

CGAP Smallholder Household Surveys



User Guide to the Data Set for Uganda, 2015

February 2016



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Background information

CGAP and financial innovation for smallholder households

CGAP has been working to build the evidence base on smallholder households as a first step in improving smallholders access to and uptake of a range of financial solutions. To address the dearth of relevant data to guide financial inclusions interventions that target smallholder households, CGAP launched two major demand-side research initiatives with smallholder households to better understand their financial lives, agricultural activities, and household livelihood strategies: (i) financial diaries with smallholder households (“Smallholder Diaries”)¹ and (ii) nationally representative household surveys and segmentations of the smallholder sector.²

These are two complementary research methods. The national surveys, which administer a household questionnaire to a nationally representative sample of about 3,000 smallholder households in each country, are wide, while the Smallholder Diaries are deep, with a year of very detailed data collection on all income sources, expenditures, and shocks with approximately 270 smallholder households across three countries. Together, these two lenses on smallholder households detail the granularity of the smallholder sector and identify distinct groups of agricultural households and their needs. The results also point to opportunities for service providers to improve financial tools for each segment and offer market information that informs the business case for doing so.

Other survey research has included smallholder households in the sample but tends to explore either their financial or agricultural lives, but not both.

- **The Living Standards Measurement Study-Integrated Surveys on Agriculture (LSMS-ISA)** are designed to improve the understanding of development in Africa with a particular focus on agriculture and the linkages between farm and nonfarm activities. Its design does not necessarily result in a subsample of smallholder farmers that is representative of the population of smallholder farmers in a country (although most of the participants in the survey might be smallholder farmers) and though the questionnaire generally asks about access to credit, it does not provide a thorough understanding of the access to or use of a wider spectrum of financial services or delve deeply into smallholder attitudes and financial decision-making.
- **The FinScope consumer survey** developed by FinMark Trust is designed to provide insights into how adults in a given country source income and manage their financial lives and to explore attitudes and perceptions regarding financial products and services. It is designed to be representative of the adult population of a country and does not focus only on those engaged in agriculture, thus it provides only a broad sense of the attributes of adults that generate an income through agricultural activities, and is not sufficient to facilitate targeted interventions in financing smallholder households.
- **The Agricultural Financial Markets Scoping (AgFiMS) diagnostic** on financial services in the agricultural sector includes a comprehensive, nationally representative survey tool focusing on potentially commercially viable agricultural enterprises, including producers, processors

¹ CGAP retained the services of Bankable Frontier Associates (BFA) to manage the Smallholder Diaries. For in-country data collection, BFA worked with International Capital Corporation in Mozambique, Digital Divide Data in Tanzania, and RCons in Pakistan. Data are available from the World Bank Group Microdata Library.

² CGAP retained the services of InterMedia to manage the national surveys of smallholder households, and it worked with Ipsos in Mozambique and Uganda for in-country data collection. National surveys and segmentations of the smallholder sector are also underway in Tanzania, Côte d’Ivoire, and Bangladesh, and results and data from all five countries will be published in 2016.

and service providers, which orients the survey sample toward a focus on the top-end of the agribusiness market (in terms of annual turnover) and therefore excludes the majority of smallholder farmers.

Smallholder families are not only agricultural producers, they are also consumers who have diverse financial needs. Most smallholder families earn income from a variety of nonagricultural sources, including the sale of labor and off-farm enterprising. Consequently, as CGAP explores financial innovation for smallholder families, CGAP proposes to adopt a holistic approach to understanding the wide array of challenging financial services needs of these households.

Financial solutions for agriculture. Meeting the financial needs of smallholder agricultural activities is challenging. Agriculture is by nature seasonal, with time passing between cash outflows and inflows. Farming depends on the quality of the resource base, it is vulnerable to pests and spoilage, and it is exposed to the volatility of weather and prices. Financial services providers face risk and liquidity management challenges because farmers in the same area generally borrow at the same time and often do the same activities, and therefore, they are often exposed to the same risks. Financial services providers need to understand both agriculture and finance—and they often require greater incentives to work in remote rural areas, where sparse populations and weak infrastructure result in higher transaction costs. As a result, traditional microfinance has not reached the vast majority of smallholder farmers. Recent advances based on supply chain finance have primarily benefitted the relatively small number of smallholder farmers in tight value-chains with agribusinesses, marketing companies, or processors.

Meeting other financial needs. The irregular cash flows and risks of agriculture activities further complicate an already complex system of household cash management where agriculture is not always the only or most important source of income. Consequently, CGAP will also focus on identifying and meeting those financial needs of smallholder families that are not directly related to agricultural production, including off-farm enterprising and household consumption. While these needs are not unique to smallholder families, they often are uniquely impacted by family reliance on agricultural activities. For example, in smallholder communities in parts of western Kenya, school fees are due soon after the maize crop is harvested, forcing parents to sell their produce when the market is still flooded and prices are low. Ironically, the financial product these smallholder families may need most is not tied to agriculture at all, but instead to education: an educational loan that would allow them to store their harvest until market prices increase.

Segmentation. Segmentation of smallholder families can help differentiate the demand for financial services among these households and can help develop tailored solutions. Drawing from the wide body of existing research and experience, in 2013 CGAP proposed a global segmentation framework based on what they grow, how they engage with markets as buyers and/or sellers, and how those markets are organized.³ Not all poor smallholder families fit clearly within only one of the three segments. But segmentation does allow a greater understanding of the fact that different segments have different financial needs, and that this variety in demand cannot be met by the same suite of financial products, terms of service, or service providers.

- **Noncommercial smallholder families.** The approximately 300 million noncommercial smallholder families are generally considered subsistence farmers, and they are among the poorest households. They typically farm to contribute to their own sustenance and survival, not as a vocation or strategic business choice. Agricultural production is concentrated in staple crops (e.g., cereals, roots, and tubers) that are consumed by the household. Irregular, small amounts of surplus might be sold in an informal, local market, and there is limited or no connection to a structured value chain. Noncommercial smallholder families are generally

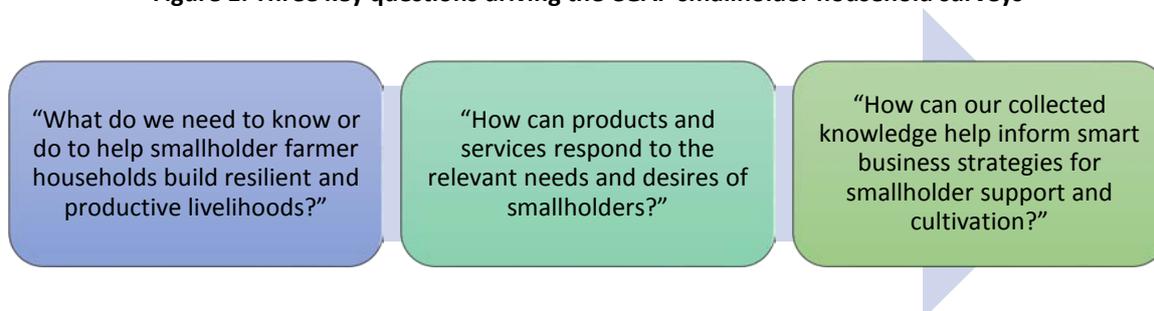
³ See Robert Peck Christen and Jamie Anderson. 2013. "Segmentation of Smallholder Households: Meeting the Range of Financial Needs in Agricultural Families." Focus Note 85. Washington, D.C.: CGAP, April.

net buyers of food (supplementing their own production) and sellers of labor, which limits their ability to produce. Very few purchased inputs and little mechanization are used, and outputs are relatively low. Access to land, technology, education, markets, and information about weather or agricultural production are very limited, leaving the household highly vulnerable to income and other shocks. These households, which are among the poorest, rely on informal financial mechanisms and tools (e.g., local savings and loan groups) for basic financial services.

- **Commercial smallholder households in loose value chains.** The approximately 165 million commercial smallholder households in loose value chains have access to somewhat more land and generate some level of surplus to sell in a market. However, lack of storage often forces these families to sell when prices are low only to repurchase the same crop for consumption later when prices are higher. Their crop mix tends to focus on staples, which they sell through loosely structured markets and value chains, but it may also include some higher value cash crops (e.g., sugar, tea, coffee, oilseeds, fibers, energy crops). Commercial smallholder households in loose value chains have limited access to inputs, information about weather, markets, and prices, but because they have some access to more effective agricultural practices and financial services, they are in a relatively more resilient position than noncommercial smallholder households.
- **Commercial smallholder households in tight value chains.** The approximately 35 million commercial smallholder households in tight value chains, broadly speaking, have access to at least two hectares of land and approach farming as a business—growing crops that generate a reliable output to sell in local or regional markets and/or through highly structured value chains. Because of their relationship with these relatively more organized value chains, farmers in this segment have access to improved seeds, inputs, agricultural and weather information, finance, and secure markets and prices. Their crop mix emphasizes higher value crops but is likely to also include staple crops. In terms of access to finance, they interact with a relatively wider range of financial services from both informal and formal financial service providers than do the other two segments.

Building on this global segmentation framework, CGAP sought to explore in more detail the financial and agricultural lives of smallholder households in Uganda, and began a comprehensive attitudinal and behavioral research program in January 2015. The research project, consisting of qualitative research in the form of focus groups, a survey with an accompanying household listing, and a segmentation, sought to answer three key questions.

Figure 1. Three key questions driving the CGAP smallholder household surveys



Definition and focus of the sample in the survey

The objectives of the Smallholder Household Survey in Uganda were to:

- Generate a clear picture of the smallholder sector at the national level, including household demographics, agricultural profile, and poverty status and market relationships;

- Segment smallholder households in Uganda according to the most compelling variables that emerge;
- Characterize the demand for financial services in each segment, focusing on customer needs, attitudes and perceptions related to both agricultural and financial services; and,
- Detail how the financial needs of each segment are currently met, with both informal and formal services, and where there may be promising opportunities to add value.

Identifying Target Group of Smallholder Households. Discussions with consultants and stakeholders in sub-Saharan Africa and extensive desk research concluded that there is no clear agreement on the characteristics that define a smallholder.⁴ As a result of both of these lines of investigation, a matrix was developed of each of the key criteria that could be used to distinguish smallholder households from other agricultural households.

Table 1. Key criteria in defining smallholder households

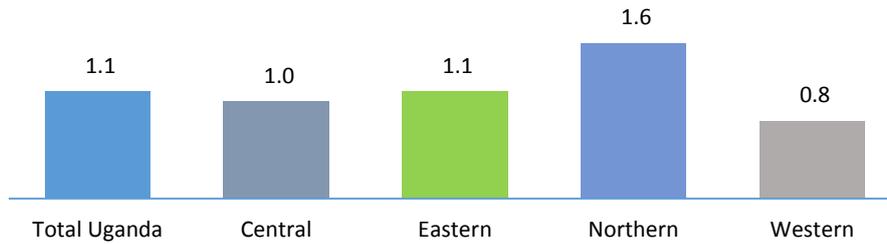
<i>Key Criteria</i>	<i>Considerations</i>
Market orientation	Subsistence vs. market-oriented vs. hybrid
Landholding size	Threshold
Labor input	Family versus hired
Income	Shared income from farming, multiple sources
Farming system	Technology, irrigation
Farm management responsibility	Owner, influence over how to farm
Capacity	Storage, management, administration
Legal aspects	Formal versus informal
Level of organization	Member of group – producer, supply chain, service provider

The desk research also found a range of definition across countries, reflecting the variations in their agricultural sectors; some governments define smallholders solely by their landholding size. The range differed greatly across Asian and African countries—from 2.5 hectares in India up to 46 hectares in Malaysia. In Uganda, research from the Uganda Bureau of Statistics Census of Agriculture pointed to smaller average farm sizes, which reinforced the justification of our target group further. In Uganda, the average farm size ranged between one and two hectares and approximately three-quarters of all agricultural holdings managed less than two hectares.⁵

⁴ Defining Smallholders: Suggestions for a RSB smallholder definitions; Roundtable on Sustainable Biomaterials; October 2013

⁵ Census of Agriculture; Uganda Bureau of Statistics, Ministry of Agriculture, Animal Industry and Fisheries, 2008/2009

Figure 2. Average size of agricultural holdings in Uganda



InterMedia proceeded to develop a high water-mark for identifying smallholder households to be as inclusive as possible, without diluting or distorting the population representation. The identification measure used two key criteria—landholding size and livestock count—as the starting point for identifying the target group. There was also a desire to ensure that the essence of smallholder farmers was included, so a series of self-identifying perception questions were asked. This was to ensure that each smallholder household selected in the study viewed agriculture as a significant part of their household’s livelihood, income, or consumption.

Sample design

The smallholder household survey in Uganda is a nationally representative survey with a target sample size of 3,000 smallholder households. The sample was designed to provide reliable survey estimates at the national level and for the following administrative 4 regions: Central, Eastern, Northern, and Western regions. The Central region includes central metro (i.e., 4 municipalities surrounding Kampala), the parishes in Kampala with poultry activity but it excludes Kampala city which is entirely urban. The universe for the survey consists of smallholder households defined as households with the criteria outlined in Table 2.

Table 2. Criteria to identify the universe of smallholder households for the survey

Household with up to 5 hectares	AND	Agriculture provides a meaningful contribution to the household livelihood, income, or consumption
OR		
Farmers who have less than: 50 heads of cattle; or 100 goats/sheep/pigs; or 1,000 chickens		

Sampling frame

The sampling frame for the smallholder household survey is the list of enumeration areas (EAs) created for the 2014 Uganda National Population and Housing Census. Uganda is divided into 112 districts with each district comprised of counties/municipalities. Each county/municipality consists of sub-counties/town councils with each of them being further divided into parishes/wards and villages/cells.

For the 2014 population census, each village and cell was further divided into EAs. Information on the number of agricultural households at the EA level will be available in December 2015, and thus not on time for the smallholder survey. As a result, the sample allocation of the survey was based on the distribution of households per region and urban and rural according to the 2014 Census.

Sample allocation and selection

In order to take nonresponse into account, the target sample size was increased to 3,158 households assuming a household nonresponse rate of 5% observed in similar national households.

The total sample size was first allocated to the four regions proportionally to their number of households. Within each region, the resulting sample was then distributed to urban and rural areas proportionally to their size.

The sample for the smallholder survey is a stratified multistage sample. Stratification was achieved by separating each region into urban and rural areas. The urban/rural classification is based on the 2014 population census. Therefore, 8 strata were created and the sample was selected independently in each stratum. Prior to the sample selection, the sampling frame was sorted by the nine agricultural zones called Zardi (Zonal Agriculture Research Development Institute).

In the first stage, 216 EAs were selected as primary sampling units with probability proportional to size, the size being the number of households in the EAs. A household listing operation was carried out in all selected EAs to identify smallholder households according to the definition used in the survey, and to provide a frame for the selection of smallholder households to be included in the sample.

In the second stage, 15 smallholder households were selected in each EA with equal probability. Due to rounding, this yielded a total of 3,240 smallholder households.

In each selected household, a household questionnaire was administered to the head of the household, the spouse or any knowledgeable adult household member to collect information about household characteristics. A multiple respondent questionnaire was administered to all adult members in each selected household to collect information on their agricultural activities, financial behaviors and mobile money usage. In addition, in each selected household only one household member was selected using the Kish grid and was administered the single respondent questionnaire.

Table 3. CGAP Smallholder household survey in Uganda: Questionnaire sections, respondents, and content

Questionnaire section	Household respondent(s)	Sample size	Content
1) Household Survey	Head of the household, their spouse, or a knowledgeable adult	n = 2,870	Basic information on all household members (e.g., age, gender, education attainment, schooling status) Information about household assets and dwelling characteristics in order to derive poverty status
2) Multiple-Respondent Survey	All household members over 15 years old who contributed to the household income and/or participated in its agricultural activities	n = 5,517	Demographics (e.g., land size, crop and livestock, decision-making, associations and markets, financial behaviors) Agricultural activities (e.g., selling, trading, consuming crops, livestock, suppliers) Household economics (e.g., employment, income sources, expenses, shocks, borrowing, saving habits, investments)
3) Single-Respondent Survey	One randomly-selected adult in the household	n = 2,771	Agricultural activities (e.g., market relationships, storage, risk mitigation) Household economics (e.g., expense prioritization, insurance, financial outlook) Mobile phones (e.g., usage, access, ownership, desire and importance) Formal and informal financial tools (e.g., ownership, usage, access, importance, attitudes toward financial service providers)

Household listing

A household listing was carried in all selected EAs to identify smallholder households and provide a frame for the second stage of sampling. A manual describing the listing and mapping procedures was prepared and used for the training of the listing teams. The manual also included listing forms along with questions used to identify smallholder households according to the agreed definition for the survey. A script was developed to support household listing on smart phones.

Sampling weights

The sample for the smallholder household survey is not self-weighting, therefore sampling weights were calculated. The first component of the weights is the design weight based on the probability of selection for each stage of selection. The second component is the response rate at both household and individual levels.

The design weights for households were adjusted for nonresponse at the household level to produce adjusted household weights. Sampling weights for the multiple respondent data file were derived from adjusted household weights by applying to them non-response rates at the individual level. For the single respondent data file, the same process was applied after taking into account the subsampling done within the household.

Finally, household and individual sampling weights were normalized separately at the national level so the weighted number of cases equals the total sample size. The normalized sampling weights were attached to the different data files and used during analysis.

Sampling errors

The sample design for the smallholder household survey was a complex sample design featuring clustering, stratification and unequal probabilities of selection. For key survey estimates, sampling errors taking into account the design features were produced using either the SPSS Complex Sample module or STATA based on the Taylor series approximation method.

Questionnaire

Overview of the questionnaire and its three parts

After utilizing secondary research into the smallholder sector and discussions with stakeholders, the design process for the survey instrument began. This process involved defining the end goal of the research by:

- drawing from existing survey instruments;
- considering the objectives and needs of the project;
- accounting for stakeholder interests and feedback;
- learning from the ongoing financial diaries in country; and
- building from a series of focus groups conducted early on in the study.

Using these foundations, a framework for the survey instrument was developed to share with stakeholders and capture all the necessary elements of a smallholder household. The framework consisted of five main subject areas—demographics, household economics, agricultural practices, mobile phones, and financial services.

In order to capture the complexity inside smallholder households, the smallholder household survey was divided into three questionnaires: the household questionnaire, the multiple respondent questionnaire and the single respondent questionnaire. In addition to English, the questionnaires were translated into nine local languages: Lugishu, Luganda, Ateso, Lugbara, Runyakole, Lutooro, Ngakaaramojong, Langi, and Acholi.

The household questionnaire collected information on:

- Basic household members' individual characteristics (age, gender, education attainment, schooling status, relationship with the household head)
- Whether each household member contributes to the household income or participates in the household's agricultural activities. This information was later used to identify all household members eligible for the other two questionnaires.
- Household assets and dwelling characteristics

Both the multiple respondent and single respondent questionnaires collected information on:

- Agricultural practices: farm information such as size, crop types, livestock, decision-making, farming associations and markets
- Household economics: employment, income, expenses, shocks, borrowing and saving habits, and investments

In addition, the single respondent questionnaire collected information on:

- Mobile phones: attitudes toward phones, usage, access, ownership, desire and importance
- Financial services: attitudes towards financial products and services such as banking and mobile money, including ownership, usage, access and importance.

Following the finalization of questionnaires, a script was developed to support data collection on mobile phones. The script was tested and validated before its use in the field.

Figure 3. Questionnaire Framework

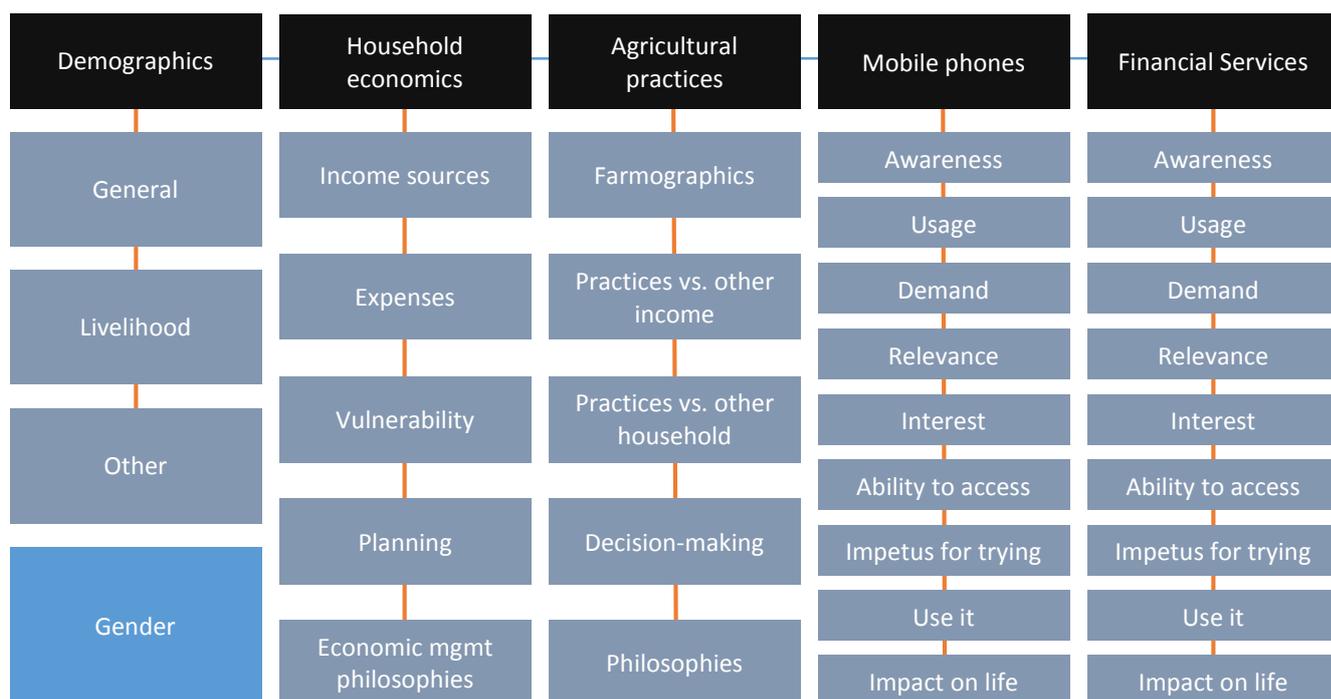
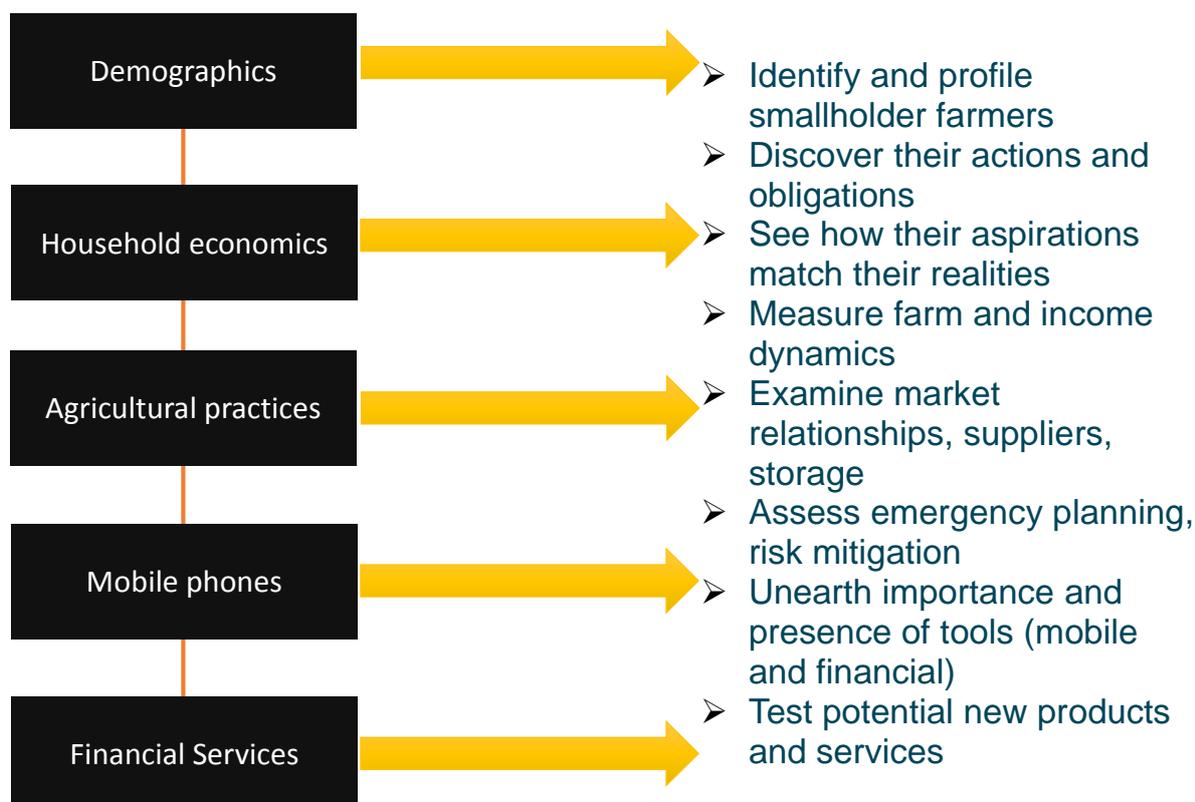


Figure 4. How to Leverage the Questionnaire Framework



Fieldwork

Training

IPSOS Uganda, InterMedia's local field partner, conducted the recruitment of interviewers and supervisors for the main fieldwork taking into account their language skills. Following the recruitment of 130 field staff, the training was conducted on 3–8 August 2015 in Kampala. Five independent field quality control staff directly hired by InterMedia also attended the training. The training consisted of instructions on interview techniques and field procedures, a detailed review of the survey questionnaires, mock interviews between participants in the classroom, and a field practice with real respondents in the areas outside the sampled EAs.

Dates

Data collection took place from 16 August 2015 to 7 September 2015.

Response rates

The below tables show household and individual response rates for the Uganda smallholder household survey.

Table 5. CGAP smallholder household survey in Uganda: Response rates

	Household Questionnaire						
	Central	Eastern	Northern	Western	Urban	Rural	Total
Household selected	865	806	635	887	672	2,521	3,193
Households occupied	817	791	618	875	639	2,462	3,101
Households interviewed	714	744	581	831	556	2,314	2,870
Household response rate	87.4%	94.1%	94.0%	95.0%	87.0%	94.0%	92.6%
	Multiple Respondent Questionnaire						
	Central	Eastern	Northern	Western	Urban	Rural	Total
Number eligible	1,417	1,691	1,189	1,596	1,116	4,777	5,893
Number of eligible interviewed	1,225	1,605	1,124	1,563	1,014	4,503	5,517
Response rate	86.5%	94.9%	94.5%	97.9%	90.9%	94.3%	93.6%
	Single Respondent Questionnaire						
	Central	Eastern	Northern	Western	Urban	Rural	Total
Number eligible	714	744	581	831	556	2,314	2,870
Number of eligible interviewed	662	724	563	823	525	2,246	2,771
Response rate	92.7%	97.3%	96.9%	99.0%	94.4%	97.1%	96.6%

Methods of data collection

Twenty six interviewing teams carried out data collection for the survey on mobile phones. Each team consisted of one supervisor and five interviewers. Four staff members from Intermedia's local field partner coordinated and supervised fieldwork activities in addition to the 5 independent quality control (QC) team hired by Intermedia. The QC team stayed with the survey teams during fieldwork to closely supervise and monitor them. Data collection took place from 16 August to 7 September 2015. During data collection, InterMedia received weekly partial data from the field which was analyzed for quality control and used to provide timely feedback to field staff.

Quality checks

IPSOS Uganda recruited 130 field that included interviewers and supervisors. In addition five independent field quality control staff were directly hired by InterMedia. Each team consisted of one supervisor and 4 - 5 interviewers. Four staff members from Intermedia's local field partner coordinated and supervised fieldwork activities and the independent QC team hired by Intermedia oversaw the overall quality function of data collection. The QC team stayed with the survey teams during fieldwork to closely supervise and monitor them.

Following the finalization of questionnaires, a script was developed using Dooblo to support data collection on smart phones. The script was thoroughly tested and validated before its use in the field.

The final data file was checked for inconsistencies and errors by InterMedia and corrections were made as necessary and where possible.

During data collection, InterMedia received a weekly partial SPSS data file from the field which was analyzed for quality control and used to provide timely feedback to field staff while they were still on the ground. The partial data files were also used to check and validate the structure of the data file.

The full data file was also checked for completeness, inconsistencies and errors by InterMedia and corrections were made as necessary and where possible.

Dataset

Location and access

The data set and accompanying user guide are available for public download at the World Bank Group Microdata Library.

CGAP Smallholder Household Survey in Uganda (2015)

**MANUAL FOR
MAPPING AND HOUSEHOLD LISTING**

February 2015

INTRODUCTION

This manual provides general guidelines for carrying out the household listing operation in the field along with the responsibilities of the listing staff, and the definition of terms used. It also describes the selection of households to be included in the survey.

DEFINITION OF KEY TERMS

The definitions of key terms used in this manual are provided below.

An **Enumeration Area (EA)** is the smallest geographical statistical unit created for a housing and population census. For example, an EA can be a city block, a village or part of a village, or a group of small villages. The EA should have well-defined boundaries identified on a map. The number of households per EA is generally small enough to be covered by one enumerator during the census. The size of the EAs is fairly uniform, although there is some variability in the number of households by EA. In some countries, the average size of EAs is different for urban and rural areas.

A **cluster** in the survey is the smallest geographical area comprised of a number of adjacent households. A cluster may correspond to an EA or a segment of a large EA with well-defined boundaries.

A **base map** is a reference map that describes the geographical location and boundaries of an EA.

A **location map** is a map produced during the household listing operation that shows the location of the cluster along with its boundaries. It also includes instructions on how to get to the cluster and any information that can be used to find the cluster and its boundaries.

A **sketch map** is a map produced during the household listing operation that shows all of the structures found in the cluster during the listing operation. It also contains features such as landmarks (river, roads), public buildings (e.g., park, school, or temple) and streets or roads, which helps the interviewer to find the selected households.

A **dwelling unit** is a room or a group of rooms normally intended as a place of residence for one household (e.g., a single house, an apartment, or a group of rooms in a house). However, a dwelling unit can also be shared by more than one household.

A **structure** is a free-standing building that can have one or more dwellings for residential or commercial use. Residential structures can have one or more dwelling units (e.g., a single house or an apartment building).

A **household** consists of a person or a group of related or unrelated persons, who live together in the same dwelling unit, who share common living arrangements, who acknowledge the same person as the household head, who eat together and are considered as one unit.

The **head of household** is defined as a usual resident member of the household who is acknowledged by the other members of the household as the household head.

Households are found in dwellings, dwellings in structures and structures in clusters.

In some cases, one may find a group of people living together in the same dwelling, but each person has separate eating arrangements and incomes. In such cases, each person constitutes a one-person household.

Collective living arrangements (sometimes also called institutional households) such as messes, hotels, residential hotels, rescue homes, homes for the elderly, orphanages, jails, army camps, workers' hostels and boarding schools are not considered as households and therefore, are excluded from the survey.

Note, however, that domestic servants and other workers living and eating in the same household should be included as household members.

Regardless, of precise definition and examples, there will be some difficult cases coming up and you should consult your supervisor.

RESPONSIBILITIES OF THE LISTING STAFF

The household listing operation will be carried out in each selected cluster by a household listing team prior to the main survey. Each team consists of two persons: one will work as the **mapper** while the other will be the **lister**. Supervisors will be overseeing teams, while the overall household listing operation will be monitored by a listing coordinator.

Responsibilities of the supervisor

- Obtain base maps for all clusters selected for the survey;
- Assign clusters to teams;
- Ensure that all listing materials (Manual for Mapping and Household Listing, mapping forms, and MDCs) are obtained before going to the field;
- Plan and organize fieldwork logistics (e.g., arranging for transport, identifying and contacting local officials and village elders in each cluster to inform them about the listing operation and to obtain their cooperation);
- Receive and review duly completed maps and ensure that they are safely stored at the central office;
- Ensure that each cluster has been fully covered and listed;
- Monitor and verify that the quality of work is acceptable.

Responsibilities of the listing team

- Identify the boundaries of the clusters;
- Draw a detailed sketch map showing the location of the cluster and of all the structures it contains;
- List all the structures and households in the cluster in a systematic manner;
- Complete all listing forms including Segmentation Form if required;
- Transfer all completed forms to the supervisor or to the central office;
- Communicate to the supervisor problems encountered in the field and follow his/her instructions.

The mapper and the lister should work together at the same time in the same area. They will first identify the cluster boundaries together, and then the mapper prepares the location and sketch map while the lister does the household listing. The sketch map and the household listing form must be prepared in tandem.

STEPS IN MAPPING AND HOUSEHOLD LISTING

The household listing operation involves three main steps: locating each cluster, preparing the location and sketch maps of each cluster, and the listing of all households found in each cluster. In some cases, segmentation is required and will be described later in this manual.

STEP 1: LOCATING THE CLUSTER

The supervisor will provide the listing team with a base map containing the cluster assigned to the team. Upon arrival in a cluster, the team should first tour the cluster to identify its boundaries. This should be done with the assistance of the local authorities where the cluster is located. During this first tour of the cluster, the listing team should determine an efficient route of travel for listing all structures in the cluster.

In most cases, the cluster boundaries are recognizable natural features such as streams or rivers, or features such as roads or railroads. However, in some cases such as in rural areas where the cluster boundaries may not be marked with visible features, particular attention should be paid to the information provided on the base map. In such cases, assistance from local authorities will be particularly helpful.

Following the identification of the cluster boundaries, the listing team will tour the cluster a second time to create the listing and draw the sketch map of the cluster. A sketch map is a detailed map of the cluster showing all its structures and features such as roads.

STEP 2: PREPARING LOCATION AND SKETCH MAPS

The mapping of the cluster and the listing of the households should be done in a systematic manner so that there are no omissions or duplications. The cluster should be divided into parts if possible, and a part can be a block of structures. The team should finish each block before going to the adjacent one. Within each block, start at one corner of the block and move clockwise around the block. In rural areas where structures are found in small groups, the team should work in one group at a time. In each group, start from the center and move clockwise around it.

Location map

During the first tour of the cluster, the mapper will:

1. First enter the identification information of the cluster on the Cluster Information Form. This information is provided by the supervisor.
2. Using the Location Map Form, the mapper will then prepare a location map of the cluster. This involves drawing a map that shows the location of the cluster along with its boundaries and the boundaries of the parts that comprise the cluster. This location map should include all instructions on how to get to the cluster and any information that can be used to find the cluster and its boundaries. An example of a location map can be found in the Examples section at the end of the document.

Sketch map

During the second tour of the cluster, using the Sketch Map Form, the mapper will draw a sketch map of all structures found in the cluster as follows:

1. Marking the starting point with a large 'X', identify on the map each structure by a small square at the spot where it is located in the cluster. Non-residential structures should be identified by their use (e.g., school, shop, or factory).
2. Number all structures in sequential order beginning with "1". Whenever there is a break in the numbering of structures (e.g., when moving from one block to another), use an arrow to indicate how the numbers proceed from one set of structures to another. Although it may be difficult to pinpoint the exact location of the structure on the map, even an approximate location is useful for finding the structure in the future.
3. Add to the sketch map landmarks, public buildings (e.g., park, school, or temple) and streets or roads. Sometimes it is useful to add to the sketch map landmarks that are found outside the cluster boundaries, if they are helpful in identifying other structures inside the cluster.
4. With permission, use the marker to write on the door or frame of the entrance to the structure the number that has been assigned to the structure on the sketch map. Note that this is the serial number of the structure that will be assigned on the household listing form. In order to distinguish the CGAP number from other numbers that may exist already on the door/frame of the structure, write CGAP in front of the structure number, for example CGAP/60 for structure number 60.
5. Ensure that all of the structures within the cluster boundaries are covered.
6. An example of a sketch map can be found in the Examples section at the end of the document.

The listing team should be careful to locate hidden structures. In some areas, structures have been built so haphazardly that they can easily be missed. If there is a pathway leading from the listed structure, check to see if the pathway goes to another structure. People living in the area may help in identifying any hidden structures.

STEP 3: LISTING OF HOUSEHOLDS

Using the Household Listing Form, the Lister will record all structures and households found in the cluster as follows.

First page:

1. Begin by entering the region name, locality name, and cluster number.
2. On the next row, enter the Mapper's name and ID number, Lister's name and ID number, and the Page number and total page count.
3. Leave blank the first two columns, which are reserved for office use.
4. **Column (1) [Serial number of structure]:** Record for each structure the same structure serial number that the Mapper enters on the Sketch Map Form.
5. **Column (2) [Address/description of structure]:** Provide the street address of the structure or any description of the structure that helps to locate it.
6. **Column (3) [Residence (Yes/No)]:** Indicate whether the structure is used for residential purposes (eating and sleeping) by circling **Y** for "Yes". In cases where a structure is used for commercial or other purposes, circle **N** for "No". Structures used for both residential and

commercial purposes (for example a combination of store and home), should be classified as residential (i.e., circle **Y** in Column 3). Make sure to list any dwelling unit found in a non-residential structure (for example, a guard living inside a factory or in a church). All structures must be listed, including vacant structures and structures under construction, as well as structures where the household members refuse to co-operate, or are not at home at the time of listing.

7. **Column (4)** [*Serial number of household in the structure*]: This is the serial number assigned to each household found in the structure. There can be more than one household in a structure. The first household in the structure will always have number "01". If there is a second household in the structure, then this household should be recorded on the next line, and "02" is recorded in Column 4. If the structure is an apartment building, assign one serial number to the entire structure (only one square with one number appears on the Sketch Map Form), but complete Columns 4 through 7 for each apartment in the building individually.
8. **Column (5)** [*Name of the Head of Household*]: Write the name of the head of the household. There can only be one head per household.
9. **Column (6)** [*Status of dwelling*]: Circle "1" if Occupied. If a dwelling is unoccupied, observations or information from neighbors will advise the appropriate code to circle. Under special circumstances where an unoccupied dwelling cannot be classified as Vacant "2" or with the household Temporarily Absent "3", and Other "6" should be circled and accompanied by the specifics of the situation in Column 7.
10. **Column (7)** [*Observations*]: Record any special information about the household or structure (e.g., non-residential structure, under construction, or household refusal). Then go to the second page.

Second page:

11. **Column (1)** [*Serial number of structure*]: Copy this information from the first page. This is the same structure serial number that the Mapper enters on the Sketch Map Form.
12. **Column (4)** [*Serial number of household in the structure*]: Copy this information from the first page. This is the serial number assigned to each household found in the structure.
13. **Column (QQ1)** [*Does any member of this household operate any land that can be used for agriculture?*]: Ask this question to find out if any portion of the household's land is used for farming and circle **Y** for "Yes" or **N** for "No". The land operated by the household can either be owned or rented. If the respondent says "No" then go to QQ3.
14. **Column (QQ2)** [*How many hectares of agricultural land do members of this household operate?*]: Ask this question to find out the land size and record the number. The land operated by the household can either be owned or rented. If the land size is less than 1 hectare, record "00" in the space provided. If the land size is unknown, try to estimate and record that number or record "DK" for "Don't Know".
15. **Column (QQ3)** [*Does this household have any livestock, herds, other farm animals, or poultry?*]: Ask this question to find out if any animals are raised on the land and circle **Y** for "Yes" or **N** for "No". If the respondent says "No" or "N", then go to the next household.
16. **Column (QQ4)** [*How many of the following animals does this household have?*]: Ask this question to find out how many animals are raised on the land and record the number for each of the animal types listed in Columns QQ4A through QQ4E. If the answer is "None",

then record “00” in the space provided. If the number of animals is unknown, try to estimate and record that number or record “DK” for “Don’t Know”.

17. **Column (QQ4A)** [*How many of the following animals does this household have – cattle, milk cows, or bulls?*]: Ask this question and record the number of cattle, milk cows, or bulls in Column A. If the answer is “None”, then record “00” in the space provided. If the number of cattle, milk cows, or bulls is unknown, try to estimate and record that number or record “DK” for “Don’t Know”.
18. **Column (QQ4B)** [*How many of the following animals does this household have – goats?*]: Ask this question and record the number of goats in Column B. If the answer is “None”, then record “00” in the space provided. If the number of goats is unknown, try to estimate and record that number or record “DK” for “Don’t Know”.
19. **Column (QQ4C)** [*How many of the following animals does this household have – sheep?*]: Ask this question and record the number of sheep in Column C. If the answer is “None”, then record “00” in the space provided. If the number of sheep is unknown, try to estimate and record that number or record “DK” for “Don’t Know”.
20. **Column (QQ4D)** [*How many of the following animals does this household have – pigs?*]: Ask this question and record the number of pigs in Column D. If the answer is “None”, then record “00” in the space provided. If the number of pigs is unknown, try to estimate and record that number or record “DK” for “Don’t Know”.
21. **Column (QQ4E)** [*How many of the following animals does this household have—chickens?*]: Ask this question and record the number of chickens in Column E. If the answer is “None”, then record “00” in the space provided. If the number of chickens is unknown, try to estimate and record that number or record “DK” for “Don’t Know”. Then continue to the third page.

Third page:

22. **Column (1)** [*Serial number of structure*]: Copy this information from the first page. This is the same structure serial number that the Mapper enters on the Sketch Map Form.
23. **Column (4)** [*Serial number of household in the structure*]: Copy this information from the first page. This is the serial number assigned to each household found in the structure.
24. **Column (QQ5)** [*Does agriculture represent an important contribution to your household livelihood—yes or no?*]: Ask this question to find out if agriculture is important to the household’s lives and circle **Y** for “Yes” or **N** for “No”.
25. **Column (QQ6)** [*Does agriculture represent an important contribution to your household income—yes or no?*]: Ask this question to find out if agriculture is important to the household’s total income and circle **Y** for “Yes” or **N** for “No”.
26. **Column (QQ7)** [*Does agriculture represent an important contribution to your household consumption—yes or no?*]: Ask this question to find out if agriculture is important to the household’s food consumption and circle **Y** for “Yes” or **N** for “No”.
27. **Column (8)** [*Comments about agricultural activity*]: Record here any comments about the household’s agricultural and livestock activities, such as the land of the household is rented off or operated by someone else.

SEGMENTATION OF LARGE ENUMERATION AREAS

The complete listing of large EAs is not cost effective. For that reason, large EAs should be subdivided into smaller segments of which only one will be selected and listed. Upon arrival in a large EA that may need segmentation, the listing team should first tour the EA and do a quick count to get the estimated number of households in the EA. As a standard, each EA with 300 or more households should be subdivided into an appropriate number of segments. If possible, the segments should be roughly of equal size and ideally around 100–200 households each. However, it is critical to adopt segment boundaries that are easily identifiable. This condition must take precedence over secondary considerations of roughly same size.

Each team should carry a number of Segmentation Forms to the field each with a random number printed in the appropriate space on the Form.

Segmentation and selection of a sample segment will be carried out as follows:

1. Draw a location map of the entire EA as described above;
2. Using clear boundaries such as roads or rivers, divide the EA into segments of roughly equal size in terms of the number of households;
3. Show on the location map of the EA the boundaries of the newly created segments;
4. Number the segments sequentially;
5. For each segment, do a quick count of the number of dwellings;
6. Using the Segmentation Form, record the identification information of the EA, the segment number, and the size of each segment in the appropriate columns (number of dwellings, percentage and cumulative percentage);
7. Compare the cumulative percentage with the random number provided on the Segmentation Form;
8. Select the first segment for which the cumulative percentage is greater than or equal to the random number;
9. Draw a sketch map of the selected segment and list all the households found in the selected segment. The selected segment corresponds to the cluster for the CGAP survey.

HOUSEHOLD SELECTION

The household selection will be done at the central office once all the listing forms are completed for all EAs. To obtain the sample of smallholder households to be interviewed for the CGAP survey, the following steps are required.

Step 1: In Column “Eligible”, mark with an X all households listed in the EA that meet the definition of a smallholder household. A smallholder household is a:

Household with up to 5 hectares	AND	Agriculture provides a meaningful contribution to the household livelihood, income, or consumption
OR		
Farmers who have less than: 50 heads of cattle; or 100 goats/sheep/pigs; or 1,000 chickens		

Step 2: In Column “Household number”, starting with “1”, assign sequentially a number to all households marked with an X in step 1 that also meet one of the following 3 additional criteria:

- Occupied residential dwellings;
- Households that refused to cooperate during household listing;
- Households whose occupants were temporarily absent during household listing.

Leave the cell blank if the dwelling unit is not occupied (Column 6 = 2) or the structure is not a residential structure (Column 3 = N). The total number of smallholder households for each EA is the number assigned to the last household listed in that EA that meets the definition of the smallholder household and one the above 3 additional criteria.

Step 3: After sequentially numbering of all smallholder households listed in each EA, record the total number of smallholder households in the Excel spreadsheet Template used for household selection (CGAP Household Selection Template provided separately). For each EA, record also in the Template the percentage that the selected segment represents in the EA that was segmented in the Column “Proportion of the selected segment”. The percentage to record is in the selected segment row of the “Percent of total” Column on the Segmentation Form of the EA. If no segmentation was carried out, leave the value of “1” in the Column in the Template (Proportion of the selected segment).

Step 4: The Excel spreadsheet Template used for household selection will automatically generate the household numbers for households to be interviewed in the survey. The selected households should be indicated on the Household Listing Form by circling the corresponding number in the Household Number Column.

MAPPING AND HOUSEHOLD LISTING FORMS

LOCATION MAP FORM
name of Country

LOCATION MAP	
	CGAP Cluster number: ___ ___ ___

SKETCH MAP FORM
name of Country

SKETCH MAP	
	CGAP Cluster number: ___ ___ ___

IDENTIFICATION	
Region name: _____	Locality name: _____
CGAP Cluster number: _____	
Mapper's name: _____	Mapper's ID: _____
Lister's name: _____	Lister's ID: _____
	Page #: _____ of _____

<i>Leave blank</i>		Serial number of structure	Address or Description of Structure	Residence? Y / N		Serial number of household in structure	Name of head of household <small>Record the name at the time of listing</small>	Status of dwelling				Observations	
Eligible (mark with X)	Household number			<small>If no, record observations or proceed to next structure</small>				1 Occupied 2 Vacant 3 Temporarily absent 6 Other (Specify)					
		1	2	3		4	5					6	7
				Y	N			1	2	3	6		
				Y	N			1	2	3	6		
				Y	N			1	2	3	6		
				Y	N			1	2	3	6		
				Y	N			1	2	3	6		
				Y	N			1	2	3	6		
				Y	N			1	2	3	6		
				Y	N			1	2	3	6		
				Y	N			1	2	3	6		
				Y	N			1	2	3	6		
				Y	N			1	2	3	6		
				Y	N			1	2	3	6		
				Y	N			1	2	3	6		
				Y	N			1	2	3	6		
				Y	N			1	2	3	6		
				Y	N			1	2	3	6		
				Y	N			1	2	3	6		

IDENTIFICATION	
Region name: _____	Locality name: _____ CGAP Cluster number: _____
Mapper's name: _____	Mapper's ID: _____ Lister's name: _____ Lister's ID: _____ Page #: _____ of _____

Serial number of structure	Serial number of household in structure	QQ1. Does any member of this household operate any land that can be used for agriculture?		QQ2. How many hectares of agricultural land do members of this household operate?	QQ3. Does this household have any livestock, herds, other farm animals, or poultry?		QQ4. How many of the following animals does this household have?				
		<i>If no, go to QQ3.</i>		<i>If less than 1, record "00". If unknown, try to estimate or record "DK".</i>	<i>If no, go to next household.</i>		<i>If none, record "00". If unknown, try to estimate or record "DK".</i>				
<i>From previous page</i>	<i>From previous page</i>						Cattle, milk cows, or bulls?	Goats?	Sheep?	Pigs?	Chickens?
1	4	QQ1		QQ2	QQ3		QQ4A	QQ4B	QQ4C	QQ4D	QQ4E
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					
		Y	N		Y	N					

SEGMENTATION FORM

name of Country

IDENTIFICATION	
Enumeration Area number: _____	Region name: _____
CGAP Cluster number: _____	Locality name: _____
Mapper's name and ID number: Name: _____ ID: ____ ____	Lister's name and ID number: Name: _____ ID: ____ ____

Number of segments to be created: _____	Random number between 1 and 100: _____
---	--

Segment number	Number of dwellings	Percent of total	Cumulative percent of total
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____
Total	_____		100

Segment selected:	_____
-------------------	-------

EXAMPLES:
LOCATION AND SKETCH MAP FORMS

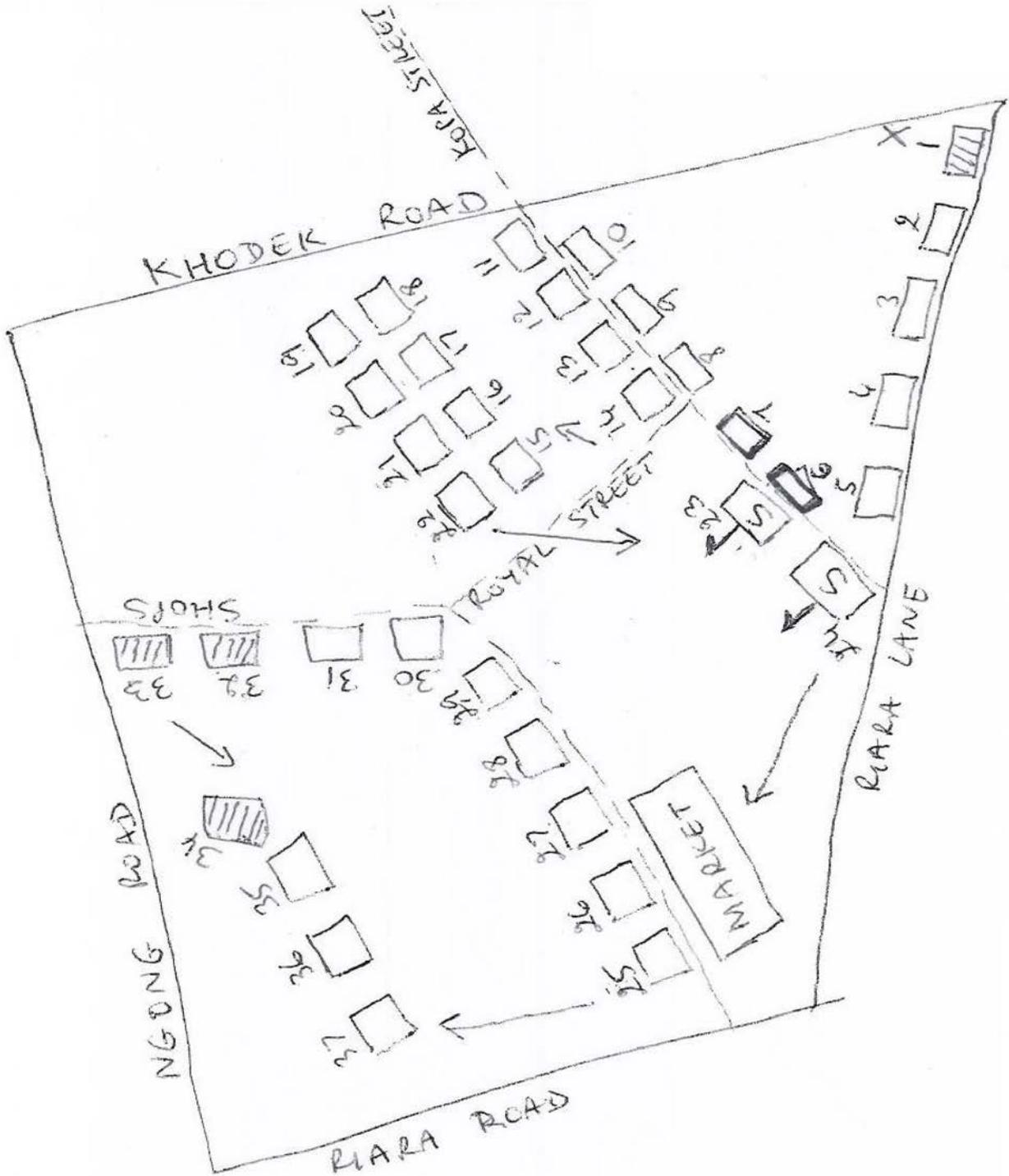
LOCATION MAP FORM EXAMPLE

CGAP Cluster number: 060



SKETCH MAP FORM EXAMPLE

CGAP Cluster number: 060



Annex 2. Questionnaires

A. CGAP Smallholder Household Survey: Household Questionnaire

HOUSEHOLD QUESTIONNAIRE	
HH1. CGAP cluster number: _____	HH2. Household number: _____
HH3. Interviewer's name and number: Name _____	HH4. Supervisor's name and number: Name _____
HH5. Day / Month / Year of interview: _____ / _____ / 2015	HH6. REGION: REGION 1 REGION 2 REGION 3 REGION 4
HH7. DISTRICT Name _____	
<p>WE ARE FROM <i>insert country-specific affiliation</i>. WE ARE CONDUCTING A SURVEY ABOUT SMALLHOLDER HOUSEHOLDS. I WOULD LIKE TO TALK TO YOU ABOUT YOUR HOUSEHOLD ACTIVITIES AND FINANCIAL BEHAVIORS. THE INTERVIEW WILL TAKE ABOUT <i>insert number</i> MINUTES. ALL THE INFORMATION WE OBTAIN WILL REMAIN STRICTLY CONFIDENTIAL AND ANONYMOUS. MAY I START NOW?</p> <p><input type="checkbox"/> YES, PERMISSION IS GIVEN ⇒ GO TO D0 TO BEGIN THE INTERVIEW.</p> <p><input type="checkbox"/> NO, PERMISSION IS NOT GIVEN ⇒ CIRCLE 04 IN HH8. DISCUSS THIS RESULT WITH YOUR SUPERVISOR.</p>	
<p>HH8. Result of household interview:</p> <p>Completed 01</p> <p>No household member or no competent respondent at home at time of visit 02</p> <p>Entire household absent for extended period of time 03</p> <p>Refused 04</p> <p>Dwelling vacant/Address not a dwelling 05</p> <p>Dwelling destroyed 06</p> <p>Dwelling not found 07</p> <p>Other (<i>specify</i>) _____ 96</p>	
AFTER THE HOUSEHOLD QUESTIONNAIRE HAS BEEN COMPLETED, FILL IN THE FOLLOWING INFORMATION:	AFTER ALL QUESTIONNAIRES FOR THE HOUSEHOLD HAVE BEEN COMPLETED, FILL IN THE FOLLOWING INFORMATION:
HH9. Respondent to Household Questionnaire: Name _____	HH12. Number of individual questionnaires completed: _____
HH10. Total number of household members: _____	
HH11. Number of eligible household members:	

HOUSEHOLD QUESTIONNAIRE

This questionnaire should be administered to the head of household or, his/her spouse, or any knowledgeable adult household member (15 and over). Use an additional questionnaire if all rows in the List of Household Members have been used.

First, please tell me the name of each person who usually lives here (excluding visitors), starting with the head of the household.

D0 Household member's Line Number	D1 Name	D2 What is (name)'s relationship to the head of household	D3 Is (name) 1=Male 2=Female	D4 What is (name)'s marital status	D5 Age (in years)	D6 Has (name) ever attended school? 1=Yes 2=No >> SKIP TO D10	D7 Is (name) currently attending school? 1=Full-time 2=Only part of the time 3=Not attending 98=Don't know	D8 What is the highest grade (name) has attended?	D9 Did (name) complete (grade from D8)? 1=Yes 2=No	Household member 15 and over		
										D10 Does (name) contribute to the household income? 1=Yes 2=No	D11 Does (name) participate in the household's agricultural activities? 1=Yes 2=No	D12 Eligible for individual household member questionnaire 1= Yes 2= No
01		01										
02												
03												
04												
05												
06												
07												
09												
10												
11												

Codes for D2 – Relationship to head of household: 1=Head 2=Spouse 3 =Son or daughter 4=Step son / Step daughter 5=Grandchild 6=Father/Mother 7=Parent-in-law 8=Brother/sister 9=Other relative 10=Not related 98=Don't know

Codes for D4 – Marital Status: 1=Single/Never married 2=Married 3=Divorced/separated 4=Widowed 5=Living together/cohabiting 98=Don't know

Codes for D8 – Highest grade: 0=No formal schooling 1=Informal schooling only (including Koranic schooling) 2=Some primary schooling 3=Primary school completed 4=Intermediate school, Some secondary school / high school 5=Secondary school / high school completed 6=Post-secondary qualifications, other than university e.g., a diploma or degree from a polytechnic or college 7=Some university 8=University completed 9=Post-graduate 99=Don't know [Do not read]

D14. What is the main language spoken in the household?
SINGLE ANSWER. _____ (98 for Don't know)

D15. What is your household's smallest source of income?

READ OUT. SINGLE ANSWER.	
Earning wages or salary from regular job	1
Earning wages from occasional job	2
Running own business in retail or manufacturing (selling or making goods)	3
Running own business by providing services	4
Getting a grant, pension, or subsidy of some sort	5
Getting money from family or friends	6
Growing something and selling it, such as crops, fruits, or vegetables	7
Rearing livestock, poultry, fish, or bees and selling it or its byproducts	8
Other (specify) _____	9
Don't know	98

D17. What is your household's largest source of income?

READ OUT. SINGLE ANSWER.	
Earning wages or salary from regular job	1
Earning wages from occasional job	2
Running own business in retail or manufacturing (selling or making goods)	3
Running own business by providing services	4
Getting a grant, pension, or subsidy of some sort	5
Getting money from family or friends	6
Growing something and selling it, such as crops, fruits, or vegetables	7
Rearing livestock, poultry, fish, or bees and selling it or its byproducts	8
Other (specify) _____	9
Don't know	98

D19. What is the minimum amount your household needs to survive per month (for personal expenses)? I am talking about the amount that will cover just your basic needs for food, transport, cooking fuel, and clothes.

SINGLE ANSWER. _____ (98 for Don't know)

D20. Please look at this card and tell me which answer best reflects your family's current financial situation.

SINGLE ANSWER.	
We don't have enough money for food	1
We have enough money for food and clothes only	3
We have enough money for food and clothes and can save a bit, but not enough to buy expensive goods such as a TV set or a refrigerator	4
We can afford to buy certain expensive goods such as a TV set or a refrigerator	5
Don't know	98

D21. What is your household's average monthly income across all sources of money that your household receives? We recognize this may vary from month to month, so please just provide an average.

SINGLE ANSWER. _____ (98 for Don't know)

D22. Generally, who makes decisions on the following agricultural activities?

	1=Husband / boyfriend 2=Wife / girlfriend 3=Both husband and wife 4=Another family member 5=Not applicable 98=Don't know
Planting time	
Purchase of farm inputs	
When to harvest	
Quantity of crops to sell	
When and where to sell crops	
Where to borrow money to support agricultural production	
When to sell livestock	
Quantity of livestock to sell	

D23. Regardless of what you have, how important is it to your household to have the following – very important, somewhat important, or not important?

READ OUT. SINGLE ANSWER.	1=Very important 2=Somewhat important 3=Not important 98=Don't know
Bank account (non-savings)	
Mobile phone	
Mobile money account	
Insurance	
Savings account	
Credit	

D24. How many mobile phones do members of your household own?

SINGLE ANSWER. _____ (98 for Don't know)

D25. What type of material is mainly used for construction of the roof of the dwelling?

SINGLE ANSWER.	
Thatch, or tins	1
Iron sheets, concrete, tiles, asbestos, or other	2

D26. What type of material is mainly used for construction of the wall of the dwelling?

SINGLE ANSWER.	
Unburnt bricks with cement, wood, tin/iron sheets, concrete/stones, burnt stabilized bricks, or cement blocks	1
Unburnt bricks with mud, mud and poles, or other	2

D27. What source of energy does the household mainly use for cooking?

SINGLE ANSWER.	
Firewood, cow dung, or grass (reeds)	1
Charcoal, paraffin stove, gas, biogas, electricity (regardless of source), or other	2

D28. What type of toilet facility does the household mainly use?

SINGLE ANSWER.	
VIP latrine, or flush toilet	1
Covered pit latrine with slab	2
Uncovered pit latrine (with or without slab), Ecosan (compost toilet), or covered pit latrine without slab	3
No facility/bush/polythene bags/bucket/etc., or other	4

D29. Does any member of your household own a radio?

SINGLE ANSWER.	
Yes	1
No	2

D31. Does every member of the household have at least one pair of shoes?

SINGLE ANSWER.	
Yes	1
No	2

B. CGAP Smallholder Household Survey: Multiple Respondent Questionnaire

THIS QUESTIONNAIRE IS ADMINISTERED TO **ALL** INDIVIDUAL HOUSEHOLD MEMBERS WHO CONTRIBUTE TO THE HOUSEHOLD INCOME THAT IS, THE HEAD OF HOUSEHOLD AND SPOUSE AND OTHER HOUSEHOLD MEMBERS AGED 15 AND OVER WHO CONTRIBUTE TO THE HOUSEHOLD INCOME. THESE HOUSEHOLD MEMBERS WERE IDENTIFIED IN THE HOUSEHOLD QUESTIONNAIRE.

INDIVIDUAL QUESTIONNAIRE	
I1. CGAP cluster number: ___ ___ ___	I2. Household number: ___ ___
I3. Household member's name: Name _____	I4. Household member's line number: _____
I5. Interviewer's name and number: Name _____	I6. Supervisor's name and number: Name _____
I7. Day / Month / Year of interview: ___ ___ / ___ ___ / 2015	I8. REGION: REGION.....1 REGION.....2 REGION.....3 REGION.....4
I9. District Name _____	
<p>REPEAT GREETING IF NOT ALREADY READ TO THIS HOUSEHOLD MEMBER:</p> <p>WE ARE FROM <i>insert country-specific affiliation</i>. WE ARE CONDUCTING A SURVEY ABOUT SMALLHOLDER HOUSEHOLDS. I WOULD LIKE TO TALK TO YOU ABOUT YOUR HOUSEHOLD ACTIVITIES AND FINANCIAL BEHAVIORS. THE INTERVIEW WILL TAKE ABOUT <i>insert number</i> MINUTES. ALL THE INFORMATION WE OBTAIN WILL REMAIN STRICTLY CONFIDENTIAL AND ANONYMOUS. MAY I START NOW?</p> <p><input type="checkbox"/> YES, PERMISSION IS GIVEN ⇒ GO TO A1 TO BEGIN THE INTERVIEW.</p> <p><input type="checkbox"/> NO, PERMISSION IS NOT GIVEN ⇒ CIRCLE 03 IN I10. DISCUSS THIS RESULT WITH YOUR SUPERVISOR.</p>	
<p>I10. Result of household member 's interview:</p> <p>Completed 01</p> <p>Not at home at time 02</p> <p>Refused 03</p> <p>Partly completed..... 04</p> <p>Incapacitated 05</p> <p>Other (<i>specify</i>) _____ 96</p>	

MODULE ON AGRICULTURAL PRACTICES

A0. MATCH TO D11. Do you participate in the household's agricultural activities?

SINGLE ANSWER.		
No	2	SKIP TO H1
Yes	1	

I would like to ask you some questions about your agricultural practices.

A1. What is the form of ownership of your land?

READ OUT. SINGLE ANSWER.	
Individual ownership with lease or certificate	1
Individual ownership under customary law	2
Communal (resources are shared)	3
State ownership	4
Other (specify) _____	5
Don't know	98

A2. How many hectares of agricultural land do you own?

SINGLE ANSWER. _____ (98 for Don't know. Record zero if do not own any agricultural land)

CATEGORIES: 0.0-0.25; 0.26-0.50; 0.51-0.75; 0.76-1.0; etc.

OR it should accept entries with decimals

A3. How many hectares of agricultural land do you rent, borrow or have the right to use?

SINGLE ANSWER. _____ (98 for Don't know. Record zero if do not rent or borrow any agricultural land)

CATEGORIES: 0.0-0.25; 0.26-0.50; 0.51-0.75; 0.76-1.0; etc.

OR it should accept entries with decimals

A4. Do you consider your farm to be a business?

SINGLE ANSWER.	
Yes	1
No	2
Don't know	98

A5. Which of the following crops do you grow?

A6. ASK ONLY FOR CROPS MENTIONED IN A5, IF ANSWERED 'NONE' IN A5, SKIP TO A7. Which of the following crops that you grow is the most important to you and your family?

READ OUT.	A5. ALLOW FOR MULTIPLE ANSWERS.	A6. SINGLE ANSWER.
	<i>Grow</i>	<i>Most important</i>
Maize	1	1
Beans	2	2
Sweet potatoes	3	3
Sorghum	4	4
Rice	5	5
Groundnuts	6	6
Cowpea	7	7
Millet	8	8
Cassava	9	9
Irish potatoes	10	10
Pigeon pea	11	11
Bananas	12	12
Cotton	13	13
Sesame	14	14
Sugar cane	15	15
Tobacco	16	16
Tea	17	17
Cocoa	18	18
Coffee	19	19
Field peas	20	20
Simsim	21	21
Soya beans	22	22
Other 1 (specify) _____	23	23
Other 2 (specify) _____	24	24
Other 3 (specify) _____	25	25
None	26 -> SKIP TO A7	26

A7. Which of the following crops do you grow that you consume at home? LIST ONLY CROPS SELECTED IN A5.

A8. ASK ONLY FOR CROPS MENTIONED IN A7, IF ANSWERED 'NONE' IN A7, SKIP TO A9. Which of these crops that you grow do you consume the most?

READ OUT.	A7. ALLOW FOR MULTIPLE ANSWERS.	A8. SINGLE ANSWER.
	<i>Grow for consumption</i>	<i>Most consume</i>
Maize	1	1
Beans	2	2
Sweet potatoes	3	3
Sorghum	4	4
Rice	5	5
Groundnuts	6	6
Cowpea	7	7
Millet	8	8
Cassava	9	9
Irish potatoes	10	10
Pigeon pea	11	11
Bananas	12	12
Cotton	13	13
Sesame	14	14
Sugar cane	15	15
Tobacco	16	16
Tea	17	17
Cocoa	18	18
Coffee	19	19
Field peas	20	20
Simsim	21	21
Soya beans	22	22
Other 1 (specify) _____	23	23
Other 2 (specify) _____	24	24
Other 3 (specify) _____	25	25
None	26 -> SKIP TO A9	26

A9. Do you buy any of the following crops?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.			
Maize	1	Sesame	14
Beans	2	Sugar cane	15
Sweet potatoes	3	Tobacco	16
Sorghum	4	Tea	17
Rice	5	Cocoa	18
Groundnuts	6	Coffee	19
Cowpea	7	Field peas	20
Millet	8	Simsim	21
Cassava	9	Soya beans	22
Irish potatoes	10	Other 1 (specify) _____	23
Pigeon pea	11	Other 2 (specify) _____	24
Bananas	12	Other 3 (specify) _____	25
Cotton	13	None	26

A10. Do you have any livestock, herds, other farm animals, or poultry?

SINGLE ANSWER.		
Yes	1	
No	2	SKIP TO A15

A11. How many of each of the following do you rear?

READ OUT. ALLOW FOR MULTIPLE ANSWERS. RECORD '0' IF DO NOT REAR ANY	Count
Cattle—beef	
Cattle—dairy	
Indigenous cattle	
Sheep	
Ducks	
Turkeys	
Pigs	
Goats—meat	
Goats—dairy	
Chickens—broilers	
Chickens—layers	
Fish (number of ponds)	
Bees (number of hives or boxes)	
Other (specify) _____	

A12. Which of the following do you rear AND get an income from? USE LIVESTOCK SELECTED IN A11 > 0

A13. ASK ONLY FOR LIVESTOCK MENTIONED IN A12, IF ANSWERED 'NONE' IN A12, SKIP TO A14. Which of these generates the most income for you?

A14. Which of the following livestock or byproducts do you rear to consume at home? USE LIVESTOCK SELECTED IN A11 > 0

READ OUT.	A12. ALLOW FOR MULTIPLE ANSWERS.	A13. SINGLE ANSWER.	A14. ALLOW FOR MULTIPLE ANSWERS.
	<i>Get income from</i>	<i>Most income</i>	<i>Consumption</i>
Cattle—beef	1	1	1
Cattle—dairy	2	2	2
Indigenous cattle	3	3	3
Sheep	4	4	4
Ducks	5	5	5
Turkeys	6	6	6
Pigs	7	7	7
Goats—meat	8	8	8
Goats—dairy	9	9	9
Chickens—broilers	10	10	10
Chickens—layers	11	11	11
Fish (number of ponds)	12	12	12
Bees (number of hives or boxes)	13	13	13
Other (specify) _____	14	14	14
None	15 -> SKIP TO A14	15	15

A15. Who do you normally purchase your main agricultural and livestock inputs (such as seeds, fertilizer, or pesticide) from?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
Co-operative	1
Wholesaler	2
Processor	3
Retailer	4
Government agency	6
Middleman/Trading company	7
Other (specify) _____	10
I do not purchase any agricultural or livestock inputs	11
Don't know	98

A17. How do you usually pay your suppliers?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
Cash	1
Cheque	2
Pay cash into bank	3
Electronic funds transfer	4
Mobile banking	5
Payment in-kind (crops, labor, etc.)	6
Prepaid debit card	7
Other (specify) _____	8
I do not buy supplies	9 -> SKIP TO A22

A18. Do your suppliers give you the option to pay them later (with credit) or do you have to pay them immediately?

SINGLE ANSWER.	
Pay later	1
Pay immediately	2

A22. Which of the following statements best describe your water situation?

READ OUT. SINGLE ANSWER.	
I always have enough water available, but if I had more water I would be able to grow my agricultural activities faster	1
I always have water available, and it is enough for the needs of my agricultural activities	2
I have intermittent water supply, but this does not affect my agricultural activities	3
I have intermittent water supply, which does affect my agricultural activities	4

A23. For managing the land and livestock, what types of labor do you use?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.		
Friends or neighbors labor, on a reciprocity basis	1	
Hired labor for extended period	2	
Family labor	3	
Daily rate for agricultural labor	4	
Other (specify) _____	5	
None	6	SKIP TO A25

A24. What do you use the labor for?

READ OUT. MULTIPLE ANSWERS	
Land plowing and preparation	1
Planting	2
Weeding	3
Harvesting	4
Selling crops	5
Livestock care	6
Livestock sale	7
Other (specify) _____	8

A25. Which of the following crops that you grow do you sell? LIST ONLY CROPS SELECTED IN A5
A26. ASK ONLY FOR CROPS MENTIONED IN A25, IF ANSWERED 'NONE' IN A25, SKIP TO A36. Which of these crops that you grow do you get the most money from selling?

READ OUT.	A25. ALLOW FOR MULTIPLE ANSWERS.	A26. SINGLE ANSWER.
	<i>Grow for selling</i>	<i>Most money from</i>
Maize	1	1
Beans	2	2
Sweet potatoes	3	3
Sorghum	4	4
Rice	5	5
Groundnuts	6	6
Cowpea	7	7
Millet	8	8
Cassava	9	9
Irish potatoes	10	10
Pigeon pea	11	11
Bananas	12	12
Cotton	13	13
Sesame	14	14
Sugar cane	15	15
Tobacco	16	16
Tea	17	17
Cocoa	18	18
Coffee	19	19
Field peas	20	20
Simsim	21	21
Soya beans	22	22
Other 1 (specify) _____	23	23
Other 2 (specify) _____	24	24
Other 3 (specify) _____	25	25
None	26 -> SKIP TO A36	26
Don't know	-	98

A27. Who do you sell your crops and livestock to?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
Co-operative	1
Wholesaler	2
Processor	3
Retailer	4
Direct to the public	5
Direct to a government agency	6
Middleman/Trading company	7
Other (specify) _____	10
Don't know	98

A28. Where do you normally sell your crops and livestock?

READ OUT. MULTIPLE ANSWERS.		
At farm to neighbor or traveling merchant	1	
In village	2	
Local market	3	
Regional market	4	
Other (specify) _____	5	
Don't know	98	SKIP TO A30

A29. Why do you sell your crops and livestock at this location?

READ OUT. MULTIPLE ANSWERS.	
I get the best price at this market	1
I do not have access to transport to other markets	2
Poor road conditions to other markets	3
I am not aware of prices at other markets	4
Other (specify) _____	5
Don't know	98

A30. When you sell your crops and livestock, do you get the current market price?

SINGLE ANSWER.		
No	2	
Yes	1	SKIP TO A32
Don't know	98	SKIP TO A32

A31. Why do you not get the current market price?

DO NOT READ OUT. CODE INTO CATEGORIES BELOW. SINGLE ANSWER.	
Too few customers	1
My customers take advantage of me	2
I have to pay high commission rates to middlemen	3
Corruption	4
No access to transport to other markets	5
Poor crop quality	6
I do not know why	7
Other (specify) _____	8
Don't know	98

A32. Do you have a contract to sell any of your crops or livestock?

SINGLE ANSWER.	
Yes	1
No	2
Don't know	98

A33. How do you usually get paid for what you sell?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
Cash	1
Cheque	2
Electronic funds transfer	4
Mobile banking	5
Payment in-kind (crops, labor, etc.)	6
Prepaid debit card	7
Other (specify) _____	8

A35. What challenges do you face in terms of getting your crops and livestock to your customers?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
Distance to the market	1
Transportation	2
Goods or products get damaged in transit	5
Lack of storage facilities	6
Lack of refrigeration facilities	7
Unreliable middlemen	8
I don't face any challenges	9
Other (specify) _____	10

A36. Which of the following crops that you grow do you trade? LIST ONLY CROPS SELECTED IN A5
A37. ASK ONLY FOR CROPS MENTIONED IN A36, IF ANSWERED 'NONE' IN A36, SKIP TO H1. Which of these crops that you grow do you trade the most?

READ OUT.	A36. ALLOW FOR MULTIPLE ANSWERS.	A37. SINGLE ANSWER.
	<i>Grow for trading</i>	<i>Most trade</i>
Maize	1	1
Beans	2	2
Sweet potatoes	3	3
Sorghum	4	4
Rice	5	5
Groundnuts	6	6
Cowpea	7	7
Millet	8	8
Cassava	9	9
Irish potatoes	10	10
Pigeon pea	11	11
Bananas	12	12
Cotton	13	13
Sesame	14	14
Sugar cane	15	15
Tobacco	16	16
Tea	17	17
Cocoa	18	18
Coffee	19	19
Field peas	20	20
Simsim	21	21
Soya beans	22	22
Other 1 (specify) _____	23	23
Other 2 (specify) _____	24	24
Other 3 (specify) _____	25	25
None	26 -> SKIP TO H1	26
Don't know	-	98

MODULE ON HOUSEHOLD ECONOMICS

Now I would like to ask you some questions about your income.

H1. Do you generate income from the following sources?

READ OUT. SINGLE ANSWER.	
Earning wages or salary from regular job	1
Earning wages from occasional job	2
Running own business in retail or manufacturing (selling or making goods)	3
Running own business by providing services	4
Getting a grant, pension, or subsidy of some sort	5
Getting money from family or friends	6
Growing something and selling it, such as crops, fruits, or vegetables	7
Rearing livestock, poultry, fish, or bees and selling it or its byproducts	8
Other (specify) _____	9

H2. Which of these has been your main source of income in the last <INSERT TIME>?

READ OUT CATEGORIES FROM H1. SINGLE ANSWER.	H2A. Month	H2B. 12 months
Earning wages or salary from regular job	1	1
Earning wages from occasional job	2	2
Running own business in retail or manufacturing (selling or making goods)	3	3
Running own business by providing services	4	4
Getting a grant, pension, or subsidy of some sort	5	5
Getting money from family or friends	6	6
Growing something and selling it, such as crops, fruits, or vegetables	7	7
Rearing livestock, poultry, fish, or bees and selling it or its byproducts	8	8
Other (specify) _____	9	9
Don't know	98	98

H3. Which of the following income sources is most important to you?

H4. Which of the following income sources do you like getting the most?

H5. Which of the following income sources is most reliable for you?

READ OUT CATEGORIES FROM H1. SINGLE ANSWER.	H9. <i>Most important</i>	H10. <i>Like getting the most</i>	H11. <i>Most reliable</i>
Earning wages or salary from regular job	1	1	1
Earning wages from occasional job	2	2	2
Running own business in retail or manufacturing (selling or making goods)	3	3	3
Running own business by providing services	4	4	4
Getting a grant, pension, or subsidy of some sort	5	5	5
Getting money from family or friends	6	6	6
Growing something and selling it, such as crops, fruits, or vegetables	7	7	7
Rearing livestock, poultry, fish, or bees and selling it or its byproducts	8	8	8
Other (specify) _____	9	9	9
Don't know	98	98	98

H6. What is your primary job (i.e., the job where you spend most of your time)?

READ OUT AND PROBE. CHOOSE CODE FROM THE LIST. SINGLE ANSWER.	
Farmer	1
Professional, i.e., doctor, teacher, nurse	2
Shop owner	3
Business owner	4
Laborer	5
Other (specify) _____	6

H7. What are your secondary or side jobs?

READ OUT AND PROBE. CHOOSE CODE FROM THE LIST. PROBE FOR MULTIPLE ANSWERS.	
Farmer	1
Professional, i.e., doctor, teacher, nurse	2
Shop owner	3
Business owner	4
Laborer	5
Other (specify) _____	6
None	7

H8. How frequently do you receive your main source of income—daily, weekly, monthly, annually, after a certain period of time, or according to the harvest?

READ OUT. SINGLE ANSWER.	1=Daily 2=Weekly 3=Monthly 4=Annually 5=After a certain period of time 6=According to the harvest 98=Don't know
Earning wages or salary from regular job	
Earning wages from occasional job	
Running own business in retail or manufacturing (selling or making goods)	
Running own business by providing services	
Getting a grant, pension, or subsidy of some sort	
Getting money from family or friends	
Growing something and selling it, such as crops, fruits, or vegetables	
Rearing livestock, poultry, fish, or bees and selling it or its byproducts	
Other (specify) _____	

H9. Are there any other ways that you get income?

READ OUT. PROBE FOR MULTIPLE ANSWERS.	
Buy/get agricultural products from farmers and process it/change it to another form (e.g., maize to flour)	1
Buy/get agricultural products from farmers/processors and sell it	2
Provide a service to farmers or processors of farming products (e.g., renting ploughs, tractors, other equipment)	6
Rent land to farmers for farming purposes	7
Other (specify) _____	8
No other way	9

H10. Do you receive income from any of the following?

READ OUT. ACCEPT MULTIPLE ANSWERS. SINGLE ANSWER PER ROW.		
Government benefits (pension, disability, welfare, etc.)	1	SKIP TO H14
Remittances/monetary or other help from family or friends	10	
Other donor/NGO benefits	13	
Occasional paid assignments, labor for hire	14	
Occasionally sell my belongings	15	
Other (specify) _____	17	

H11. You said you receive a payment from the government (benefits, welfare, stipend, grant or another payment). How do you usually get this payment?

READ OUT. MULTIPLE ANSWERS.	
Direct deposit to a bank account	1
Personal pick-up in cash	2
Personal pick-up in cheque	3
Courier delivery	4
Deposit to your m-money account	6
Deposit to an agent's m-money account	7
Deposit to another person's m-money account	8
Digital card	9
Western Union/ Money Gram	10
Other (specify) _____	11
Don't know	98

H14. How often do you make each of the following expenses?

READ OUT. SINGLE ANSWER.	1=At least once a week 2=At least once a month 3=A few times a year 4=Once a year 5=According to the harvest 6=Never 98=Don't know
Grocery purchases	
Transportation	
Medicine, medical payments, hospital charges	
Educational expenses, school fees	
Bills: utility bills, mobile phone and airtime, rent, taxes, etc.	
Emergency expenses (specify) _____	
Investment in business, farm or future, e.g., buying livestock, land, seeds, equipment and machinery, etc.	
Make a large purchase, such as TV, car or bicycle, house, etc.	
Home repairs	
Other (specify) _____	

F62. MATCH TO D8. ASK ONLY IF D8 IS BETWEEN 0 AND 7 OR 99. Can you read any part of these sentences to me?

DO NOT READ. SINGLE ANSWER	
Cannot read at all	1
Able to read only parts of sentences	2
Able to read whole sentences	3
No card with required language	4
Blind/visually impaired.	5
Refused	6

1. Parents love their children.
2. Farming is hard work.
3. The child is reading a book.
4. Children work hard at school.

F63. Do you have any of the following types of an official identification?

READ OUT. ACCEPT MULTIPLE ANSWERS	1=Yes	2=No
Government-issued ID/National ID		
East African Passport		
International Passport		
Driver's license		
School-issued ID		
Voters card		
Ration card		
Employee ID (For Government/Civil Servants)		
Military ID		
Birth Certificate		
Village/LC ID		
Other (Specify) _____		

C. CGAP Smallholder Household Survey: Single Respondent Questionnaire

THIS QUESTIONNAIRE IS ADMINISTERED TO **ONLY ONE** HOUSEHOLD MEMBERS WHO CONTRIBUTES TO THE HOUSEHOLD INCOME THAT IS, THE HEAD OF HOUSEHOLD, HIS/HER SPOUSE OR ANOTHER HOUSEHOLD MEMBERS AGED 15 AND OVER WHO CONTRIBUTES TO THE HOUSEHOLD INCOME. THIS HOUSEHOLD MEMBER IS RANDOMLY SELECTED AMONG ALL ELIGIBLE HOUSEHOLD MEMBERS IDENTIFIED IN THE HOUSEHOLD QUESTIONNAIRE.

INDIVIDUAL QUESTIONNAIRE	
I1. CGAP cluster number: ___ ___ ___	I2. Household number: ___ ___
I3. Household member's name: Name _____	I4. Household member's line number: _____
I5. Interviewer's name and number: Name _____	I6. Supervisor's name and number: Name _____
I7. Day / Month / Year of interview: ___ ___ / ___ ___ / 2015	I8. REGION: REGION.....1 REGION.....2 REGION.....3 REGION.....4
I9. District Name _____	
<p>REPEAT GREETING IF NOT ALREADY READ TO THIS HOUSEHOLD MEMBER:</p> <p>WE ARE FROM <i>insert country-specific affiliation</i>. WE ARE CONDUCTING A SURVEY ABOUT SMALLHOLDER HOUSEHOLDS. I WOULD LIKE TO TALK TO YOU ABOUT THEIR HOUSEHOLD ACTIVITIES AND FINANCIAL BEHAVIORS. THE INTERVIEW WILL TAKE ABOUT <i>insert number</i> MINUTES. ALL THE INFORMATION WE OBTAIN WILL REMAIN STRICTLY CONFIDENTIAL AND ANONYMOUS. MAY I START NOW?</p> <p><input type="checkbox"/> YES, PERMISSION IS GIVEN ⇒ GO TO A99 TO BEGIN THE INTERVIEW.</p> <p><input type="checkbox"/> NO, PERMISSION IS NOT GIVEN ⇒ CIRCLE 03 IN I10. DISCUSS THIS RESULT WITH YOUR SUPERVISOR.</p>	
<p>I10. Result of household member 's interview:</p> <p>Completed 01</p> <p>Not at home at time 02</p> <p>Refused 03</p> <p>Partly completed..... 04</p> <p>Incapacitated 05</p> <p>Other (<i>specify</i>) _____ 96</p>	

MODULE ON AGRICULTURAL PRACTICES

A99. MATCH TO D11. Do you participate in the household's agricultural activities?

SINGLE ANSWER.		
No	2	SKIP TO H16
Yes	1	

I would like to ask you some questions about your agricultural practices.

A38. How many years have you been farming?

READ OUT. SINGLE ANSWER.	
Less than 2 years	1
2 to 5 years	2
6 to 10 years	3
More than 10 years	4
Don't know	98

A39. Do you intend to keep working in agriculture?

SINGLE ANSWER.		
No	2	
Yes	1	SKIP TO A41
Don't know	98	SKIP TO A41

A40. What would make you less likely to stay in agriculture?

SINGLE ANSWER. _____ (98 for Don't know)

A41. Do you agree or disagree with the following statements?

READ OUT. SINGLE ANSWER.	1=Agree 2=Disagree 98=Don't know
I enjoy agriculture	
I would not want to do any other kind of work	
I want to expand my agricultural activities by looking at new products and/or markets	
I would take full time employment if I were offered a job	
I am satisfied with what my agricultural activities have achieved	
I regard my agricultural activities as the legacy I want to leave for my family	
I just work to make ends meet	
I want my children to continue in agriculture	

A42. Are you a member of any of the following groups or associations?

READ OUT. MULTIPLE ANSWERS.		
A planting, weeding, and harvesting group	1	IF NO TO ALL OR REFUSED, SKIP TO A44
An exporting group or association	2	
Trade union	3	
Saving and credit group (e.g., chama, VSLA—village savings and loan association)	4	
Women’s group or association	5	
Processors group	6	
Cooperative/Producers’ group	7	
Farm implement group	8	
SACCO	9	
Other (specify) _____	10	

A43. What types of services do you get from these groups or associations?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
Business advice	1
Farming advice	2
The group markets our products	3
Access to farm implements	4
Buying products and services on credit	5
Start-up livestock, seeds, etc.	6
Financial advice	7
Access to inputs, fertilizer, seeds, labor, fuel, etc.	8
Storage facilities	9
Access to loans	10
Share in the profit	11
Savings account	12
Other (specify) _____	13
None	14
Don’t know	98

A44. How often do you use each of the following sources of information for agricultural activities?

READ OUT. SINGLE ANSWER PER ROW.	1=Daily 2=Weekly 3=Monthly 4=More than monthly 5=Never 98=Don't know
Cell phone/SMS	
Radio	
Television	
Internet	
Newspapers/magazines	
Friends or family members	
Religious leaders	
Community members	
Rural development agents/NGOs	
School teachers	
Government officials	
Input (such as seeds, fertilizer, or pesticides) suppliers	
Merchants	
Government extension workers	
Intermediaries/Middlemen	
Other (specify) _____	

A47. How important is it to keep money aside for the following agricultural needs – very, somewhat, or not important?

A48. Do you currently keep money aside for any of the following agricultural needs? ASK ONLY IF A47 IS 1 OR 2

A49. Do you want to keep money aside for any of the following agricultural needs?

READ OUT.	A47. <i>Importance</i>	A48. <i>Currently keep</i>	A49. <i>Want</i>
SINGLE ANSWER.	1=Very important 2=Somewhat important 3=Not important 98=Don't know	1=Yes >> NEXT ITEM 2=No 98=Don't know	1=Yes 2=No 98=Don't know
Fertilizer			
Seeds			
Pesticides			
Equipment			
Fuel			
Hiring staff/workers			
Security			
For future investment opportunities			
Crop storage after harvest			
Irrigation			
Other (specify) _____			

A52. Do you currently store any of your crops after the harvest?

SINGLE ANSWER.		
Yes	1	
No	2	SKIP TO A57

A53. Which crops do you normally store? USE ONLY CROPS LISTED IN A5

READ OUT. ACCEPT MULTIPLE ANSWERS.	
Maize	1
Beans	2
Sweet potatoes	3
Sorghum	4
Rice	5
Groundnuts	6
Cowpea	7
Millet	8
Cassava	9
Irish potatoes	10
Pigeon pea	11
Bananas	12
Cotton	13
Sesame	14
Sugar cane	15
Tobacco	16
Tea	17
Cocoa	18
Coffee	19
Field peas	20
Simsim	21
Soya beans	22
Other 1 (specify) _____	23
Other 2 (specify) _____	24
Other 3 (specify) _____	25
None	26

A55. Where do you store your crops?

SINGLE ANSWER. _____ (98 for Don't know)

A56. Why do you store your crops?

DO NOT READ OUT. CODE INTO CATEGORIES BELOW. ALLOW FOR MULTIPLE ANSWERS.		
I am waiting for the price to get better	1	SKIP TO A58
Storage is good way to minimize hazards or risks	2	
So my family can have extra money after harvest season	3	
I store so I can pay for school fees	4	
I store for another major expense	5	
I store it so we can consume it later	6	
Other (specify) _____	7	
Don't know	98	

A57. Why do you not currently store any of your crops?

DO NOT READ OUT. CODE INTO CATEGORIES BELOW. ALLOW FOR MULTIPLE ANSWERS.		
There is no available storage place nearby	1	
Storage is too expensive	2	
There are no leftover crops to store	3	
It is not a good idea to store crops	4	
I need to use the money after the harvest	5	
Other (specify) _____	6	
Don't know	98	

A58. Have you ever purchased livestock as an investment?

SINGLE ANSWER.		
Yes	1	
No	2	SKIP TO A60

A59. Do you currently have livestock that are investments?

SINGLE ANSWER.	
Yes	1
No	2

A60. Which of the following factors pose the most significant risk to your agricultural activities?

READ OUT. SINGLE ANSWER.		
Weather-related event (drought, floods, late rains)		1
Power failure/shortage		2
Market prices		3
Input (such as seeds, fertilizer, or pesticides) prices		4
Pests/diseases		5
Contracts not being honored		6
Crops or livestock not being sold		7
Perils and accidents (e.g., fire) or theft		8
Health (your own, your family's, or your workers')		9
Land being taken away from them, due to informal ownership		10
Breakdown of equipment		11
Other (specify) _____		12
Don't know		98

A61. Have your agricultural activities been seriously affected by any of the following events in the past three years?

READ OUT. SINGLE ANSWER PER ROW.	1=Yes 2=No	
Weather-related event (drought, floods, late rains)		
Pests / diseases		
Accident (e.g., fire) or theft		
Unexpected price fluctuation in the market		
Unexpected price fluctuation of inputs (such as seeds, fertilizer, or pesticides)		
Contracts not being honored		
Market downturn/crops or livestock not able to be sold		
Breakdown of equipment		
Health (your own, your family's, or your workers')-related event		
Don't know		

A62. How did you mainly cope when this happened?

READ OUT ANSWERS FROM A61. SINGLE ANSWER PER ROW.	1=Temporary job 2=Took a loan 3=Borrowed 4=Sold livestock 5=Sold asset 6=Used savings 7=Was covered by insurance 8=Did not need to do anything special 9=Did not do anything 98=Don't know
Weather-related event (drought, floods, late rains)	
Pests/diseases	
Accident (e.g., fire) or theft	
Unexpected price fluctuation in the market	
Unexpected price fluctuation of inputs (such as seeds, fertilizer, or pesticides)	
Contracts not being honored	
Market downturn/crops or livestock not able to be sold	
Breakdown of equipment	
Health (your own, your family's, or your workers')-related event	

MODULE ON HOUSEHOLD ECONOMICS

Now I would like to ask you some questions about how you manage money.

H16. When it comes to financial or income-related advice, who do you regularly talk to?

READ OUT. PROBE FOR MULTIPLE ANSWERS.			
Chief or Village leader	1	Middle men	8
Local Councilor or LC	2	Savings and credit group (e.g., chama, VSLA)	9
Lead farmer	3	Other community group	10
Other community leader	4	Friends and family	11
Farmers' association or co-op	5	Don't know who to go to	12
Extension agents	6	Don't have anyone to go to	13
Financial institution like a bank or microfinance	7	Don't ask for advice	14

H17. In your opinion, how important is it for your household to save for each of the following?

H18. Which of the following do you feel your household needs to save for **the most**?

READ OUT. SINGLE ANSWER.	H17. <i>Save for</i>	H18. <i>Do the most</i>
	1=Very important 2=Somewhat important 3=Not important 98=Don't know	
Save money for a future purchase		1
Save money for an unexpected event		2
Save money for regular purchases		3
Save money for school fees		4
Don't know		98

H19. In your opinion, how important is it for your household to save at each of the following?

READ OUT. SINGLE ANSWER PER ROW.	1=Very important 2=Somewhat important 3=Not important 98=Don't know
Save money at a financial institution	
Save money with an informal group like a chama or VSLA	
Save money at home	
Save money on a mobile phone	

H21. In your opinion, how important is it for your household to invest in each of the following?

H22. Which of the following do you feel your household needs to do **the most**?

READ OUT. SINGLE ANSWER.	H21. <i>Invest in</i>	H22. <i>Do the most</i>
	1=Very important 2=Somewhat important 3=Not important 98=Don't know	
Invest money in a farm		1
Invest money in a home/home improvement		2
Invest money in a future educational opportunity		3
Don't know		98

H23. In the past 12 months, have you saved money with any of the following?

READ OUT. SINGLE ANSWER PER ROW.	1=Yes 2=No 98=Don't know
Bank or other formal financial institution	
Microfinance institution	
SACCO	
Cooperative	
Savings and credit group (e.g., chama, VSLA)	
Friends and family	
Other (specify) _____	

H24. What would make you **most likely** to save money with a bank or formal financial institution?

READ OUT. SINGLE ANSWER.	
Having a bank account that you could access through your mobile phone	1
Having a bank that was close to your home	2
Having a bank account that met your needs	3
Knowing more about how to get a bank account	4
If fees or minimum deposit requirements were not an issue	5
Knowing that others in your community also used the bank	6
Knowing that people at the bank would be there to help you	7
Another reason (specify) _____	8
I do not want to save with a bank	9
Don't know	98

H25. Now I would like to ask you a few questions about how you manage your money.

READ OUT. SINGLE ANSWER PER ROW.	1=Yes 2=No 98=Don't know
A. In the event of an emergency, could you get extra money through relatives sending money or by selling assets?	
B. In the past 4 weeks, has anyone in your household skipped a meal to save money?	
C. In the past 4 weeks, has your house been unlit at night because you could not buy charcoal/kerosene/etc. to light the house?	
D. In the past 12 months, has the household head missed any work because he was too sick to work?	
E. Does your family receive income (upkeep money or regular support) from a person outside your community or city?	

H26. I am going to read you a few statements and for each, please tell me if you agree or disagree.

READ OUT. SINGLE ANSWER PER ROW.	1=Agree 2=Disagree 98=Don't know
When my money is in an account, it is constantly working for me	
I like to store money somewhere for a specific purpose	
I like to save my money in case of an emergency	
I like to store my money somewhere I trust	
I like to save my money in an account because it is safer	
Storing my money somewhere is easier than saving in an account	
I need to be able to access my money immediately	

H27. Imagine that you have an emergency and you need to pay 114,000 shillings. How possible is it that you could come up with 114,000 shillings within the next month—very possible, somewhat possible, or not possible?

DO NOT READ OUT. SINGLE ANSWER.		
Very possible	1	
Somewhat possible	2	
Not possible	3	SKIP TO H30
Don't know	98	SKIP TO H30

H28. What would be the main source of money that you would use to come up with the 114,000 shillings within the next month?

READ OUT. SINGLE ANSWER.	
Savings	1
Family, relatives, or friends	2
Money from working	3
Loan from employer	4
Credit card	5
Borrowing from a financial institution	6
Borrowing from a savings and credit group	7
Borrowing from an informal money lender	8
Other source (specify) _____	9
Don't know	98

H30. I will read several statements. Please, tell me how often does the following apply to you?

READ OUT. SINGLE ANSWER PER ROW.	1=Always or most of the time 2=Sometimes 3=Rarely 4=Never 98=Don't know
I spend less money than I make each month	
I have an emergency fund to cover for unplanned expenses	
I pay my bills on time	
My savings are larger than my debts	

H31. Do you have any of the following?

READ OUT. SINGLE ANSWER PER ROW.	1=Yes 2=No	
An insurance plan		SKIP TO H33
A living will; I know what will happen to my money if I die unexpectedly		
A retirement plan (employer provided or personal) that will help me live comfortably after I stop working		
A savings plan		
An investment		

H32. Which of the following types of insurance do you have?

READ OUT. MULTIPLE ANSWERS.	
Medical	1
Life	2
Car	3
Agriculture	4
House/property	5
Unemployment/income protection	6
Other (specify) _____	7
None	8
Don't know	98

H33. Which of the following types of insurance do you feel your household needs the most?

READ OUT. SINGLE ANSWER.	
Medical	1
Life	2
Car	3
Agriculture	4
House/property	5
Unemployment/income protection	6
Other (specify) _____	7
Don't know	98

H34. Does your family have a plan to manage the unexpected expenses, which might result from the following?

READ OUT. SINGLE ANSWER PER ROW.	1=Yes 2=No 98=Don't know
Loss of a house due to fire, flood or another natural disaster	
Major medical emergency, including illness, injury and childbirth	
Bankruptcy/loss of a job or a business	
Loss of harvest or livestock due to weather conditions or a disease	
Loss of property due to theft or burglary	
Death in the family	
An extended period of time without your own food supply	

H35. In the past 12 months, have you experienced any of the following events?

READ OUT. ACCEPT MULTIPLE ANSWERS.			
Medical emergencies	1	Wedding or marriage	6
Death of a family member	2	Housing repair or construction	7
Income lost due to theft	3	Relocation	8
Loss of job	4	None	9
Loss of wage labor	5	Don't know	98

H37. Do you agree or disagree with the following statements?

READ OUT EACH STATEMENT. SINGLE ANSWER PER ROW.	1=Agree 2=Disagree 98=Don't know
My life is determined by my own actions.	
I can mostly determine what will happen in my life.	
I only focus on the short-term.	
I live more for the present day than for tomorrow.	
The future will take care of itself.	
When I get what I want, it is usually because I worked hard for it.	
My experience in my life has been that what is going to happen will happen.	
I feel like what happens in my life is mostly determined by powerful peoples.	

H38. Do you agree or disagree with the following statements?

READ OUT EACH STATEMENT. SINGLE ANSWER PER ROW.	1=Agree 2=Disagree 98=Don't know
I always work hard to be among the best at what I do.	
I do things after giving them much thought.	
It is not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune.	
I am impulsive.	
I say things before I think them through.	
I always look for opportunities for improving my situation.	
I have many aspirations.	

H39. Now, I would like to ask you just a few questions about your financial habits and preferences. In the past 30 days (1 month), how many times did you do the following...?

H40. Now, how many times did you do the following activities in the past 90 days (3 months)?

READ OUT THE LIST OF ACTIVITIES. WRITE DOWN THE NUMBER. SINGLE ANSWER PER ROW.	H39. <i>In the past 30 days</i>	H40. <i>In the past 90 days</i>
Deposit money		
Withdraw money		
Buy airtime top-ups		
Pay a school fee		
Pay utility bills (electricity, solar lantern, water, TV, cable)		
Send money to family members or friends		
Receive money from family members or friends		
Other (specify)_____		

H41. ASK NEXT QUESTION ONLY FOR ACTIVITIES THAT THE RESPONDENT CODED IN H40. IF NO ACTIVITIES REPORTED, THEN SKIP TO M1 IN NEXT SECTION. Which delivery method did you use most frequently for this activity (READ THE ACTIVITY MARKED IN H40, THEN READ OUT THE LIST OF METHODS)?

<p>READ OUT THE LIST OF ACTIVITIES. SINGLE ANSWER PER ROW.</p>	<p>H41. 1=Direct deposit to a bank 2=Personal delivery by self 3=Courier delivery 4=Post office transfer 5=Bank and other Informal Services 6=Own m-money 7=Agent’s m-money account 8=Other person’s m-money account 9=Digital card 10=Western Union/ Money Gram 11=Door-to-door agents 12=Delivery through friend/relative 13=Other, specify</p>
Deposit money	
Withdraw money	
Buy airtime top-ups	
Pay a school fee	
Pay utility bills (electricity, solar lantern, water, TV, cable)	
Send money to family members or friends	
Receive money from family members or friends	
Other (specify)_____	

MODULE ON MOBILE PHONES

Now I would like to ask you some questions about mobile phones.

M1. Have you ever used a mobile phone?

SINGLE ANSWER.		
Yes	1	SKIP TO M3
No	2	

M2. How interested would you be in using a mobile phone—very, somewhat, or not interested?

READ OUT. SINGLE ANSWER.		
Very interested	1	SKIP TO M19
Somewhat interested	2	
Not interested	3	
Don't know	98	

M3. What type of phone have you used?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
Basic phone (no internet capability)	1
Feature phone (basic phone with internet capability)	2
Smartphone (touch screen)	3
Don't know	98

M4. Do you currently own a personal mobile phone?

SINGLE ANSWER.		
Yes	1	
No	2	SKIP TO M7

M5. How many mobile phones do you own?

SINGLE ANSWER. _____ (98 for Don't know, IF NONE, SKIP TO M7)

M6. What type of phone(s) do you own?

READ OUT. SINGLE ANSWER PER ROW.	<i>First phone</i>	<i>Second phone</i>	<i>Third phone</i>	
Basic phone (no internet capability)	1	1	1	SKIP TO M10
Feature phone (basic phone with internet capability)	2	2	2	
Smartphone (touch screen)	3	3	3	
Don't know	98	98	98	

M7. You said you don't own a personal mobile phone. Do you borrow or pay to use a mobile phone elsewhere?

SINGLE ANSWER.	
Yes	1
No	2

M8. What is the main reason you do not have a mobile phone?

DO NOT READ OUT. CODE INTO CATEGORIES BELOW. SINGLE ANSWER.	
I am not allowed to use a phone by my spouse or family	1
Using a phone is against my culture/religion	2
I don't have money to buy phone	3
I don't have money to pay for airtime	4
There is no network where I live/work	5
I worry about what people in my community would think	6
I don't have a need to use a phone	7
There is no place to charge a phone	8
No specific reason	9
Other (specify) _____	10
Don't know	98

M9. How likely are you to purchase a mobile phone in the next twelve months – very likely, somewhat likely, or not likely?

SINGLE ANSWER.	
Very likely	1
Somewhat likely	2
Not likely	3
Don't know	98

M10. Do you personally have an active/working SIM card?

SINGLE ANSWER.		
Yes	1	
No	2	SKIP TO M12

M11. How many active / working SIM cards do you have with the following providers?

READ OUT. ACCEPT MULTIPLE ANSWERS.		
MTN Uganda		SKIP TO M14
Airtel Uganda		
UTL (Uganda Telecom)		
Africell		
Orange		
Smile Telecom		
Sure Telecom		
K2 Telecom		
Smart Telecom		
Vodafone Telecom		
Other (specify) _____		

M12. You said you don't personally own a SIM card. Do you use a SIM card that belongs to somebody else?

SINGLE ANSWER.	
Yes	1
No	2

M13. How likely are you to purchase your own SIM card in the twelve months?

SINGLE ANSWER.	
Very likely	1
Somewhat likely	2
Not likely	3
Don't know	98

M14. What are the benefits to having your own mobile phone or SIM card?

DO NOT READ OUT. CODE INTO CATEGORIES BELOW. MULTIPLE RESPONSES.	
Talking to friends and family	1
Running your business	2
Conducting financial transactions	3
Downloading/Watching /Listening to music, games, videos, ringtones	4
Browsing social media (Facebook, Twitter, Instagram, WhatsApp)	5
Other (specify)	6
Don't know	98

M15. Is having a mobile phone important to you?

SINGLE ANSWER.	
Yes	1
No	2
Don't know	98

M16. DO NOT ASK IF 'NO' IN M7. Apart from today, when was the last time you performed the following activities on the mobile phone you use?

READ OUT. SINGLE ANSWER.	1=Yesterday 2=In the past 7 days 3=In the past 30 days 4=In the past 90 days 5=More than 90 days ago 6=Never 98= Don't know
Made/received calls	
Sent/received text messages or photos	
Used/browsed the internet	
Downloaded music, video, games, or mobile phone application	
Made a financial transaction such as send/receive money, pay debt, or banking transaction	
Used "Call Tunes" or other audio/video on-demand-from operator services	
Used Facebook, WhatsApp, Twitter, Instagram or another social networking site	
Took a color picture	

M19. How important is each of the following abilities to your household’s agricultural activities – very important, somewhat important, or not important?

M20. Do you currently have any of the following abilities for your agricultural activities?

M21. ASK NEXT QUESTION ONLY FOR PRODUCTS THAT THE RESPONDENT DOES NOT HAVE IN M20. IF THE RESPONDENT HAS ALL ABILITIES CODED IN M20, THEN GO TO NEXT QUESTION. Do you want to have any of the following abilities for your agricultural activities?

READ OUT.	M19. <i>Importance</i>	M20. <i>Currently have</i>	M21. <i>Want</i>
SINGLE ANSWER.	1=Very important 2=Somewhat important 3=Not important 98=Don’t know	1=Yes 2=No >> NEXT QUESTION	1=Yes 2=No 98=Don’t know
Ability to access weather information on a mobile phone			
Ability to access market pricing information on a mobile phone			
Ability to access farming information on a mobile phone			
Ability to track the transportation of inputs and crops on a mobile phone			
Ability to buy and sell on a mobile phone			
Ability to charge my phone at a central location			
Ability to access financial services on a mobile phone			
Other (specify)_____			

MODULE ON FINANCIAL SERVICES

I would like to ask you some questions about financial services.

F1. How important is it to your agricultural activities to have the following—very important, somewhat important, or not important?

READ OUT. SINGLE ANSWER.	1=Very important 2=Somewhat important 3=Not important 98=Don't know
Bank account (non-savings)	
Mobile phone	
Mobile money account	
Insurance	
Savings account	
Credit or a loan	

For the next few questions, I am going to ask you about banks and formal financial institutions, such as Centenary Bank, Equity Bank, Stanbic Bank, Mercantile Credit Bank, Post Bank, FINCA and UGAFODE.

F2. Have you ever been inside a bank?

SINGLE ANSWER.	
Yes	1
No	2

F3. What are the benefits to having an account at a formal financial institution?

DO NOT READ OUT. CODE INTO THE FOLLOWING CATEGORIES. ALLOW FOR MULTIPLE ANSWERS.	
Avoid lengthy wait times for bill payments	1
Ability to save money	2
Saving money in a secure location	3
Ability to do more business	4
Ability to send or receive money to/from family members or friends	5
Ability to send or receive payments	6
Other (specify) _____	7
Don't know	98

F4. Do you personally have an account that is registered in your name?

SINGLE ANSWER.		
Yes	1	
No	2	SKIP TO F5

F80. At which institution(s) do you have an account?

DO NOT READ OUT. CODE INTO THE FOLLOWING CATEGORIES. ALLOW FOR MULTIPLE ANSWERS.				
ABC Capital Bank	1	Housing Finance Bank	18	SKIP TO F8
Bank of Africa	2	Imperial Bank Uganda	19	
Bank of Baroda	3	Kenya Commercial Bank	20	
Bank of India	4	Mercantile Credit Bank	21	
Barclays Bank	5	NC Bank Uganda	22	
Cairo International Bank	6	Opportunity Bank	23	
Centenary Bank	7	Orient Bank	24	
Citibank Uganda Limited	8	Post Bank	25	
Commercial Bank of Africa	9	Pride Microfinance Limited	26	
Crane Bank	10	Stanbic Bank Uganda	27	
DFCU Bank	11	Standard Chartered Uganda	28	
Diamond Trust Bank	12	Tropical Bank	29	
Ecobank Uganda	13	UGAFODE	30	
Equity Bank	14	United Bank for Africa	31	
Finance Trust Bank	15	Other (specify) _____	32	
FINCA	16	Don't know	98	
Guaranty Trust Bank	17			

F5. What is the main reason you do not have an account?

DO NOT READ OUT. SINGLE ANSWER.		
I do not know what it is		1
I do not know how to open one		2
I never thought about using one		3
There are none close to where I live		4
I do not have money/ I do not have enough money to make any transactions with such account		5
I do not need one, I do not make any transactions		6
Registration fee is too high/ Fees for using an account are too high		7
They do not offer the services I need		8

F6. Do you use an account that belongs to somebody else if you need to?

SINGLE ANSWER.		
Yes	1	
No	2	SKIP TO F17

F7. Whose account are you most likely to use if you need to?

DO NOT READ OUT. CODE INTO THE FOLLOWING CATEGORIES. SINGLE ANSWER.		
Spouse		1
Parent		2
Child		3
Other relative (specify) _____		4
Not related		5
Don't know		98

F8. Who else has access to your account or the account you use that belongs to someone else?

READ OUT. CODE INTO THE FOLLOWING CATEGORIES. MULTIPLE ANSWERS.	
Spouse	1
Parent	2
Child	3
Other relative (specify) _____	4
Not related	5
Don't know	98

F9. Which of the following services does the institution you use offer? It does not matter if you don't use those services, I just want to know if they are available to you.

READ OUT. ALLOW FOR MULTIPLE ANSWERS.		
At least one of the following—savings, money transfers, insurance, investments	1	
Only loans	2	SKIP TO F17
None of the above	3	SKIP TO F17
Don't know	98	SKIP TO F17

F11. Apart from today, when was the last time you made a deposit or withdrawal using an account or used an account for any other financial activity?

READ OUT. SINGLE ANSWER.		
Yesterday	1	
In the past 7 days	2	
In the past 30 days	3	
In the past 90 days	4	
More than 90 days ago	5	
Never	6	SKIP TO F17
Don't know	98	SKIP TO F17

F12. When you use an account for any financial activity, do you use any of the following?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.		
Over the counter in a branch of the institution	1	
ATM	2	
Over the counter at a retail store	3	
Institution's website	4	
Mobile app	5	
A door-to-door agent or another person who is associated with this institution	6	
Through a mobile wallet by transferring money from my account to my phone	7	
Other (specify) _____	8	
Don't know	98	SKIP TO F14

F13. Of the different ways you use a bank for financial activities, which is your preferred way?

READ OUT ANSWERS FROM F12. SINGLE ANSWER.	
Over the counter in a branch of the institution	1
ATM	2
Over the counter at a retail store	3
Institution's website	4
Mobile app	5
A door-to-door agent or another person who is associated with this institution	6
Through a mobile wallet by transferring money from my account to my phone	7
Other (specify) _____	8
Don't know	98

F14. Which of the following have you ever done using an account?

READ OUT. SINGLE ANSWER PER ROW.	1=Yes 2=No
Deposit money	
Withdraw money	
Buy airtime top-ups	
Pay a school fee	
Pay utility bills (electricity, solar lantern, water, TV, cable)	
Send money to family members or friends	
Receive money from family members or friends	
Other (specify) _____	

F15. Do you use an account for the following payments or purchases?

READ OUT. SINGLE ANSWER PER ROW.	1=Yes 2=No	
Pay employees		SKIP TO F17
Pay suppliers		
Receive payments from customers		
Receive payments from suppliers		
Make investment, e.g., buy new equipment or expand the office or business building		
Pay business associated expenses, including rent, taxes, utility and transportation bills		
Pay for agricultural inputs (seeds, pesticides, fertilizers, etc.)		
Other (specify) _____		
I do not use my bank account to make business transactions		

F16. You said you do not use an account for any payments or purchases. Please tell me why.

DO NOT READ. CODE INTO THE FOLLOWING CATEGORIES. ALLOW FOR MULTIPLE ANSWERS.	
I do not have a business	1
I will have to pay extra taxes	2
I will have to pay bribes to government officials to avoid taxation/licensing/paper work	3
My business is not registered, it is not formal	4
To pay account fees I will have to raise prices and people won't buy from me	5
My business is too small to need a bank account	6
I use other methods of payment	7
Other (specify) _____	8
Don't know	98

For the next few questions, I will ask you about microfinance institutions, SACCOs, and cooperatives, which are financial service providers that are less formal than banks, such as BRAC Uganda, Agaru SACCO, and Hofokam.

F17. Have you ever used any of the following?

READ OUT. SINGLE ANSWER PER ROW.	1=Yes 2=No
Microfinance institution	
SACCO	
Cooperative	

F19. Do you have an account/membership in your name with any of the following?

F20. ASK ONLY FOR OPTIONS MARKED "YES" IN F19. OTHERS GO TO F24. Apart from today, when was the last time you used the account/membership in your name?

READ OUT.	F19. <i>Have account</i>	F20. <i>Last used</i>
SINGLE ANSWER PER ROW.	1=Yes 2=No	1=Yesterday 2=In the past 7 days 3=In the past 30 days 4=In the past 90 days 5=More than 90 days ago 6=Stopped using altogether 98=Don't know
Microfinance institution		
SACCO		
Cooperative		

F21. ASK ONLY IF ANSWERED 'YES' IN F17 OR F19, OTHERS SKIP TO F24. Which of the following services does your <INSERT F19 INSTITUTION> offer? It does not matter if you use those services, I just want to know if they are available to you.

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
At least one of the following—savings, money transfers, insurance, investments	1
Only loans	2
None of the above	3
Don't know	98

F81. ASK ONLY IF ANSWERED 'YES' IN F17 OR F19, OTHERS SKIP TO F24. At which microfinance institutions, SACCO, or cooperatives do you have an account?

DO NOT READ OUT. CODE INTO THE FOLLOWING CATEGORIES. ALLOW FOR MULTIPLE ANSWERS.			
Advance Uganda	1	Lyamujungu Cooperative Financial Services	15
Agaru SACCO	2	Masaka Microfinance Development Coop Trust Ltd	16
Blue Employee Benefits	3	Micro-Credit for Development and Transformation	17
BRAC Uganda	4	Rural Credit Finance Company Ltd	18
Ebirungi Biruga Omututu	5	Rushere SACCO	19
Ecumenical Church Loan Fund	6	Silver Upholders Ltd	20
Emesco Development Foundation	7	The Hunger Project Uganda	21
Five Talents	8	Top Finance Ltd	22
Hofokam	9	Uwmfo Uganda	23
Issia Cooperative Savings & Credit Society Ltd	10	Vision Fund	24
Kakuto SB SACCO	11	Wazalendo SACCO	25
Kitgum Coop Savings & Credit Society	12	Other (specify) _____	26
Kyamuhunga SACCO	13	Don't know	98
Letshego Uganda Ltd	14		

F22. ASK ONLY IF ANSWERED 'YES' IN F19, OTHERS SKIP TO F24. Which of the following have you ever done using a <INSERT F19 INSTITUTION> account?

READ OUT. SINGLE ANSWER PER ROW.	1=Yes 2=No
Deposit money	
Withdraw money	
Buy airtime top-ups	
Pay utility bills (electricity, solar lantern, water, TV, cable)	
Send money to family members or friends	
Receive money from family members or friends	
Other (specify) _____	

F23. ASK ONLY IF ANSWERED 'YES' IN F19, OTHERS SKIP TO F24. Do you use a <INSERT F19 INSTITUTION> account for the following payments or purchases?

READ OUT. SINGLE ANSWER PER ROW.	1=Yes 2=No
Pay employees	
Pay suppliers	
Receive payments from customers	
Receive payments from suppliers	
Make investment, e.g., buy new equipment or expand the office or business building	
Pay business associated expenses, including rent, taxes, utility and transportation bills	
Pay for agricultural inputs (seeds, pesticides, fertilizers, etc.)	
Other (specify) _____	
I do not use my account to make these transactions	

F24. The next few questions are about mobile money. Have you ever heard of something called mobile money?

SINGLE ANSWER.		
Yes	1	
No	2	SKIP TO F46

F25. Are there benefits to having a mobile money account?

SINGLE ANSWER.		
Yes	1	
No	2	SKIP TO F27

F26. What are the benefits to having a mobile money account?

DO NOT READ OUT. CODE INTO THE FOLLOWING CATEGORIES. ALLOW FOR MULTIPLE ANSWERS.	
Avoid lengthy wait times for bill payments	1
Ability to save money	2
Saving money in a secure location	3
Ability to do more business	4
Ability to send or receive money to/from family members or friends	5
Ability to send or receive payments	6
Other (specify) _____	7
Don't know	98

F27. To the best of your knowledge, for what types of financial activities can you use mobile money?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
Deposit and/or withdrawal	1
Person-to-person money transfers	2
Bill pay	3
Save or store money for a long term purpose	4
Make business transactions	5
Buy airtime	6
Can connect bank account to mobile wallet	7
Other (specify) _____	8
Don't know	98

F28. Please tell me the names of any mobile money providers that you are aware of?

F29. ASK ONLY ABOUT PROVIDERS NOT MENTIONED IN F28. Have you ever heard about the following mobile money providers?

F30. ASK IF AT LEAST ONE PROVIDER MARKED IN F28 OR F29. IF "NO" FOR ALL IN F29, SKIP TO F46. From which source of information did you first learn about this mobile money provider?

	<i>Unaided recall</i>	<i>Prompted recall</i>	<i>Information source</i>
	F28. DO NOT READ OUT. SINGLE ANSWER.	F29. READ OUT. SINGLE ANSWER.	F30. READ OUT. SINGLE ANSWER.
	1=Yes 2=No	1=Yes 2=No	1=Radio 2=TV 3=Billboards/posters 4=Newspapers / Magazines 5=Relatives 6= Non-relatives 7=Other (specify) _____
MTN Mobile Money			
Airtel Money			
M-Sente			
Ezee Money			
Vodafone M-PESA			
Africell money			
MCash			
Micropay			
Smart money			
Orange			
Other (specify)			

F31. ASK IF AT LEAST ONE PROVIDER MARKED IN F29. OTHERS SKIP TO F36. Have you ever used this mobile money provider for any financial activity?

F32. ASK FOR EACH MOBILE MONEY PROVIDER MARKED IN F31. IF NO PROVIDERS MARKED IN F31, SKIP TO F36. Apart from today, when was the last time you conducted any financial activity with this mobile money provider?

F33. ASK IF AT LEAST ONE PROVIDER MARKED IN F31. OTHERS SKIP TO F36. Do you have a registered account (account registered in your name) with this mobile money provider?

	F31. <i>Used</i>	F32. <i>When used</i>	F33. <i>Have account</i>
READ OUT. SINGLE ANSWER PER ROW.	1=Yes 2=No	1=Yesterday 2=In the past 7 days 3=In the past 30 days 4=In the past 90 days 5=More than 90 days ago	1=Yes 2=No
MTN Mobile Money			
Airtel Money			
M-Sente			
Ezee Money			
Vodafone M-PESA			
Africell money			
MCash			
Micropay			
Smart Money			
Orange			
Other (specify) _____			

F34. ASK IF AT LEAST ONE PROVIDER MARKED IN F33. IF NO PROVIDERS MARKED IN F33, SKIP TO F36. Do you usually make transactions with your mobile money account yourself or does somebody else do them on your behalf?

SINGLE ANSWER.	
I make the transactions myself	1
Somebody does them on my behalf	2
Don't know	98

F35. ASK FOR EACH MOBILE MONEY PROVIDER MARKED IN F31. IF NO PROVIDERS MARKED IN F31, SKIP TO F36. How do you usually access this mobile money provider?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	1=Over the counter or by using an agent's account 2=Account of a family member in this household 3=Account of a family member in another household, other relative, friend or a neighbor 4=Account of a workmate or a business partner 5=My own account 6=Other (specify) _____
MTN Mobile Money	
Airtel Money	
M-Sente	
Ezee Money	
Vodafone M-PESA	
Africell money	
MCash	
Micropay	
Smart Money	
Orange	
Other (specify)	

F36. ASK ONLY IF "NO" FOR ALL IN F31. OTHERS SKIP TO F37. What is the main reason you have never used mobile money services?

DO NOT READ OUT. CODE INTO THE FOLLOWING CATEGORIES. SINGLE ANSWER.		
I do not know what it is	1	SKIP TO F46
I do not know how to open one	2	
I do not have a state ID or other required documents	3	
There is no point-of-service/agent close to where I live	4	
I do not need one, I do not make any transactions	5	
Using such account is difficult	6	
I never have money to make transactions with this service	7	
I do not trust that my money is safe on a mobile money account	8	
It is too expensive	9	
Other (specify) _____	10	

F37. ASK ONLY IF AT LEAST ONE MOBILE MONEY SERVICE IS SELECTED IN F31. OTHERS GO TO F46. What is the main reason you started using mobile money?

DO NOT READ OUT. CODE INTO THE FOLLOWING CATEGORIES. SINGLE ANSWER.	
I had to send money to another person	1
I had to receive money from another person	2
Somebody/a person requested I opened an account	3
I had to send money to an organization/government agency: e.g., had to pay a bill	4
I had to receive money from an organization/government agency: e.g., pension, unemployment payment or welfare benefits	5
An agent or sales person convinced me	6
I saw posters/billboards/radio/TV advertising that convinced me	7
A friend or family member recommended it	8
I saw other people using it and wanted to try by myself	9
I wanted to start saving money with an m-money account	10
I wanted a safe place to store my money	11
I got a discount on airtime	12
I got a promotional amount of money to spend if I start using m-money	13
Other (specify) _____	14

F38. ASK IF AT LEAST ONE MOBILE MONEY SERVICE IS SELECTED IN F31. OTHERS GO TO F46. Have you ever used a mobile money account to do the following...?

READ OUT. SINGLE ANSWER PER ROW.	1=Yes 2=No
Deposit money	
Withdraw money	
Buy airtime top-ups	
Pay a school fee	
Pay utility bills(electricity, solar lantern, water, TV, cable)	
Send money to family members or friends	
Receive money from family members or friends	
Other (specify) _____	

F39. ASK IF AT LEAST ONE MOBILE MONEY SERVICE IS SELECTED IN F31. OTHERS GO TO F46. Do you use a mobile money account to make the following payments or purchases?

READ OUT. SINGLE ANSWER PER ROW.	1=Yes 2=No	
Pay employees		SKIP TO F41
Pay suppliers		
Receive payments from customers		
Receive payments from suppliers		
Make investment, e.g., buy new equipment or expand the office or business building		
Pay business associated expenses, including rent, taxes, utility and transportation bills		
Pay for agricultural inputs (seeds, pesticides, fertilizers, etc.)		
Other (specify) _____		
I do not use my mobile money account to make these transactions		

F40. You said you do not use a mobile money account for any payments or purchases. Please tell me why.

DO NOT READ. CODE INTO THE FOLLOWING CATEGORIES. ALLOW FOR MULTIPLE ANSWERS.	
I do not have a business	1
I will have to pay extra taxes	2
I will have to pay bribes to government officials to avoid taxation/licensing/paper work	3
My business is not registered, it is not formal	4
To pay account fees I will have to raise prices and people won't buy from me	5
My business is too small to need a bank account	6
I use other methods of payment	7
Other (specify) _____	8
Don't know	98

F41. ASK ONLY IF AT LEAST ONE PROVIDER MARKED IN F31. OTHERS SKIP TO F46. Which of the following mobile money agents are the closest to where you live, regardless of what service you use?

READ OUT. SINGLE ANSWER.	
MTN Mobile Money	1
Airtel Money	2
M-Sente	3
Ezee Money	4
Vodafone M-PESA	5
Africell money	6
MCash	7
Micropay	8
Smart Money	9
Orange	10
Other (specify)	11

F42. ASK ONLY IF AT LEAST ONE PROVIDER MARKED IN F31. OTHERS SKIP TO F46. How do you usually get to a mobile money agent? Do you...?

READ OUT. SINGLE ANSWER.	
Walk	1
Use a motorcycle taxi or a mini-bus taxi	2
Use a regular bus	3
Have to take a train	4
The agent comes to me	5
Ride a bicycle	6
Ride in my own car or motorbike	7
Get a car/motorbike ride for free with a friend, relative or neighbor	8
Other (specify) _____	9
Don't know	98

F43. ASK ONLY IF AT LEAST ONE PROVIDER MARKED IN F31. OTHERS SKIP TO F46. Do you usually go to a mobile money agent at or near the following places?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
Your home	1
Your work	2
Where you shop for food	3
Near your children's school/childcare facility	4
Near a public transportation hub, for example, a bus stop or station	5
Near a shop where you go to charge your mobile phone	6
Near/at the shop where you buy airtime	7
Other (specify) _____	8
Don't know	98

F46. The next few questions are about informal financial services and service providers such as VSLAs – village savings and loan associations, ROSCAs (nigiina), or chamas. Have you ever used any of the following?

F47. ASK ONLY FOR OPTIONS MARKED “YES” IN F46. OTHERS GO TO F51. Apart from today when was the last time you used these services or service providers for any financial activity?

READ OUT.	F46. <i>Used</i>	F47. <i>Last used</i>
SINGLE ANSWER PER ROW.	1=Yes 2=No >> IF NO TO ALL, SKIP TO F51	1=Yesterday 2=In the past 7 days 3=In the past 30 days 4=In the past 90 days 5=More than 90 days ago 6=Stopped using altogether 98=Don't know
VSLA – village savings and loan association		
ROSCA (nigiina)		
Chama		
Other informal saving and credit group		
A money guard/ someone in workplace or neighborhood that collects and keeps savings deposits on a regular basis		
Savings collectors		
Shop keepers		
A digital card, a recharge card that is not attached to a bank or MFI account		
Money lenders		
Other group (specify) _____		

49. Which of the following services do these groups provide?

READ OUT. ACCEPT MULTIPLE ANSWERS.	
Give one member all the monies collected in one round (merry go round)	1
Lend money out to non-members who borrow and repay with interest added	2
Lend money out to members who borrow and repay with little or no interest added	3
Buy household goods, groceries, or food for members	4
Act as a guarantor or security for members	5
Invest the money in shares, company shares, or a business	6
Contribute money to purchase working tools	7
Purchase fixed assets like land or houses as a group or for members	8
Raise the money needed for funerals or emergencies (part or all)	9
Help members save money	10
Other (specify) _____	11
Don't know	98

F50. Which of these service providers or services is the most important to you?

READ OUT. SINGLE ANSWER.		
VSLA—village savings and loan association	1	SKIP TO F52
ROSCA (nigiina)	2	
Chama	3	
Other informal saving and credit group	4	
A money guard/someone in workplace or neighborhood that collects and keeps savings deposits on a regular basis	5	
Savings collectors	6	
Shop keepers	7	
A digital card, a recharge card that is not attached to a bank or MFI account	8	
Money lenders	9	
Other group (specify) _____	10	

F51. Why do you not have a membership with any of these groups?

DO NOT READ OUT. CODE INTO THE FOLLOWING CATEGORIES. ACCEPT MULTIPLE ANSWERS.	
You have an account in a bank or other formal institution	1
You don't have any money	2
People steal your money	3
You don't know about them	4
You don't need any service from them	5
You don't trust them	6
Groups require too much time in meetings	7
Another reason (specify) _____	8

F52. On a scale from 1 to 5, where 1 means “fully distrust” and 5 means “fully trust,” how much do you trust each of the following as financial sources?

READ OUT. SINGLE ANSWER PER ROW.	1=Fully distrust 2=Somewhat distrust 3=Neither trust nor distrust 4=Somewhat trust 5=Fully trust 98=Don't know
Banks and other formal financial institutions	
Bank agents	
Microfinance institutions	
Mobile money providers	
Mobile money agents	
Savings groups	
Friends, neighbors or relatives who borrow from/save money for me	

F53. What would be the main reasons for borrowing money?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.	
To start a new business or expand my business	1
To improve the cash flow situation of my business	2
To buy inputs (such as seeds, fertilizer, or pesticides)	3
To make big purchases (not inputs) such as land or modern equipment	4
For other agricultural activities	5
For emergency expenses	6
To pay for school fees	7
To cover daily expenses	8
Other (specify) _____	9
Don't know	98

F54. For your agricultural activities, how important to you is it to borrow from each of the following – very important, somewhat important, or not important?

F55. In the past 12 months, have you attempted to borrow from any of the following?

F56. If the need arose, would you attempt to borrow from any of the following?

READ OUT.	<i>F54. Importance</i>	<i>F55. Attempted</i>	<i>F56. Would attempt</i>
SINGLE ANSWER PER ROW.	1=Very important 2=Somewhat important 3=Not important 98=Don't know	1=Yes 2=No	1=Yes 2=No
Bank or other formal financial institutions			
Microfinance institution			
SACCO			
Cooperative			
Informal money lender			
Friends and family			
Other (specify) _____			

F57. What factors would you consider when you want to borrow money?

READ OUT. ALLOW FOR MULTIPLE ANSWERS.			
Quickest access to money	1	Best repayment terms	8
Most convenient to get to	2	Met minimum requirements	9
Best interest rates	3	Trust in a financial institution	10
Was desperate / no other options	4	Loan size	11
Recommended by a friend	5	Other (specify) _____	12
Easiest to use	6	Don't know	98
Have borrowed from them before	7		

F58. Do you currently have any loans?

SINGLE ANSWER.	
Yes	1
No	2

F59. How important is each of the following products to your agricultural activities – very important, somewhat important, or not important?

F60. Do you currently have any of the following products for your agricultural activities?

F61. ASK ONLY IF THE ANSWER TO F60 IS NO. Do you want to have any of the following products for your agricultural activities?

READ OUT.	F59. <i>Importance</i>	F60. <i>Currently have</i>	F61. <i>Want</i>
SINGLE ANSWER PER ROW.	1=Very important 2=Somewhat important 3=Not important 98=Don't know	1=Yes 2=No	1=Yes 2=No 98=Don't know
A loan that came with a bank account			
A loan that is accessed directly through a bank account			
A loan that is accessed through a mobile money account and linked to a bank account			
A loan that is accessed through a mobile money account			
A loan that came with a mobile money account			
A mobile money account that came with a smartphone			
A loan that came with an insurance plan (i.e., home, business, life, medical)			
A credit plan for school fees			
A goal savings plan or contractual savings plan for school fees			
A savings plan for inputs, such as seeds, fertilizers, or pesticides			
A payment plan for inputs, such as seeds, fertilizers, or pesticides			
A pre-paid card to make payments			
A pre-paid card for receiving income			
Other (specify) _____			

CGAP Smallholder Household Survey in Uganda (2015)

SAMPLE DESIGN

July 2015

The smallholder household survey in Uganda is a nationally representative survey with a target sample size of 3,000 smallholder households. The sample was designed so as to allow the production of reliable survey estimates for the following administrative 4 regions: Central, Eastern, Northern, and Western regions. The Central region includes central metro (i.e., 4 municipalities surrounding Kampala), the parishes in Kampala with poultry activity but it excludes Kampala city which is entirely urban.

The universe for the survey consists of smallholder households defined as households with the criteria outlined in Table 1.

Table 1. Criteria to identify the universe of smallholder households for the survey

Household with up to 5 hectares	AND	Agriculture provides a meaningful contribution to the household livelihood, income, or consumption
OR		
Farmers who have less than: 50 heads of cattle; or 100 goats/sheep/pigs; or 1,000 chickens		

Sampling Frame

The sampling frame for the smallholder survey is the list of enumeration areas (EAs) created for the 2014 Uganda National Population and Housing Census. Uganda is divided into 112 districts with each district comprised of counties/municipalities. Each county/municipality consists of sub-counties/town councils with each of them being further divided into parishes/wards and villages/cells.

For the 2014 population census, each village and cell was further divided into EAs. Information on the number of agricultural households at the EA level will be available in December 2015, and thus not on time for the smallholder survey. As a result, the sample allocation of the survey was based on the distribution of households per region and urban and rural (tables 2 and 3).

Table 2: Distribution of households per region and urban and rural (2014 Census)

Region	Rural	Urban	Total
Central**	1,284,685	587,901	1,872,586
Eastern	1,436,156	306,514	1,742,670
Northern	1,152,847	171,743	1,324,590
Western	1,575,224	332,606	1,907,830
Uganda	5,448,912	1,398,764	6,847,676

**Central includes central metro but excludes Kampala

Table 3: Percentage Distribution of households per region and urban and rural (2014 Census)

Region	Rural	Urban	Total
Central**	69%	31%	27%
Eastern	82%	18%	25%
Northern	87%	13%	19%
Western	83%	17%	28%
Uganda	80%	20%	100%

Sample allocation and selection

In order to take nonresponse into account, the target sample size was increased to 3,158 households assuming a household nonresponse rate of 5% observed in similar national households.

The total sample size was first allocated to the 4 regions proportionally to their number of households. Within each region, the resulting sample was then distributed to urban and rural areas proportionally to their size (Table 4).

Table 4: Sample allocation

Region	Rural	Urban	Total
Central**	592	271	864
Eastern	662	141	804
Northern	532	79	611
Western	726	153	880
Uganda	2,513	645	3,158

Given that EAs were the primary sampling units and 15 households were selected in each EA, a total number of 216 EAs were selected (Table 5).

Table 5: Distribution of the number of EAs

Region	Rural	Urban	Total
Central**	40	18	58
Eastern	44	10	54
Northern	36	8	44
Western	50	10	60
Uganda	170	46	216

The sample for the smallholder survey is a stratified multistage sample. Stratification was achieved by separating each region into urban and rural areas. The urban/rural classification is based on the 2014 population census. Therefore, 8 strata were created and the sample was selected independently in each stratum. Prior to the sample selection, the sampling frame was sorted by the 9 agricultural zones called Zardi (Zonal Agriculture Research Development Institute).

In the first stage, EAs were selected as primary sampling units with probability proportional to size, the size being the number of households in the EAs. A household listing operation was carried out in all selected EAs to identify smallholder households and to provide a frame for the selection of smallholder households to be included in the sample. In the second stage, 15 smallholders were selected in each EA with equal probability. Following some rounding, this yielded a total of 3,240 smallholder households.

In each selected household, a household questionnaire was administered to the head of the household, the spouse or any knowledgeable adult household member to collect information about household characteristics. A multiple respondent questionnaire was administered to all adult members in each selected household to collect information on their agricultural activities, financial behaviors and mobile money usage. In addition, in each selected household only one household member was selected using the Kish grid and was administered the single respondent questionnaire.

Sampling weights

The sample for the smallholder survey is not self-weighting, therefore sampling weights were calculated. The first component of the weights is the design weight based on the probability of selection for each stage of selection. The second component uses non-response rates at both household and individual levels.

The probability of selection of the EA is given by:

$$P_{1hi} = \frac{n_h \times M_{hi}}{M_h}$$

where

P_{1hi} = First stage probability of selection for the i-th sample EA in stratum h

n_h = number of EAs selected in stratum h

M_{hi} = number of households in the i-th sample EA in stratum h

M_h = total number of households for stratum h

The conditional probability of selection of households in the second stage of sampling is given by:

$$P_{2hi} = \frac{15}{L_{hi}}, \text{ where}$$

L_{hi} is the number of smallholders listed in the i-th sample EA in stratum h

The overall probability of selection for households in the i-th sample EA in stratum h is the product of the above probabilities of selection, that is:

$$P_{overall(hi)} = \frac{n_h \times M_{hi}}{M_h} \times \frac{15}{L_{hi}}$$

The design weight for households is the inverse of this overall probability, calculated as follows:

$$W_{hi} = \frac{1}{P_{overall(hi)}}$$

Where W_{hi} = design weight for households in the i-th sample EA in stratum h

The design weights for households were adjusted for nonresponse at the household level to produce adjusted household weights. Sampling weights for the multiple respondent data file were derived from

adjusted household weights by applying to them non-response rates at the individual level. For the single respondent data file, the same process was applied after taking into account the subsampling done within the household.

Finally, household and individual sampling weights were normalized separately at the national level so the weighted number of cases equals the total sample size. The normalized sampling weights were attached to the different data files and used during analysis.

Sampling errors

The sample design for the smallholder survey is a complex sample design featuring clustering, stratification and unequal probabilities of selection. For key survey estimates, sampling errors taking into account the design features will be produced using either the SPSS Complex Sample module or STATA based on the Taylor series approximation method.