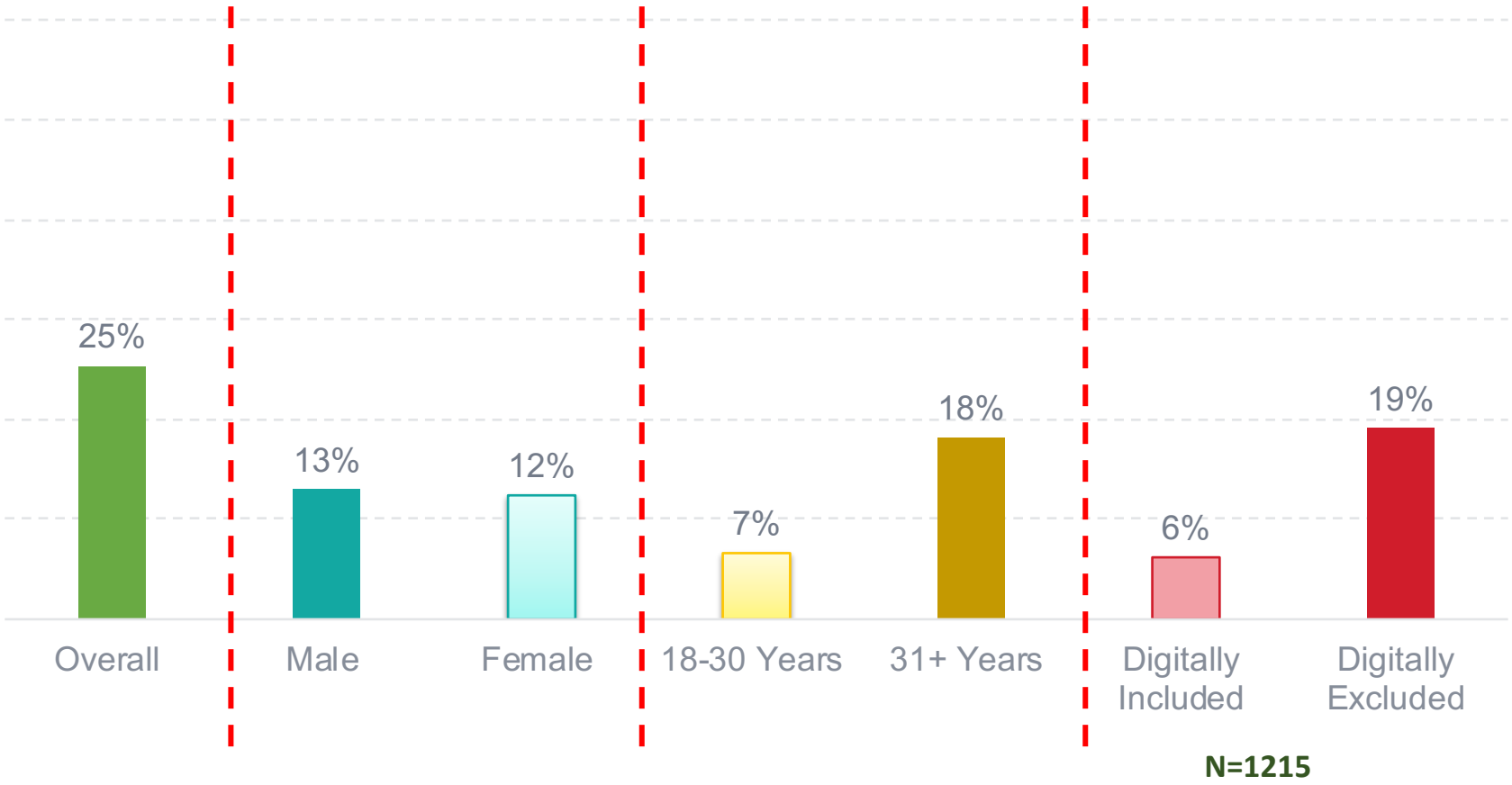




Population size of SHFs with high index values	**2,347,790**
Population size of SHFs with high values that do not take-up MM	**1,408,674**

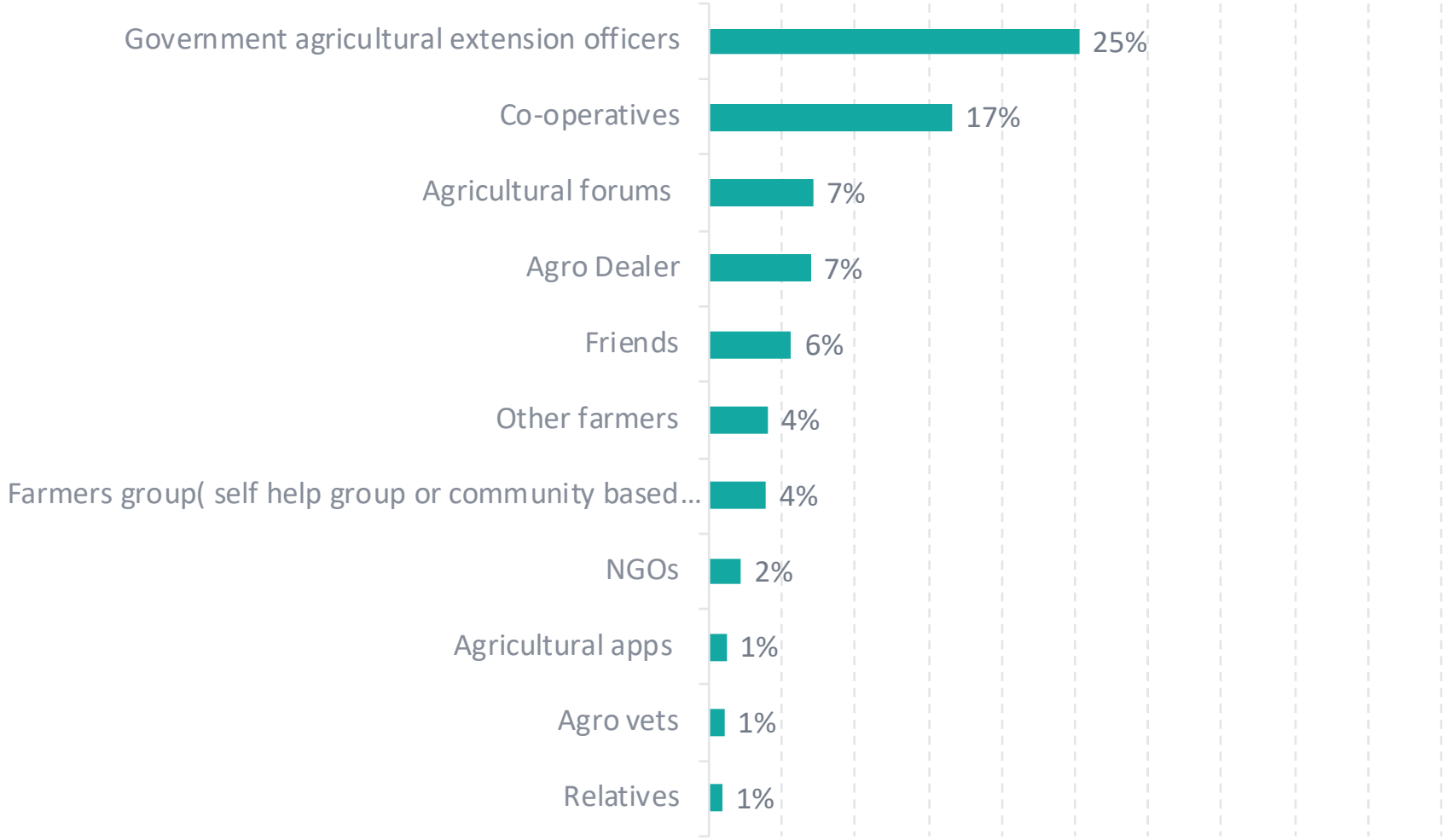
Agricultural Advisory Services

25% of smallholder farmers have access to Agricultural advisory services



- More farmers in Lusaka Province have access to agricultural advisory services as compared to other provinces

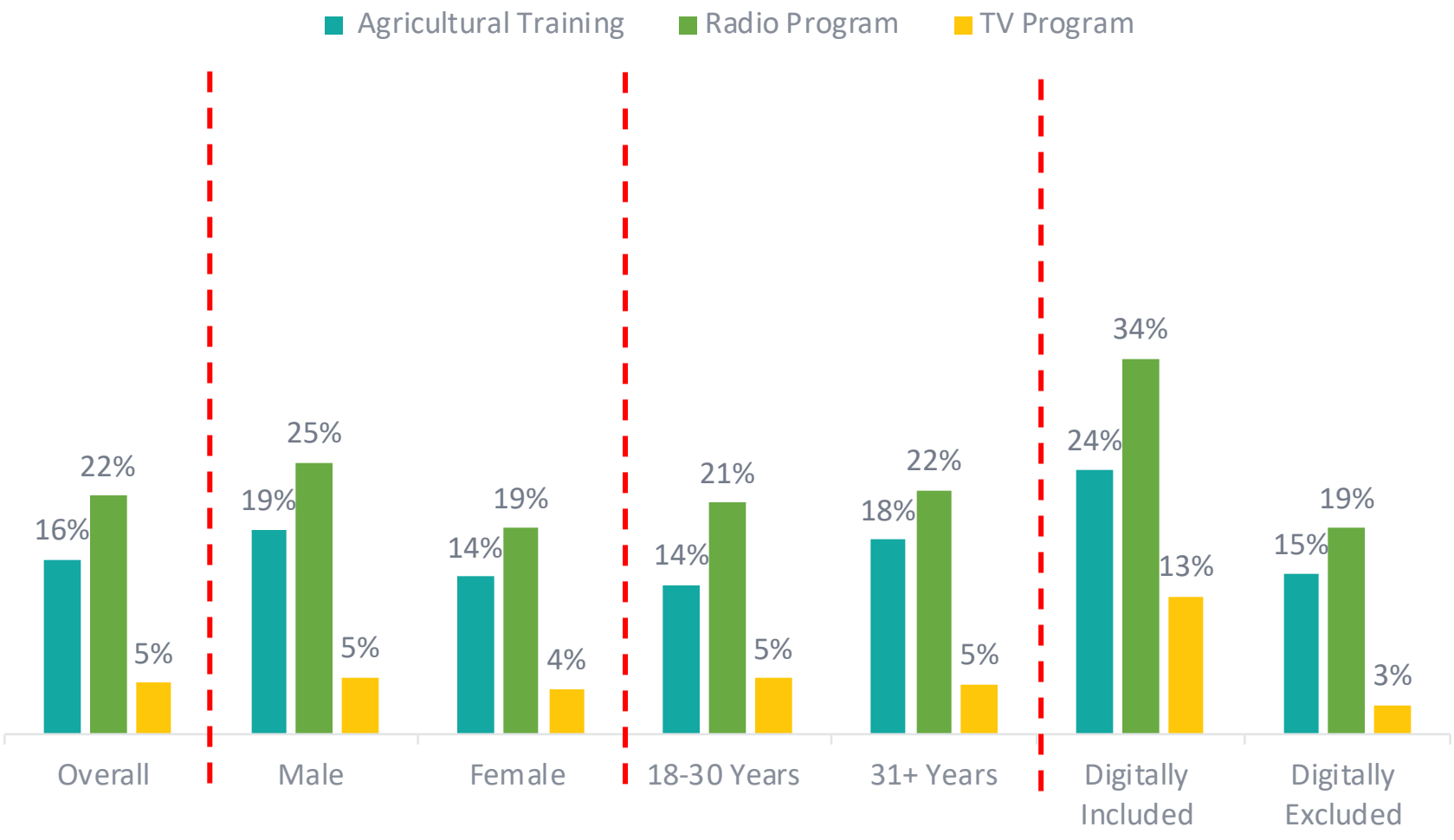
Government Agricultural Extension officers are the primary source of Agricultural advise to farmers



- Farmers in Copperbelt and Muchinga tend to trust co-operatives more than Government agricultural extension officers for advisory servicers

N=304

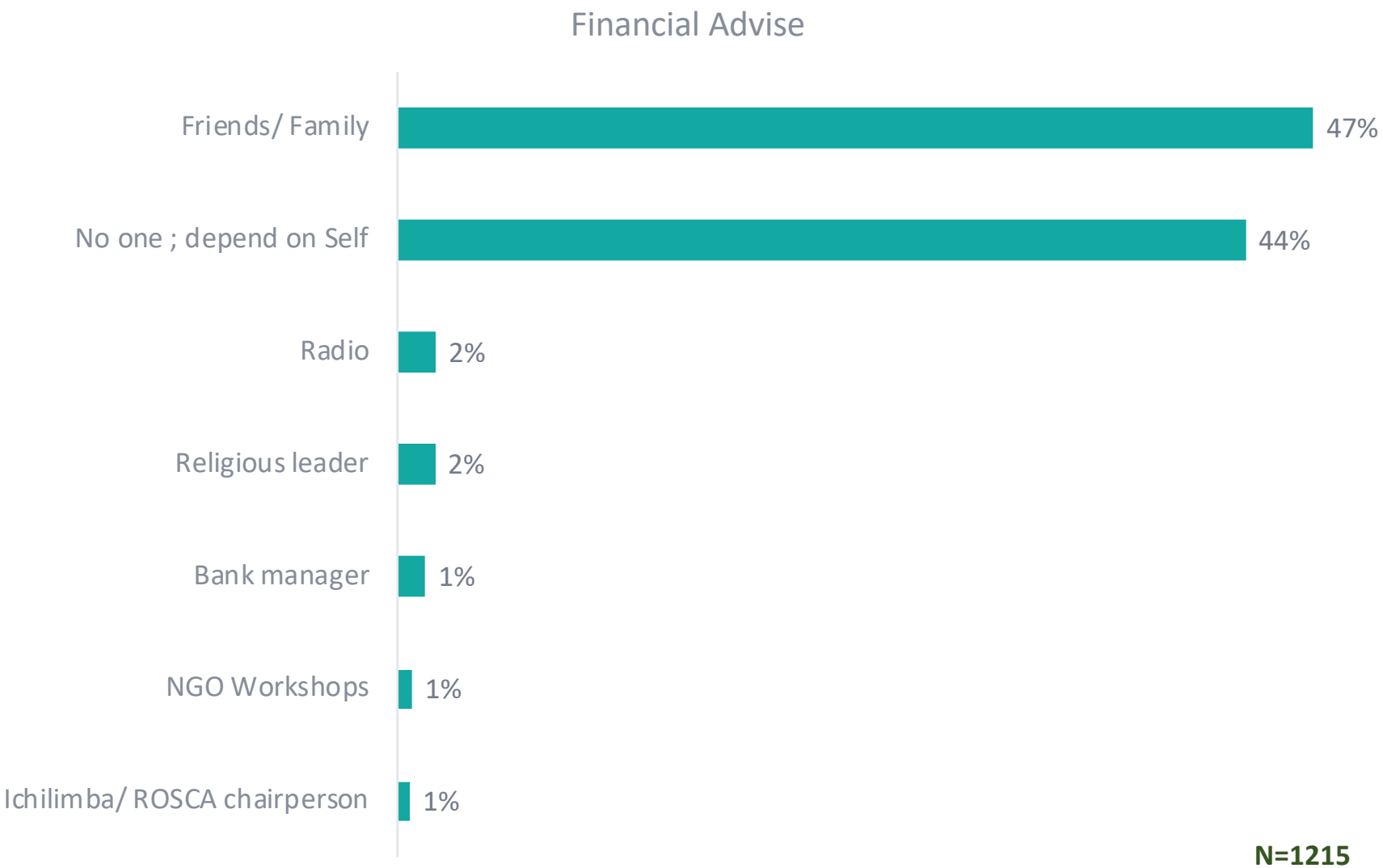
There is a high prevalence for Radio among smallholder farmers, although not considered as important source for advice



N=1215

Financial Services

Friends and family are trusted most as a source of financial advise



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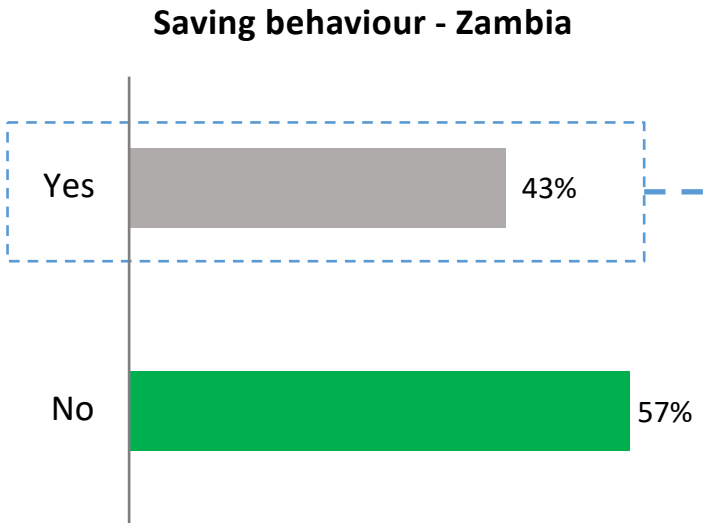
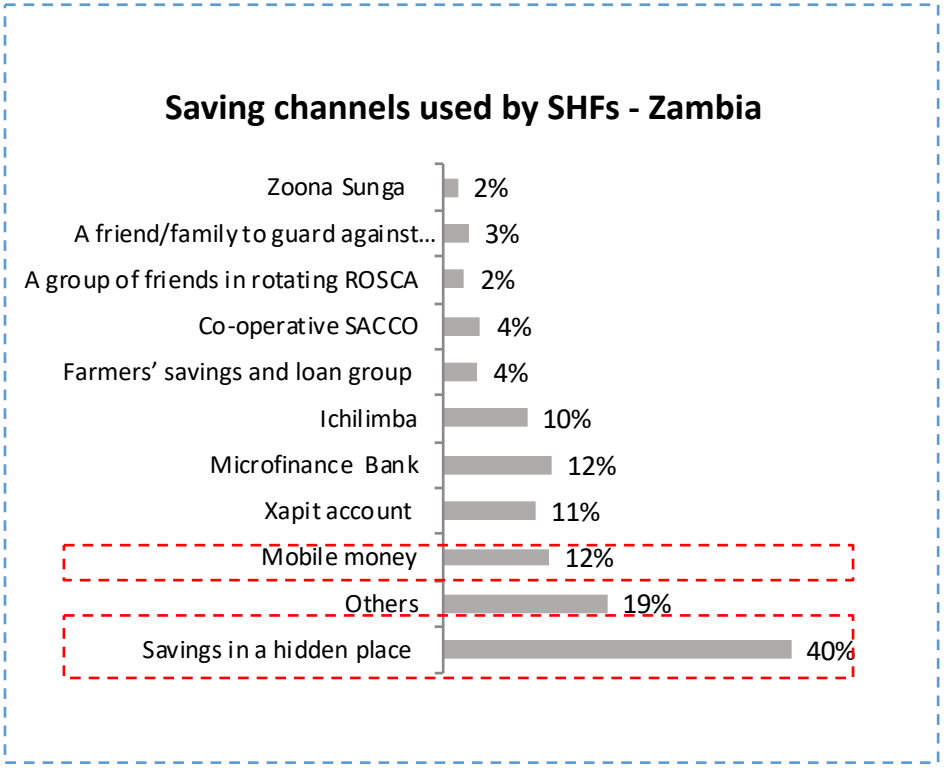
The most common way of saving for SHFs in Zambia is savings money in a hidden place, at home. Saving in Mobile money is relatively high considering the overall low uptake of across SHFs in Zambia.





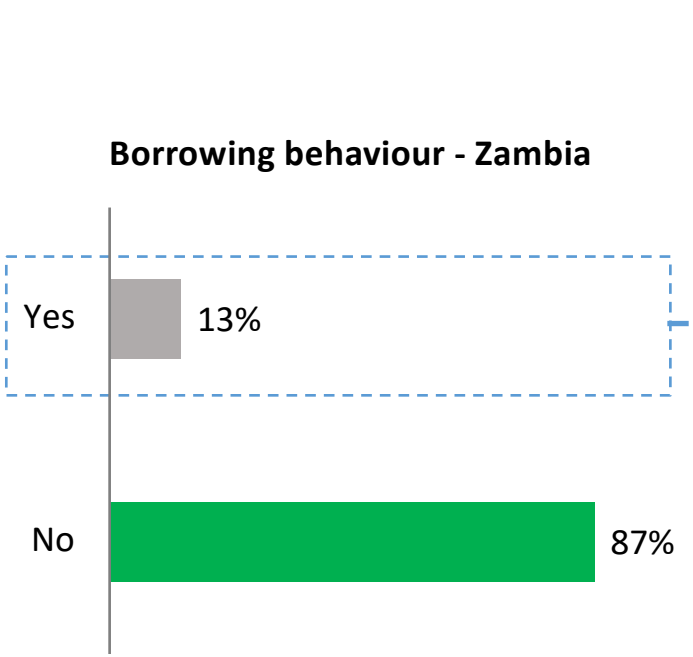
Base: SHFs who save

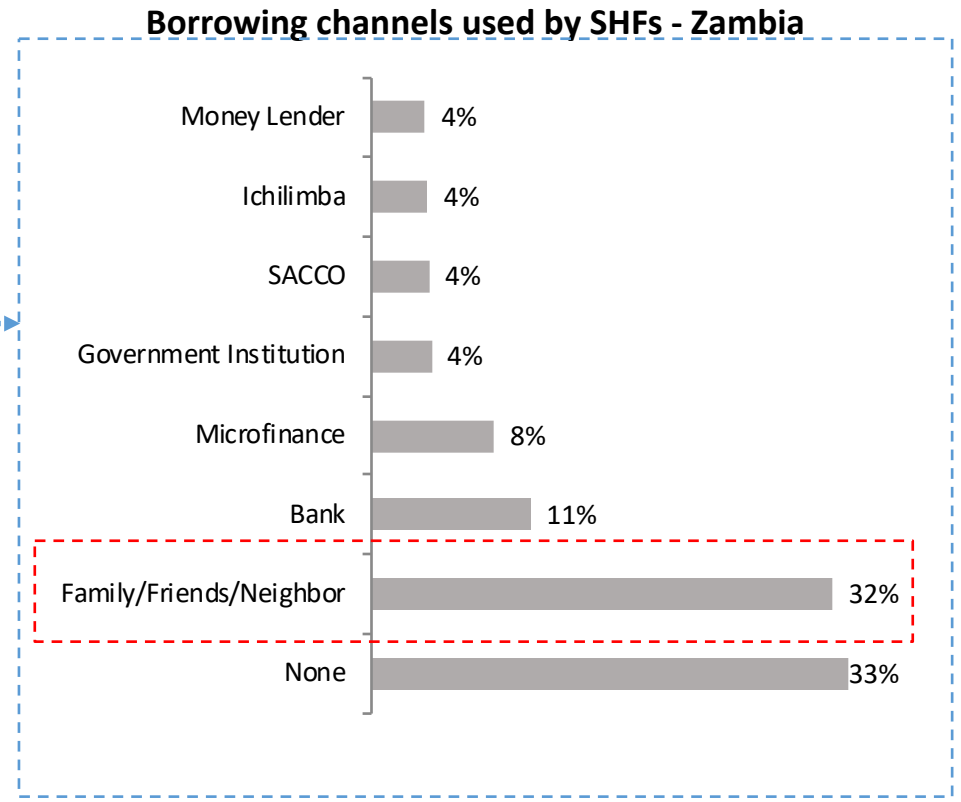
Lack of additional income and lack of information are the main barriers to saving

Barriers	Male	Female	18-30 Years	31+ Years	Digitally Included	Digitally Excluded
Lack of additional income for saving	59%	62%	68%	57%	52%	61%
Lack of information about saving products	24%	23%	19%	25%	22%	24%
Lack of useful saving products	8%	8%	7%	8%	10%	8%
Saving institutions not accessible	6%	4%	6%	4%	5%	5%
Saving products available are not affordable	5%	2%	2%	4%	3%	3%
Access to savings	3%	2%	1%	3%	7%	2%

N=729

More than one in 10 of SHFs in Zambia report they borrow money. Of those who do, 33% do not indicate a source and 32% borrow from family and friends.





Base: SHFs who borrow

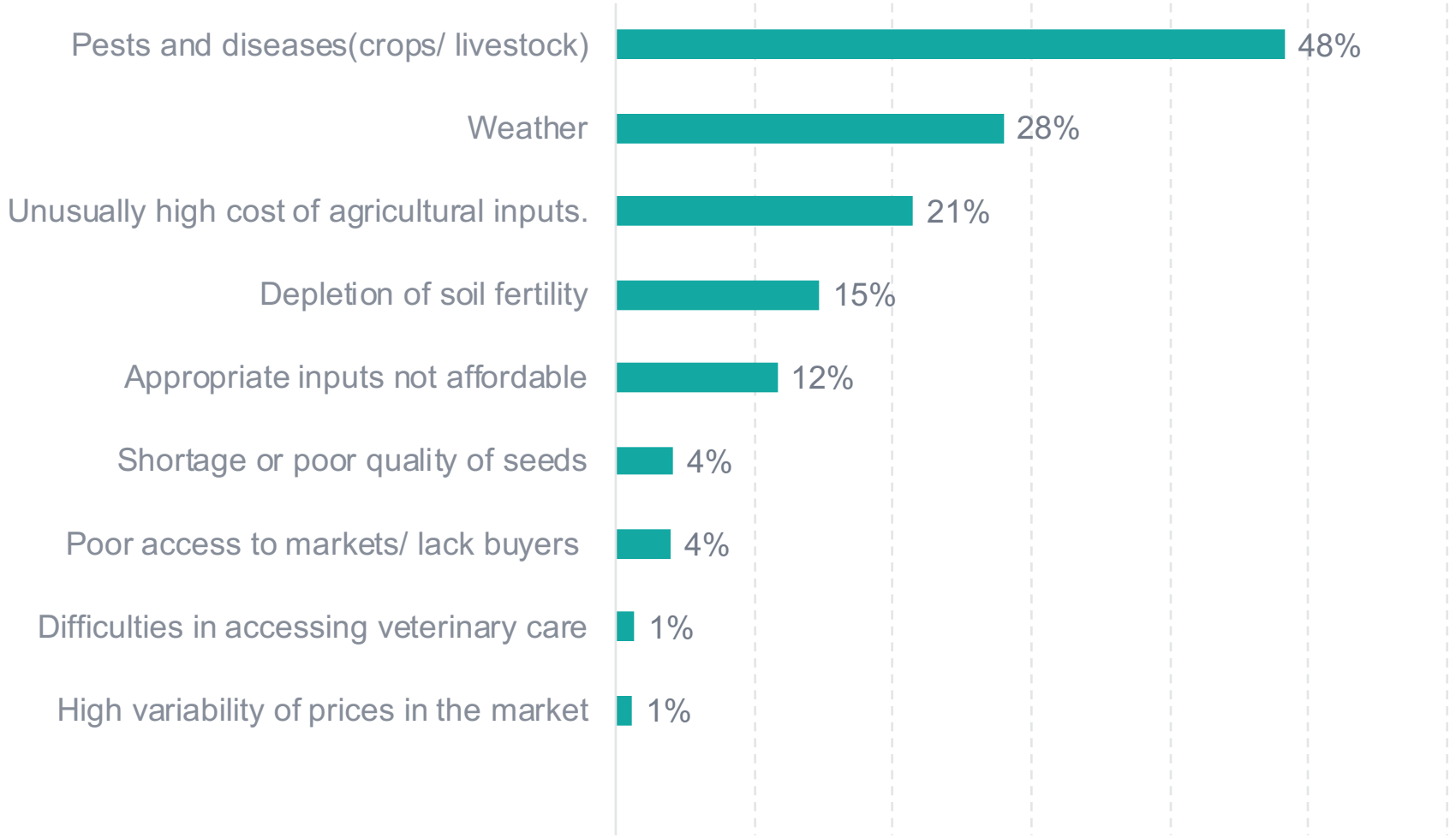
High interest rates and inaccessibility of loan institutions are the main barriers to use of credit

Barriers	Male	Female	18-30 Years	31+ Years	Digitally Included	Digitally Excluded
High Interest rates	34%	34%	40%	32%	39%	33%
Loan institutions are not accessible	32%	23%	23%	30%	23%	28%
Lack of proper information about credit facilities	25%	17%	20%	22%	15%	22%
Lack of appropriate credit products	14%	10%	11%	12%	9%	12%
Scared of ways of Paying the loan	6%	9%	7%	8%	9%	7%
No stable income to repay	3%	4%	2%	4%	3%	4%
Taking loan is against my religious faith	2%	2%	1%	2%	3%	2%
Not interested	1%	2%	2%	2%	3%	1%

More than eight in 10 of either disbursements or payment is done in cash

N=1057

Pests, Diseases and changing weather conditions are the main events affecting Smallholder farmers in Zambia



N=1215

Majority of those using own savings as coping strategies are the digitally included farmers

	Male	Female	18-30 Years	31+ Years	Digitally Included	Digitally Excluded
Did not do anything	38%	38%	47%	34%	31%	40%
Depend on own savings	22%	20%	18%	23%	32%	18%
Go to friends/Family	16%	14%	14%	15%	14%	15%
Look for money	12%	12%	11%	12%	12%	12%
Go to National Government Agency	9%	13%	10%	12%	10%	12%
Borrowed money	3%	4%	4%	3%	3%	3%

Only **2%** of farmers have insurance, the risks covered are not agricultural related, mainly driven by national insurance covers. **More than seven in 10** sight lack of understanding of insurance as the main reason they have not yet adopted it ac a coping strategy.

N=1215

Discussion

Zambia shows a high rate of financial exclusion among farmers, what type of data/information do you need to make decisions? What are the sources that you go to get the information? In what form is the information? What form would you prefer to get the information?

While addressing exclusion, is mobile money the solution? is there space to also address inequality in exclusion? How can we take advantage of the fact that more than one in 10 mention having savings in Mobile money?

Can we address access to financial services in isolation, can focusing on increasing productivity and access to information be change agents? How can we increase access to information?

Farmers are not benefiting from Agricultural insurance to mitigate risk, are there products available, are they aware of the products? What can be used to inform product development?

N=1215


Thank You!
MERCY CORPS