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ZIMBABWE NATIONAL STATISTICS AGENCY (ZIMSTAT)

AND

MINISTRY OF AGRICULTURE, MECHANIZATION AND IRRIGATION DEVELOPMENT

AGRICULTURAL PRODUCTIVITY MODULE (APM) OF THE POVERTY, INCOME,
CONSUMPTION AND EXPENDITURE SURVEY (PICES)

SECOND ROUND 2017

ENUMERATOR INSTRUCTION MANUAL

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INTRODUCTION

INTRODUCTION AND BACKGROUND

The Agricultural Productivity Module (APM), is the first nationally representative survey on agricultural productivity in Zimbabwe. It is administered on a subsample of the on-going Poverty, Income, Consumption and Expenditure Survey (PICES) 2017, a survey that is conducted at five year intervals and is the building block for national accounts data and for measuring poverty and inequality in the country. The APM survey covers four agricultural sectors, namely A1 farming, the Small Scale Commercial Farming (SSCF), Communal, and the Old Resettlement Areas. The survey is being guided by a Technical Committee consisting of the Ministry of Agriculture, Mechanization and Irrigation Development (MAMID), the Zimbabwe National Statistics Agency (ZIMSTAT), and the World Bank through the Statistical Capacity Building Trust Fund. In turn, the APM Technical Committee operates under the auspices of the PICES Technical Committee.

OBJECTIVES OF THE SURVEY

The development objective of the APM Survey is twofold: First, to collect, disseminate, and analyse high-quality household level data on agriculture and welfare by introducing an additional innovative module to a subsample of the on-going PICES 2017. Second, to strengthen national capacity for the collection and policy relevant analysis of such data. This is done by working through existing institutions for data collection and analysis, supporting strong national ownership of the module and promoting institutional interaction between MAMID, ZIMSTAT, and researchers.

AGRICULTURAL PRODUCTIVITY

Agricultural productivity measures the relationship between agricultural output and corresponding inputs. In simple terms, agricultural productivity is the ratio of agricultural *outputs* to agricultural *inputs*. Given that most individual agricultural products are usually measured by weight, their varying densities make measuring overall agricultural productivity difficult. To this end, agricultural productivity can also be measured as the value of agricultural output per agricultural input (labour, land, etc.). These are called partial measures of productivity. When we measure productivity as the ratio of output to a specific input, it is called partial factor productivity.

Agricultural productivity may also be measured by what is termed total factor productivity (TFP). This method of calculating agricultural productivity compares an index of agricultural inputs to an index of outputs. This measure of agricultural productivity was established to remedy the shortcomings of the partial measures of productivity; notably, it is often hard to identify the other factors that caused them to change. Changes in TFP are usually attributed to technological improvements.

The literature is replete with a number of factors determining agricultural productivity (use of fertiliser, herbicide, pesticide, high yielding varieties, mechanization etc.), as well as the impact of agricultural productivity on livelihoods of those engaged in the primary sectors of the economy (e.g. impact on poverty, food consumption, food security, etc.). Understanding these linkages in the context of Zimbabwe is important for evidence-based policy making.

AGRICULTURAL INPUTS

Agricultural inputs are at the heart of rural marketing and rural development. The different types of agricultural inputs can be broken down into two broad categories namely, consumable inputs and capital inputs.

Consumable inputs are those that can be depleted or worn out by use. Examples include seeds (high yield varieties), fertilizers (manures), veterinary medicines, packaging materials (gunnies, ropes, twine), agrochemicals, oil and lubricants, cattle feed, among others.

- *Seed* can be defined as any part of the crop from which a new crop will grow. Loosely defined, a seed is any propagative part of a plant, such as tuber, spore, or bulb. Botanically, a seed is a fertilized ovule.
- *Fertilizers* come in organic and inorganic forms. Organic fertilizers are generally decomposed by-products or residues of living and non-living organisms; e.g. manure, composts, etc. Inorganic fertilizers are also referred to as chemical fertilizers and consist of macronutrients nitrogen, phosphorus, potassium, sulphur, calcium magnesium and other micronutrients. All nutrients fulfil specific functions in plants and cannot replace each other.

Capital inputs are tangible assets which include for example agricultural machinery (thresher, harvester), agricultural implements and tools (cultivators, tractors, levellers, irrigation, pump sets, motors, sheds, bullock carts, jeeps, sprayers, hoes etc.).

SAMPLE DESIGN

The APM survey focuses on rural smallholder households engaged in agricultural activities. Thus, urban and related Enumeration Areas (EAs)/households will not be covered. In addition, A2 and Large Scale Commercial Farming (LSCF) EAs/households will not be included.

A two stage sampling design will be used. The first stage will involve the selection of enumeration areas from the PICES sample EAs to be covered in March, April, and May 2017. The second stage will involve the selection of households from a sample of PICES households covered in these EAs. The table below gives the distribution of EAs and households to be included in the APM survey.

Table 1: Distribution of EAs and households to be included in the APM survey

Sector type	Number of PICES EAs in March, April and May	Number of EAs selected for APM	Households per EA selected for APM	Total number of APM households
Communal Areas	349	160	8	1,280
SSCF	9	9	14	126
A1, A2, LSCF	35	35	14	490
Old Resettlement Areas (A1, A2)	82	82	8	656
Urban	100	0	0	0
Other urban	1	0	0	0
Total	576	286		2,552

Table 1 indicates that:

1. 46% of EAs in communal Areas (CAs) will be selected for the APM sample. This translates to 160 EAs. In each of the 160 EAs, 8 out of the 14 PICES households will be selected for the APM.
2. All Small Scale Commercial Farming (SSCF) EAs will be included in the APM. In this sector, all 14 PICES households in each EA will be selected for the APM.
3. All A1 EAs within the A1 classification under the PICES will be included in the APM. In the A1 sector, all 14 PICES households in each EA will be selected for the APM, noting that A2 and LSCF sector type households will be excluded.
4. Old Resettlement Areas (ORAs) EAs, as per PICES classification, will be included in the APM, and in these EAs, 8 PICES households will be selected for the APM, noting that A2 sector type households will be excluded.

This sampling strategy allows for representativeness at national level as well as CAs, SSCF areas, A1 resettlement areas, and ORAs.

For logistical purposes, the APM committee adopted the following process in selecting households for enumeration under the APM:

- The sampling team scientifically selects the APM sample EAs from the EAs to be covered in March, April, and May 2017.
- The selected EAs are sent to the Provincial Supervisors.
- Provincial Supervisors and Team Leaders verify that the sampled EAs are in the correct APM agricultural sector types.

- The Provincial Supervisors then send a list of all the PICES households in the selected CAs and ORA EAs to the sampling team to select households to be interviewed in the APM survey.
- In case a selected household in the CAs and ORAs is not an agricultural household, a reserve of four extra households will be selected per EAs for replacement purposes.
- A list of selected APM households is sent back to the Provincial Supervisors.
- The Provincial Supervisors give this list of sampled households to the APM Team Leader.
- A census will be conducted for all the 14 PICES households in SSCF and A1 sector type EAs.
- All EA maps for the selected EAs for the APM survey to be provided by ZIMSTAT cartography section and these are sent to the Provincial Supervisors.

ROLE OF FIELD STAFF

TEAM COMPOSITION AND MOVEMENT

Teamwork is a crucial part of the APM field work. It is absolutely necessary for all levels of staff in the field to work well together, trying their best in any circumstance. Teamwork means that people will try to cooperate, using their individual skills and providing constructive feedback, despite any personal differences between individuals. Individuals in a team must know why they are in the team and their role in the survey, i.e. to collect high-quality household level data on agriculture and welfare.

There will be eight mobile teams, one per province. Each mobile team will comprise a team leader, a data entry person and five enumerators. The teams will be operating in a roving manner. This means that each team will move to an EA, interview all selected households in that EA including PLOT measurements, and then move to another EA. This will be done until all the EAs and households in the assigned province have been covered.

CONDUCT OF FIELD STAFF

Your presence, interest, participation and co-operation are absolutely vital for the successful completion of fieldwork. You will be provided with the necessary information, training, equipment and support in order for you to accomplish this very important task. In order for the workload to be equally divided and the support equally shared, the following have to be observed and enforced:

- a) Every position in the survey staff is vital to the success of the survey.
- b) Except in cases of illness (where the team leader or enumerator himself or herself falls ill), any person who is absent from duty during any part of training or fieldwork without prior approval from the supervisor or team leader will face disciplinary action.
- c) There is a great deal of work to be done during the training days and unnecessary absenteeism, lack of seriousness in attending the training sessions or arriving late at an assigned work site will not be tolerated.
- d) Maintaining your position is based on competence, therefore your performance and ability must be high both during training and fieldwork.
- e) Throughout the survey training and fieldwork period you must bear in mind that you are representing ZIMSTAT. Your conduct must be professional and your behaviour must be congenial in dealing with the public. You must always be aware of the fact that we are only able to do our work with the goodwill and co-operation of the respondents.
- f) For the success of the survey, the APM field staff must work closely together, sharing problems, co-operating and supporting each other. Tasks will be assigned in a manner that enhances the co-operation and goodwill of each APM team. Any member of the field staff who creates a disruptive influence on others will be liable to disciplinary action.
- g) It is absolutely essential that the data gathered during fieldwork be both accurate and valid. To control inaccurate or invalid data, spot checks will be conducted.
- h) All electronic gadgets – laptops, GPS, and WiFi hotspots – should be kept secured at all times.

ROLE OF ENUMERATOR

Enumerators are an essential part of the survey process and serve a very valuable role. He or she is the link between the questionnaire and the sample unit, in this case the selected household. The position held by the enumerator may seem low in the survey hierarchy but the ultimate success of the survey depends on the quality of each enumerator's work.

In general, the duties of the enumerator within the scope of the APM will include:

- a) Publicising the survey and approaching local authorities as well as community leaders to introduce oneself and the survey.
- b) Identifying the selected households and persuading them to participate in the survey. The list of households will be supplied to the enumerator by the APM team.
- c) Identifying the most competent respondents and gaining their cooperation.
- d) Interviewing households and recording responses.
- e) Making repeated visits at appropriate times to households to make sure that all questions/sections in the questionnaire are filled correctly and accurately.
- f) Checking completed questionnaire sections to make sure that all questions were asked and the responses were recorded accordingly. This is to be done immediately after completing the questionnaire and before leaving the household.
- g) Making call back visits at appropriate times if needed.
- h) Complete the number of assigned households to be interviewed per day for the duration of the survey.
- i) Keep the questionnaires safe until they are handed over to the team leader for checking.

It should always be borne in mind that “*high quality work*” depends on:

- *Good training*: Enumerators must know what they have to do;
- *High morale*: they must wish to do what they have to do; and
- *Close supervision*: they must be informed as soon as possible when they make mistakes.

A positive attitude is important for an enumerator: enumerators with a positive attitude have a better chance of gaining the cooperation and confidence of respondents.

These tasks and many others will be described in more detail throughout this manual and during the training sessions.

ROLE OF TEAM LEADER

The primary responsibility of a supervisor/team leader is to manage the enumerators to ensure the successful completion of the collection of high quality data in a given time period of the fieldwork. The supervisor is expected to record information about the fieldwork by completing the fieldwork forms, which track the status of completion of the work in the field, document problems in the field and

solutions taken to resolve these problems. Specifically, the team leader tasks include, but are not limited to the following:

1. Introduce the survey team and enumerators in the communities and households where the survey is administered.
2. Review questionnaires and check that they have been correctly filled in. Provide feedback on reviewed questionnaires as quickly as possible to enumerators
3. Monitor and attend some interviews and make comments on the enumerator's performance.
4. Meet frequently with each member of the team to discuss, improve and organize work.
5. Help enumerators to solve problems they encounter in dealing with respondents who are not responsive to questions or refuse to be interviewed.
6. Manage the team's work schedule, including tracking questionnaires completed in the field and questionnaires that require correction by enumerators.
7. Communicate with ZIMSTAT, Provincial and Headquarters staff regarding field issues, as and when necessary.
8. Keep the completed questionnaires safe until they are submitted in line with ZIMSTAT protocol.
9. Keep survey materials and equipment, including laptops, Wi-Fi hotspots, GPS gadgets, etc. safe and accounted for at any point.
10. Meet on daily basis with the data entry person to review the CSPro error report and any inconsistencies in the data collected. This will ensure

Unlike other surveys, this survey would have field teams comprising the team leader, data entry person and five enumerators, who will be operating in a roving manner. The team leader is responsible for the work allocated to his/her team and for assisting each member of the team in carrying out his or her job. The team leader will provide feedback to the ZIMSTAT management team at all stages of the work.

In addition, the team leader is charged with the responsibility of helping the enumerators identify the households that have been allocated to them, resolving any problems with reluctant households, observing interviews and making checks by visiting the households after the survey to verify some of the data. Enumerators would give the team leader their completed questionnaires, which s/he should review on a daily basis. Upon review, the team leader will either reject or accept the completed questionnaire depending on gaps, errors, and inconsistencies, if any. The team leader will need to work with the enumerator to discuss these errors. The enumerator should return to the household to re-ask any problematic questions or to obtain any missing information. The corrected questionnaire would be sent back to the team leader for review. This process continues until there are no errors or none that can be resolved. At this point the questionnaire/interview is considered complete and approved by the supervisor.

ROLE OF PROVINCIAL SUPERVISOR

The Provincial Supervisor is responsible for all PICES/APM activities in the province. He or she is the link between the field staff and Head Office survey staff. The responsibilities include:

- a) Assigning work to team leaders, including allocation of EAs to be covered by each team during data collection.
- b) Contacting provincial, district and other authorities as a way to publicise the survey.
- c) Monitoring the progress of the survey in the whole province through:
 - supervising team leaders
 - conducting quality control and spot checks in the field
 - observing interviews during field supervision
 - editing questionnaires in the field and in the office and verifying that the quality of work is of acceptable standard.

TRAINING OF ENUMERATORS

It is understandable that some enumerators are naturally more adept at soliciting information from respondents than others. Enumerators with considerable experience tend to get lower nonresponse rates than enumerators with less experience. It is also acceptable that one can become a good enumerator through experience and training. This training is aimed at making the best use of these two attributes. Hence the training will consist of classroom instruction and some practical exposure. Since every survey is unique, you are all required to actively participate in the training. Learning anything takes a little time. Before each training session you should study this manual carefully along with the questionnaire. You must allow time for new ideas to sink in; and be prepared to go slower with hard stuff. Write down any questions you may have. Mentally label everything you must learn as one of 3 categories: *must know*, *should know*, and *could know*.

‘*Must know*’ are indispensable. Focussing your mind on what goes into which category aids effortless learning. Spend enough time on ‘*must know*’ and ‘*should know*’.

Ask questions you might have at any time in order to avoid mistakes during the actual administration of the questionnaire. At every stage, you must bear in mind that enumerators can learn a lot from each other by asking questions and talking about situations they encounter in the field practice and actual fieldwork situation.

During this training session, you will be exposed to;

- a) General fieldwork instructions.
- b) Detailed discussion of questionnaire sections and manual.
- c) Classroom and homework assignments. Some of these assignments will have to be done in the evenings.
- d) Field practice will entail collecting information from households and discussion of experiences after the practice.
- e) Written tests will be administered during the course of the training and these tests are meant to assess your performance during your formal training. These tests will indicate your familiarity and understanding of survey concepts and definitions, the questionnaire and the survey process. At the end of the training session your strengths and weaknesses will be pointed to you with a view to correcting you before the start of actual fieldwork.

The training for the APM does not end when the formal training is completed. The supervisor will continue to discuss with you while in the field, an opportunity which should be utilised to continue your training and reinforcing of your knowledge. The formal training period merely provides you with the basic knowledge and information regarding the survey, questionnaires, etc. Thus continued observation and supervision during fieldwork completes the training process. It is imperative that you discuss and forward to your supervisors, problems which you may run into (during fieldwork) but might have not been covered during training.

As has already been pointed out that training will continue during data collection, this will be done through the following supervisory tasks;

- a) Observation of some of your interviews to ensure that you are conducting the interviews correctly, asking questions in the right manner and interpreting the ideas correctly.

- b) Reviewing each questionnaire to make sure that it is complete and is internally consistent.
- c) Meet with each member of the team on a regular basis to discuss performance and future work assignments.
- d) Help you to solve any problems you may be having with the selected households.

It goes without saying that you must be suitably equipped or you may fail to complete the journey. You should be able to tackle any interview situation without undue difficulty after this training. Short cuts are fraught with danger.

Appropriate action will be taken for those who will not perform at the level necessary to produce high quality data required to make the APM a success.

CONDUCTING AN INTERVIEW

Successful interviewing is an art and not a mechanical process and each interview is a new source of information to be made interesting and exciting. Although the art of interviewing develops with practice, there are basic principles e.g. on how to build rapport, conducting interviews etc., which are followed. It is essential for enumerators to develop the correct attitude in carrying out interviews. Some of the essential and necessary attributes of a good enumerator or enumerator are: *politeness, patience and perseverance*. These terms are defined in more detail in subsequent paragraphs.

ESTABLISHING RAPPORT WITH THE RESPONDENT

The enumerator and the respondent are strangers to each other and one of the main task is to establish rapport. The first impression a respondent has of you is formed through your appearance. The way you dress, your voice, gender and age may determine whether your interview is successful or not. The enumerator's demographic characteristics i.e. gender and age play a role, in combination with similar respondent characteristics and the survey topic. Several refusals in a row might affect an enumerator's ability to approach the next household. So the respondent and enumerator interaction determines the decision of the respondent to cooperate or refuse. Dress neatly and simply. A positive attitude enhances the chances of gaining cooperation from respondents. The enumerator should assess each situation and tailor his or her approach based on prior information, perhaps obtained at the initial contact.

The survey would have been publicised such that the respondent may be expecting your visit. However, always carry your official identification card with you.

APPROACHING THE DWELLING

Use a direction that appears to be well used as an entrance. Do not straddle fences or any other property boundaries. Ask locals or neighbours your way to the next dwelling unit when in doubt. Try not to arrive at the selected household at an inconvenient time of the day, such as mealtimes, or too late or too early in the morning. Try to arrive when the respondents will not be too busy to answer questions.

Make a good first impression

Always do your best to make the respondent feel at ease on your first visit. With a few well-chosen words, you can put the respondent in the right frame of mind for the interview. Open the interview with a smile and greetings and then proceed with your introduction as specified on your questionnaire. A good introduction of yourself, the organization you are representing, the purpose of your visit and what sort of demands you are going to place on the respondent should all be briefly articulated to the respondent. You must be well versed in the local traditional forms of greetings (especially in rural

settings). Avoid mumbling and waffling. By the end of this training session it is hoped that these equally important aspects would have been covered fully.

Make sure that the respondents do not confuse you with others who might be visiting households for other reasons; for instance, malaria campaign.

If the respondents refuse to be interviewed, note the reasons on the questionnaire and inform your team leader who will take an appropriate decision. In such a circumstance, remain calm and polite at all times. Prior to declaring a household a total refusal, the enumerator must have applied the three Ps which stand for *Politeness*, *Patience*, and *Perseverance*.

- *Politeness* is best expressed as the practical application of good manners. The goal of politeness is to make all parties relaxed and comfortable with one another. It is a cultural phenomenon and therefore what is considered polite in one culture can sometimes be quite rude in another culture. Politeness must therefore seek to establish a positive relationship between parties.
- *Patience* is the state of enduring under difficult circumstances which can mean perseverance in the face of delay or provocation without acting on annoyance in a negative way, especially when faced with difficulties.
- *Perseverance* is the maintenance of effort in spite of difficulties encountered, it implies steadfastness, unremitting continuance in spite of problems or challenges faced.

Always adopt a positive approach

Never be apologetic and do not use words like, "Are you too busy?" "Would you spare a few minutes?" or "Would you mind answering some questions?" Such questions obviously invite refusals before you start. "I would like to ask you a few questions" or "I would like to talk to you for a few minutes" Such statements may mislead the respondent to think that your mission is unimportant and invite refusal. You can proceed as follows:

"Hello, I am (Name) from the Zimbabwe National Statistics Agency (ZIMSTAT) and I am here to collect data on Agricultural Productivity Module (APM). All the data collected in the Survey is strictly confidential and will be published in aggregated form where personal information of the individual such as names and addresses will not be recognised."

Note again that, a positive attitude increases the chances of gaining cooperation from respondents.

- a) It is essential that you stress the confidentiality of all responses. You should never mention other interviews or show completed questionnaires to other enumerators or supervisors in front of a respondent or any other person.
- b) Avoid the presence of persons other than members of the household during the interview.

The presence of third parties during the interview may prevent you from getting honest and frank responses from the respondent. It also violates the rule of confidentiality. It is necessary that the interview is conducted as privately as is possible. A tactful attempt should be made to get rid of third parties.

Answer any questions from the respondent frankly

The respondent may ask a few questions before agreeing to be interviewed. Be direct and pleasant and display your knowledge and understanding of all aspects of the questionnaire and the survey.

TIPS ON CONDUCTING THE INTERVIEW

Be neutral throughout the interview.

People are generally polite and may give answers they think you want to hear. Never allow the respondent to think that s(he) has given a right or wrong answer by an expression on your face or tone of your voice. Never appear to approve or disapprove any of the respondent's answers. Refer any questions raised by the respondent to the end of the interview. Note that questions are carefully worded to be neutral and do not suggest that one answer is more likely or preferable to another. Failing to read the complete question may destroy that neutrality. If an ambiguous answer is given, try to probe in a neutral way by asking like this: "*Can you explain a little more, I did not quite get you, could you please repeat what you said again?*"

- a) *Never ever suggest answers to the respondents.* For example, "*I suppose you mean that -----, is that right?*" Rather probe, that is, asking questions in such a manner that the respondent comes up with the relevant answer.
- b) *Do not change the wording or sequence of questions.* The wording and sequence of the questions must be maintained. If the question has been misunderstood, repeat it slowly and clearly. If it is not clear, you may reword the question but without altering the meaning of the original question.
- c) *Handle hesitant respondents tactfully.* A respondent may simply say, "*I don't know*", or may give an irrelevant answer or may act bored or detached or may contradict themselves or may refuse to answer. Try to instil interest of the respondent by spending a few moments talking about things unrelated to the interview. In doing so, please avoid engaging in potentially controversial topics or subjects such as politics, football, religion, etc. Confine your conversation to neutral topics such as the weather, agriculture and livestock, comments on the garden, etc. Do not interrupt the respondent or show any signs of impatience (*remember the 3 Ps*) when the respondent is giving irrelevant or elaborate answers. Listen to what she or he has to say and try to steer her or him back to the original question. Listening is an essential part of a two-way communication.
- d) *Do not form expectations.* You must not form expectations as to what is supposed to be the agricultural activities of the households. Also remember that differences between you and the respondent can influence the interviewee.
- e) *Do not hurry the interview.* Hurrying the interview may lead to errors in recording responses. You may also not get the correct and accurate answers from the respondent as he or she might not have fully understood or digested your question(s).

LANGUAGE OF INTERVIEW

The questionnaire for the APM has not been translated into all the major languages. It has, however, been translated into Shona and Ndebele for reference purposes by the enumerator. It is therefore imperative, that each team works out translations that fit the local dialects and culture where possible. It is very important not to change the meaning of the questions when you rephrase or interpret them. These additional translations should be done during the training and before the commencement of field work.

FIELD PROCEDURES

PREPARATORY ACTIVITIES

Each team member must ensure that s(he) has sufficient materials and is aware of the role to be performed. Each team will be provided with questionnaires, enumerator manuals, a list of selected EAs/households (the sample), EA maps, an official ID/letter, GPS gadgets, among other materials.

HOW TO READ THE QUESTIONS

Each question should be read clearly and exactly as presented in the questionnaire. In cases where there has to be translation, the question should be translated as literally as possible. You should make sure that the way the question is read preserves the sense of the English question, rather than a word by word translation. If you have questions about how to phrase a question, you should ask your supervisor and refer to your notes from the training, where the phrasing of questions in local language will be discussed in detail. After reading the question, time should be allowed for the respondent to answer. If it appears the respondent did not hear the question, it should be read again and time allowed for a response.

RECORDING RESPONSES

It is important that, as much as possible, all questions have recorded responses. Consistency is also critical. For each survey conducted, each attribute is checked for accuracy, even from one survey to another, such that at regional and international level, the quality is assessed.

The APM questionnaire is divided into 20 sections. Complete the questionnaire in order of sections. The types of questions to be encountered on the questionnaire include those with:

- Open ended responses where one must write the respondent's answer in the spaces provided e.g. age; answers in words where paraphrasing should keep the meaning accurate e.g. for occupation.
- Pre-coded responses where the possible answers are listed on the questionnaire, and to record the answer you merely write the appropriate code in the space provided. Ensure that for any response coded '*Other specify*' you specify the response given. To record any other response, first write the appropriate code for *other specify* in the response options, followed by the detailed specification. The responses are critical during analysis as well as for improvement of future survey response options.

Also, note the following in recording responses:

- *Question*: It is to be read literally to the respondent based on which information required in the survey is obtained. Each question is numbered.
- *Answer modality*: These are possible answers where the enumerator selects an answer code, which is closest to the respondent's answer. Pay attention that in many questions, there are no offered modalities but measured units to be used in the answer (year, km, kg, etc.).
- *Answer box*: It is a place where a given answer is to be recorded.
- *Instruction to enumerator*: These are printed in CAPITAL letters and facilitate survey implementation.

- *Skip patterns:* Questions are normally asked in order; one after another. However, in some cases, a given answer defines which question to ask next or which question is to be skipped. The questionnaire uses the sign ►, which shows which question is to be skipped.

THE RIGHT WAY OF ASKING QUESTIONS

Unless, otherwise indicated, all questions should be asked row-wise and answers recorded accordingly. For instance, if the enumerator is in section 5, he/she must ask all the questions under this section for the first PLOT on PARCEL one before proceeding to the next PLOT on PARCEL one. Asking questions row-wise ensures that we get the correct and unique information for each row item. Enumerators should desist from repeating the same response for all PLOTS or row categories.

10.	
What was main the source of this <u>FREE SEED</u> for [CROP] that you used on [PLOT] this agricultural season 2016/2017?	
GOVERNMENT/EXTENSION OFFICERS	1
NGOs.....	2 ►12
AGRICULTURE INPUT DEALER.....	3 ►12
FELLOW FARMER	4 ►12
OTHER (SPECIFY)	5 ►12

THIS INDICATES SKIP TO Q12 IF THE RESPONSE TO Q10 IS 2, 3, 4 OR 5

UPPER AND LOWER CASE TEXT

Unless otherwise stated, text written in UPPER case (CAPITAL) letters are instructions to the enumerator and should NOT be read to the respondent. Other text that you will see written with upper case letters are lists and codes. These also should NOT be read to the respondent.

Text written in lower case (small) letters SHOULD be read directly to the respondent.

For example, in Question 1 (see Table below), you should read: “*What is the total area of all your land holdings?*” You should NOT read the text below because it is written in UPPER case (CAPITAL) letters. The text in upper case letters is an instruction to you, the enumerator.

1. What is the total area of all your land holdings? ENUMERATOR: ASK THE FARMER TO ESTIMATE THE AREA. <div style="text-align: right;"> UNITS ACRES 1 HECTARES 2 SQUARE METERS 3 </div>		2. Of all your land holdings, what is the total area of the arable land? ENUMERATOR: ASK THE FARMER TO ESTIMATE THE AREA. <div style="text-align: right;"> UNITS ACRES 1 HECTARES 2 SQUARE METERS 3 </div>	
NUMBER	UNIT	NUMBER	UNIT
— — — — . — —		— — — — . — —	

HOW TO USE FLAPS

There are fourteen (14) flaps in the APM second round Questionnaire, each applicable to a given section(s). The flaps should be opened and used for the applicable section(s) only. The following are the flaps and their applicable sections:

- | | |
|-------------------------------------|--------------------------|
| 1. HOUSEHOLD ROSTER FLAP: | For Household Roster |
| 2. PARCEL FLAP: | For section 1 |
| 3. PLOT FLAP: | For sections 2, 3, and 4 |
| 4. CROPS ON PLOT FLAP: | For sections 5 and 6 |
| 5. CROP FLAP: | For section 7 |
| 6. HARVESTED CROPS FLAP: | For sections 8 and 9 |
| 7. INPUT COST FLAP: | For section 10 |
| 8. COMMAND AGRICULTURE FLAP: | For section 11 |
| 9. AGRICULTURAL CAPITAL FLAP: | For section 12 |
| 10. AGRICULTURAL CAPITAL USE FLAP: | For section 13 |
| 11. ANIMAL HOLDINGS FLAP: | For section 14 |
| 12. ANIMAL COSTS FLAP: | For section 15B |
| 13. AGRICULTURAL BY-PRODUCT FLAP: | For section 16 |
| 14. EXTENSION SERVICES SOURCE FLAP: | For section 18B |

PUBLICITY

Publicity should be done properly and effectively at national, provincial, district and local levels.

- At the national level: Insertions can be made in the local media such as newspapers, radio, and TV.
- At the provincial level: Publicity at this level can be done by sending letters to the Provincial Administrators, Town Clerks, District Administrators, Police Chiefs, and other influential person.
- At the district level: Letters can also be sent to the following: District Administrators, Police and other influential people.

At the local level: Team Leaders and Enumerators should contact the local leadership (Ward Chairperson/ Councilor, Chief, Village Chairperson, and Headman), police and other influential persons before the onset of data collection in every EA.

THE APM SECOND ROUND QUESTIONNAIRE

OVERVIEW OF THE APM SECOND ROUND QUESTIONNAIRE

Below is an overview of the APM second round questionnaire. In what follows, we take each section and delve deep into individual questions, emphasizing the rationale for each question.

- COVER PAGE
- HH1: HOUSEHOLD ROSTER
- AG1: PARCEL ROSTER & DETAILS
- AG2: PLOT ROSTER, DETAILS & GPS MEASUREMENTS
- AG3: AGRICULTURAL LABOUR
- AG4: INPUT USE ON PLOT
- AG5: SEED ACQUISITION
- AG6: FIELD CROP HARVEST
- AG7: PURCHASED SEEDS
- AG8: FIELD CROP DISPOSITION
- AG9: AGRICULTURAL LABOUR – POST-HARVEST ACTIVITIES
- AG10: INPUT ACQUISITION & COSTS
- AG11: COMMAND AGRICULTURE
- AG12: AGRICULTURAL CAPITAL
- AG13: AGRICULTURAL CAPITAL USE
- AG14: ANIMAL HOLDINGS
- AG15A: PASTURE
- AG15B: ANIMAL COSTS & PRODUCTION SYSTEMS
- AG16: AGRICULTURAL PRODUCT & BY-PRODUCT
- AG17: SOURCES OF ENERGY FOR AGRICULTURAL ACTIVITIES
- AG18A: EXTENSION SERVICES (TOPIC)
- AG18B: EXTENSION SERVICES (SOURCE)
- AG19: CREDIT
- AG20: FOOD SECURITY
- AG21: DIETARY DIVERSITY

THE AGRICULTURAL SEASON 2016/17

Throughout the questionnaire, “*the agricultural season 2016/2017*” is mostly used as a reference period. The *agricultural season 2016/2017* refers to as an agricultural season that occurs between October 2016 and September 2017.

PREFILLING THE QUESTIONNAIRE

The following sections should be pre-filled using information from the already completed first-round questionnaire for the households concerned:

- Cover page
- Household Roster
- Parcel Flap
- Plot Flap
- Crops on Plot Flap
- Animal Holding Opening Stock

Information to be used in prefilling these flaps will be provided to you in what is called “**Prefilled Sheets/Forms**”.

ASPECTS TO BE PREFILLED IN THE QUESTIONNAIRE

SECTION	QUESTION NUMBER
COVER PAGE	HOUSEHOLD IDENTIFICATION
HH ROSTER	Q1, Q2, Q3, Q4
PARCEL FLAP	PARCEL ID, PARCEL NAME AND DESCRIPTION, Q0
PLOT FLAP	PARCEL ID, PLOT ID, PLOT NAME AND DESCRIPTION, Q0a, Q0b
CROPS ON PLOT FLAP	PARCEL ID, PLOT ID, CROP NAME, CROP CODE
ANIMAL HOLDING	Q02

The prefilled sheets/forms are handed out by the team leader to each enumerator, and the sheet should contain the prefilling information of the household with which the enumerator is assigned to conduct an interview. Before the enumerator approaches the household for an interview, preferably the night before, the enumerator should carefully and accurately transfer all the information on the prefilled sheet/form to the corresponding pages/questions of the questionnaire. The team leader must check whether the prefilling has been done correctly and ensure that no omission or error has been made. In addition, each team will be provided with a soft copy of the prefilling data file to cross check with the information contained in the prefilling sheet/form.

A sample prefilling form is presented in Appendix A.

HOW TO PREFILL THE COVER PAGE

The enumerator should prefill the cover page using the cover page prefilling sheet which is already filled with the information from the first-round. The prefilling sheet will contain the same information from the first-round cover page and the necessary household identification information. The enumerator should ensure that the information entered on the cover page of the second-round questionnaire correspond to the information contained in the prefilling sheet provided for the respective household. **QUESTIONNAIRE _ OF _ TOTAL** should NOT be prefilled. It should be left blank.

HOW TO PREFILL THE HOUSEHOLD ROSTER

The enumerator should prefill Q01-Q04 of the household roster using the household roster prefilling sheet which is already filled with the information from the first-round. The information should be transferred in such a way that there is 100 percent consistency between the information contained in the prefilling sheet/form and what has been written in the household roster flap of the questionnaire.

HOW TO PREFILL THE PARCEL FLAP

The enumerator should prefill Parcel ID, Parcel name, and Q0 (sector type) of the Parcel Flap using the parcel prefilling sheet which is already filled with the information from the first-round. The information should be transferred in such a way that there is 100 percent consistency between the information contained in the prefilling sheet/form and what has been written in the parcel flap of the questionnaire.

HOW TO PREFILL THE PLOT FLAP

The enumerator should prefill Parcel ID, Plot ID, Q0a, and Q0b of the Plot Flap using the plot prefilling sheet which is already filled with the information from the first-round. Further to ensuring consistency

between the prefiling form and the transferred information on the plot flap, care should be taken not to mix the Parcel ID and Plot ID combinations.

HOW TO PREFILL THE CROPS PLOT FLAP

The enumerator should prefill Parcel ID, Plot ID, Crop name, and Crop code of the Crops on Plot Flap using the prefiling sheet which is already filled with the information from the first-round. Again, care should be taken not to mix the Parcel ID and Plot ID as this will negatively impact the outcome of the exercise.

HOW TO PREFILL THE ANIMAL HOLDING OPENING STOCK

The opening stock for the animal holding in this visit, Q02 (for January 1, 2017) is obtained from the closing stock, Q03 (for December 31, 2016) of the first-round visit. This opening stock is provided on the animal holding prefiling sheet and the enumerator must carefully transfer the values indicated on the sheet on to Q02 of the animal holding section, for each [ANIMAL]. Once the transfer has been carefully done, the enumerator must go to the animal holding flap and answer YES for each [ANIMAL] with a non-zero value in Q02. This must be done before visiting the household, preferably, the night before. Further, the enumerator must then ask the respondent if his/her household owned any [ANIMAL] between January 1, 2017 and August 31, 2017 for those animals with no response yet. Once this is done, the enumerator must proceed with the rest of the questions in the animal holding section for those animals with a yes response on the flap.

START AND END DATE/TIME, AND PRIMARY RESPONDENT

For each section of the questionnaire, the enumerator must provide the start date and time, the end time as well as the primary respondent. It is important that the enumerator records the start date/time before commencing the interview of a module, as well as the end time once the interview is completed. The primary respondent is the person who provides most of the responses for the section.

HH1: HOUSEHOLD ROSTER

The flap in this section must be filled out before asking any other question in the Roster. That is, questions 1, 2, 3, and 4 will be prefilled and questions 5 – 11 will be completed when the enumerator visits the household, as well as update the roster where necessary. The enumerator should enquire if new persons have joined the household since the last interview. All persons that have joined the household since the last interview should be written immediately below the list of persons already prefilled in the flap. New members of the household should be recorded systematically starting with adults who are related to the head of household, their children, if any, and the names of the adult persons who are not related to the head of household and their children, if any. Children, especially babies, are usually forgotten when listing members of households in many population censuses and surveys, but this should not be the case in this exercise. For new members that joined the household since the last visit, once their names have been listed below the old members in Q01, only Q02 should be filled for them on the flap, leaving Q03 and Q04 blank. Thus, once Q02 has been answered, the interviewer should skip to Q05 for all new members, as indicated in the instruction for Q02.

In filling the household roster, the respondent should preferably be the head of the household. If the head is absent, then a responsible and knowledgeable adult, preferably the spouse of the household head should be interviewed.

Provision is made for 15 household members. If there are more than 15 household members, a second household questionnaire should be used and the first person on the added questionnaire should be number 16 and so on. **The enumerator should confirm that the household head here is the same as the household head listed on the cover page.**

- Q01:** You **MUST** obtain a list of household members. Members of the household are defined as all individuals who normally live and eat their meals together in the household. These may include persons who are not related, such as live-in domestic workers, as well as temporarily absent members who regularly participate in the household agricultural activities. Complete this question for each member before moving to the next question. First, prefill this question for old members listed during the first-round visit, from the prefilling sheet, and update with new members where necessary.
- Q02:** First, prefill this question for old members listed during the first-round visit, from the prefilling sheet. Second, ask for the sex of any new household member that has joined the household since the first-round visit. Do not try to guess the sex of a household member from the name provided to you. This can lead to mistakes. Even in cases where you think the name would most likely be a male's (or a female's) name, have the respondent confirm the sex. *Once the sex has been established for new members, please skip to Q05.*
- Q03:** This question is only for old members listed during the first-round visit, and it must be prefilled using the information from the household roster prefilling sheet. Do not solicit information for new members that joined the household since the last visit.
- Q04:** Similar to Q03, this question is only for old members listed during the first-round visit, and it has to be prefilled using the information from the household roster prefilling sheet. Do not solicit information for new members that joined the household since the last visit
- Q05:** Here, the enumerator should establish if the person is a NEW member added on this visit from the flap Q01. If "Yes", skip to Q08, otherwise, continue with Q06.
- Q06:** Ask if the person still lives in the household. Note that this question is for old members listed during the first-round visit. If **NO**, record 2 and cross out the individual ID of the person on the household roster flap. **SKIP INSTRUCTION:** If the response is "No", skip to next person. Otherwise, continue with Q07.
- Q07:** This establishes changes in headship and subsequently, changes in relationship to the new head. Ask how the household member is related to the head of the household. If the respondent is not the head of the household, make sure that you record the relationship of each person to the household head, not the relationship to the respondent. This question should be addressed to both old and new members, whether or not there has been a change in Headship since the last interview.
- Q08:** You are to obtain each person's age in completed years, that is, the age at the time of the last birthday. Note the instructions in UPPER CASE. Use the age determination table on the flip page and in Appendix B for reference. where appropriate. This question should be addressed to both old and new members.
- Q09:** This question is for all household members, and intends to establish if the individual has worked on any of the plots cultivated by the household or has been involved in taking care of the households' livestock in the last 30 days. **SKIP INSTRUCTION:** If the response is "Yes", skip to next person. Otherwise, continue with Q10.

Q10: If the response to Q09 is “No”, then Q10 wants to establish the main reason why the person did not work on the household’s cultivated plots or cared for livestock in the last 30 days.

AG1: PARCEL ROSTER & DETAILS

This module is to be administered to the most knowledgeable household member regarding the household farm operations, who may be assisted by other farm managers and farm workers within the household. Before delving into the contents of this section, it is important to know the definitions and distinction between parcels and plots in the context of Zimbabwe.

Definition of Parcels and Plots

In this agricultural productivity module survey, we identify both PARCELS and PLOTS that are owned or cultivated by the sampled households.

A **PARCEL** is a continuous piece of land that is NOT split by a river or a path wide enough to fit an ox-cart or vehicle. A **PARCEL** can be made up of **ONE** or **MORE** plots.

A **PLOT** is a continuous piece of land on which a unique crop or a mixture of crops are grown, under a uniform, consistent crop management system. It **MUST** be a continuous piece of land and **MUST NOT** be split by a path of more than one metre in width. Plot boundaries are defined according to the *crops grown* and the *operator*.

See Appendix C for examples of Parcels and Plots.

PARCEL and PLOT SKETCH

Note that the sketch of all parcels and plots from the first-round visit will be photocopied and handed over to the enumerator in addition to the prefilling forms. The photocopied sketch will have the geocode, province name and the name of the household head from the first-round visit. The enumerator should first re-sketch the parcel and plot, paying attention to the modifications that appear on the new sketch sheet. Second, if the household has acquired or used any new parcel and plot since the first-round visit, the enumerator should add that new parcel and corresponding plot(s) to the re-sketched sheet, indicating the location and direction of the new parcels/plots.

OPEN THE PARCEL FLAP ON PAGE 8

All parcels captured in the first-round visit should have had their information prefilled in the Parcel Flap. Before proceeding to the questions, the enumerator should mention the parcels listed from the first-round visit *to the respondent* and then **must** ask the respondent if there are any new parcels obtained since the last interview. New parcels should then be listed starting from the first available line after the prefilled parcels from the first-round visit. **IF THERE ARE MORE THAN 10 PARCELS, AN ADDITIONAL QUESTIONNAIRE MUST BE USED FOR THE ADDITIONAL PARCELS. IT IS NEVER ACCEPTABLE TO EXCLUDE A PARCEL IF THERE IS NO MORE SPACE ON THE QUESTIONNAIRE.**

You **MUST** have a detailed and focussed conversation with the respondent(s) using the SKETCH page of the questionnaire and make sure that the respondent(s) and you are discussing about the same PARCEL.

Q01: The enumerator should indicate whether the [PARCEL] is a newly added parcel in this visit. It is very important that this question is answered correctly since it will determine which questions

are asked for the parcel. **SKIP INSTRUCTION:** If the response is “Yes”, skip to Q07 on the same row. Otherwise, continue with Q02.

- Q02:** The enumerator should indicate if the [PARCEL] is a communal parcel based on Q0 of the parcel flap. **SKIP INSTRUCTION:** If the response is “Yes”, skip to next parcel. Otherwise, continue with Q03.
- Q03** Ask if anyone in the household still owns or cultivates the [PARCEL]. If the [PARCEL] is no longer owned or cultivated by someone in the household, we will want to know how it was disposed of. **SKIP INSTRUCTION:** If the response is “Yes”, skip to next parcel. Otherwise, continue with Q04.
- Q04:** We seek to know how the [PARCEL] that is no longer owned or cultivated by the household was disposed of. Ask the respondent and record the most appropriate option from the coded list. If the response does not correspond to a coded option, record ‘9’ (other specify) *and clearly specify*. **SKIP INSTRUCTION:** If any of options ‘1’ to ‘4’ is chosen, skip to Q06. If option ‘5’ and ‘8’ is selected, then skip to next parcel. Otherwise, continue with Q05.
- Q05:** This question is only asked for parcels that have been sold since the last visit (responded ‘6’, or ‘7’ in Q04). Ask for the total amount of money received from the sale of the [PARCEL] *including estimated value of any in-kind payments*. Record the total value in USD.
- Q06:** Find out the major reason for disposing of the [PARCEL]. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record ‘12’ (other specify) *and clearly specify*. **SKIP INSTRUCTION:** For all responses, skip to next parcel.

Q07-18 SHOULD ONLY BE ASKED FOR PARCELS ADDED ON IN THIS VISIT

- Q07:** For newly added parcels, obtain a description and the location of the [PARCEL]. The description should be detailed, such that it would be easier for you to identify and distinguish the [PARCEL] in the future. Use landmarks and physical demarcations for the description.
- Q08:** Ask for the sector type of this newly added [PARCEL]. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record ‘7’ (other specify) *and, clearly specify*. **SKIP INSTRUCTION:** For options other than ‘4’ (Communal), skip to Q10, otherwise, continue with Q09.
- Q09:** Given that the response to Q08 is Communal land (‘4’), this question asks for the person(s) in the household under whose name(s) the land was registered with the community heads/leaders. Refer to the household roster for the ID(s) of the person(s). Record UP TO TWO applicable member(s) from the household roster.
- Q10:** Each plot will be listed separately in the next section, but this question asks the respondent to report the total number of PLOTS found on the [PARCEL] based on your discussions with the respondent, and in accordance with the PARCEL vs. PLOT definitions.
- Q11:** Enumerator should indicate whether the [PARCEL] is under the communal sector or not based on the response to Q08. Note that households cannot own communal land. It is very important that this question is answered correctly since it will determine whether the subsequent questions will be asked for this parcel. **SKIP INSTRUCTION:** If the response is “Yes”, skip to next parcel. Otherwise, continue with Q12.

- Q12:** This question establishes whether any of the household members are owner(s) of the [PARCEL]. SKIP INSTRUCTION: If the response is “No”, skip to Q14. Otherwise, continue with Q13.
- Q13:** Ask which household member(s) is/are the owner(s) of the [PARCEL]. Refer to the household roster for the ID(s) of the person(s). Record UP TO TWO applicable member(s) from the household roster. Record ‘98’ in the first column if the [PARCEL] is owned by the entire household.
- Q14:** Ask which non-household member(s) is/are the owner(s) of the [PARCEL]. Here a SPOUSE LIVING ELSEWHERE refers to the wife/husband of the household head or a member of the household, who is currently residing outside the household, based on our working definition of a household. A RELATIVE is someone that has blood relations with the members of the household either matrilineal or patrilineal. If the [PARCEL] is owned only by household member(s), record ‘4’ (NONE).
- Q15:** This question establishes whether any of the household members have an ownership documentation that verifies the Rights of Occupancy to the [PARCEL]. Such a document ensures that the household owns the [PARCEL] legally and can use those documents as collateral or sell the land. SKIP INSTRUCTION: If the response is “No”, skip to Q18. Otherwise, continue with Q16.
- Q16:** This question seeks for the type of ownership documentation for the [PARCEL]. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record ‘6’ (other specify) *and clearly specify*.
- Q17:** Ask for household member(s) under whose name(s) the ownership documentation was or (were) acquired. Refer to the household roster for the ID(s) of the person(s). Record UP TO TWO applicable member(s) from the household roster. Record ‘98’ in the first column if it is under the entire household. SKIP INSTRUCTION: For any responses, skip to next parcel.
- Q18:** This question intends to understand why the household has not acquired ownership documentation or offer letter that verifies the ownership status of or the right of occupancy to the [PARCEL]. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record ‘5’ (other specify) *and clearly specify*.

AG2: PLOT ROSTER, DETAILS & GPS MEASUREMENTS

RESPONDENT: The ideal respondent for this section is the manager of each plot. If the manager is not available, then the respondent should be another adult member of the household, who is knowledgeable about operations on each plot.

One of the most important aspect of this section is the plot measurement. Plots that were not measured in the first-round phase **MUST** be measured in this visit, as well as newly added plots on this visit. The prefilling sheet will indicate which plots were not measured or incorrectly measured in first-round.

Each row of the section on the questionnaire represents a **single plot on a parcel**. Once plots are listed on the PLOT FLAP, all questions in this section should be asked per plot, starting with the first PLOT on PARCEL ONE, before moving to the next plot. Do not ask questions column-wise.

OPEN THE PLOT FLAP ON PAGE 27

All plots captured in the first-round visit should have had their information prefilled in the Plot Flap. Before proceeding to questions, the enumerator should mention the names of the plots on each parcel listed in the first-round visit *to the respondent* and then **must** ask the respondent about plots on new parcel(s) if the household has obtained any new parcel(s) since the first-round visit. New plots should then be listed starting from the first available line after the first-round plots. **IF THERE ARE MORE THAN 10 PLOTS, AN ADDITIONAL QUESTIONNAIRE MUST BE USED FOR THE ADDITIONAL PLOTS. IT IS NEVER ACCEPTABLE TO EXCLUDE A PLOT IF THERE IS NO MORE SPACE ON THE QUESTIONNAIRE.**

- Q0a:** Indicate whether the [PLOT] was measured using GPS in the previous visit. This information will be provided on the plot prefiling sheet and should be filled before proceeding to the field. For new plots, this question should be left blank.
- Q0b:** Indicate whether the [PLOT] has been cultivated during the previous visit. This information will be provided on the plot prefiling sheet and should be filled before proceeding to the field. For new plots, this question should be left blank.
- Q0c:** Enumerator should indicate whether the [PLOT] is a newly added plot in this visit. It is very important that this question is answered correctly since it will determine which questions are asked for the plot. SKIP INSTRUCTION: If the response is “No”, skip to Q26. Otherwise, continue with Q01.

Q01-25 SHOULD ONLY BE ASKED FOR PLOTS ADDED ON IN THIS VISIT

- Q01:** For plots on newly added parcels, obtain a description and the location of the [PLOT]. The description should be detailed, such that it would be easier for you and anyone else to identify and distinguish the [PLOT] in the future. Use landmarks and physical demarcations to describe the [PLOT].
- Q02:** Ask the farmer/owner/manager of the [PLOT] to give you the estimated size of the [PLOT] and the corresponding UNIT. Note that this question is about farmer’s recall and not the GPS estimates of the [PLOT]. Do not forget to write leading zeros where appropriate.
- Q03:** This question establishes whether the main decision maker(s) for the [PLOT] is/are a member(s) of the household and/or a non-household member(s). Note that the main decision maker(s) can be the manager, owner, the head of the household, the spouse of the head, any other person in the household, someone external to the household, or a combination of these. Decisions include what to plant, when to weed, when to apply fertilizer and other chemical inputs, renting out plots, sharecropping, etc. SKIP INSTRUCTION: If the response is “No”, skip to Q05. Otherwise, continue with Q04.
- Q04:** If the main decision maker(s) for the [PLOT] is(are) members of the household, refer to the household roster for the ID(s) of the person(s). Record UP TO TWO applicable member(s) from the household roster.
- Q05:** Ask which non-household member(s) makes (make) decisions for the [PLOT]. Here a SPOUSE LIVING ELSEWHERE refers to the wife/husband of the household head or a member of the household, who is currently residing outside the household, based on our working definition of a household. A RELATIVE is someone that has blood relations with the members of the household either matrilineally or patrilineally. If the [PLOT] is managed only by household member(s), record ‘4’ (NONE). If more than one response is given, solicit for the main person.

- Q06:** This question aims to link the manager of the [PLOT] provided in the previous page (Q04) to the one who is responding to the questions on the [PLOT] for this section. **SKIP INSTRUCTION:** If the response is “Yes”, skip to Q08. Otherwise, continue with Q07.
- Q07:** If any of the managers provided in Q04 is not responding here, then this question asks for the person in the household responding to the questions on the [PLOT] for this section. Refer to the household roster for the ID of the person. If possible, questions concerning an individual plot should be asked to the individual(s) who makes (make) decisions for the [PLOT]. *Do **NOT** assume this person will be the household head.*
- Q08:** This question establishes the ownership status of the [PLOT] or the capacity in which the household uses the [PLOT]. It also captures how the [PLOT] was acquired by the household. If the [PLOT] was acquired by more than one means, ask for the main means of acquisition. Note that this question is not interested in whether land has title deeds or not, or whether money changed hands or not. The real interest is how the present owners or controllers, **NOT** their parents or grandparents, got the access to that piece of land. Probe to record the right option for this question. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record ‘8’ (other specify) *and clearly specify*. **SKIP INSTRUCTION:** For options other than ‘4’ (Rented Short Term), skip to Q15. Otherwise, continue with Q09.

Owned by the household is the situation where the household has full ownership to the PLOT. There are several ways through which a household can claim ownership of PLOT – outright purchase with or without title, family inheritance, gift from another person/household, etc.

Rented plot is when a plot owner gives a plot to another person for a period of time on an oral or written agreement where a payment is made for the temporary use of the land. This is sometimes referred to as subletting. The payment may be in cash or in kind or both. We can have two types of rented plots – rented in and rented out.

Sharecropping refers to when the plot owner agrees to give out his/her land to a farmer/household for farming operations based on sharing the proceeds from the farm with the farmer/household after the harvest. The produce is shared based on an agreed formula or proportion. Here also, we can have sharecropped-in and sharecropped-out.

Moved in without permission occurs if the household does not own, rent or sharecrop the PLOT, but instead occupies it without the knowledge of the owner. This also refers to illegal occupants/operators of the PLOT.

Q09 – Q14: RENTING IN LANDS – NEW PLOTS

These questions ask for information on those new plots that are *rented in* by the household. *Renting in* is the situation where the household rents a plot from another household for farming purposes on an agreed payment terms. It normally applies to households that do not own personal lands or have insufficient lands and therefore resorts to external sources for farming lands. An agreed amount is paid by the *tenant/renter* to the *landlord/landowner/plot owner*.

- Q09:** Ask for the total amount (USD) paid in cash for *renting in* the [PLOT] e.g. **200**. Round up to the nearest dollar if the response given includes cent(s).
- Q10:** Ask for payment in-kind for *renting in* the [PLOT]. It must be converted and valued in USD. For example, **5 bags of maize valued at USD 150, then 150 should be recorded here**. Round up to the nearest dollar if the response given includes cent(s).

- Q11:** Ask which household member(s) has/have use rights or negotiated the contract for this *rented in* [PLOT]. Refer to the household roster for the ID(s) of the person(s). Record UP TO TWO applicable member(s) from the household roster.
- Q12:** Ask which non-household member(s) has/have use rights or negotiated the contract for this rented [PLOT]. Here a SPOUSE LIVING ELSEWHERE refers to the wife/husband of the household head or a member of the household, who is currently residing outside the household, based on our working definition of a household. A RELATIVE is someone that has blood relations with the members of the household either matrilineally or patrilineally. If only household member(s) has/have use rights or negotiated the contract for this rented [PLOT], record '4' (NONE). If more than one response is given, solicit for the main person.
- Q13:** The question asks for information on how the *renting in* contract for the [PLOT] was established. A contract can be entered either formally in a written form or unwritten, or informally with or without a witness. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record '4' (other specify) *and clearly specify*.
- Q14:** The question asks for information on the actual type of rental agreement. The type of rental agreement can be based on cash payment, sharecropping or temporary land exchange, and joint-venture, among others. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record '4' (other specify) *and clearly specify*.

Q15 – Q17: USE OF PLOTS – NEW PLOTS

This sub-section concerns the current use of plots, specifically for the agricultural season 2016/2017. This section is particularly important as it influences subsequent sections of the PLOT-PARCEL combinations.

- Q15:** We are interested in knowing whether the plot was cultivated by any member of the household during the agricultural season 2016/2017. If the [PLOT] was given out to a non-household member to cultivate during the agricultural season 2016/2017, then the response should be NO. SKIP INSTRUCTION: If the response is "Yes", skip to Q26. Otherwise, continue with Q16.
- Q16:** For those plots that were not cultivated during the agricultural season 2016/2017, this question enquires for the main use of the [PLOT]. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record '7' (other specify) *and clearly specify*. If more than one response is given, ask for the main use of the [PLOT]. SKIP INSTRUCTION: If any of the options '4' – '7' is chosen, then skip to Q26. If option '2' is selected, then skip to Q18. If option '3' is chosen, skip to Q24. If option '1' is taken, continue with Q17.
- Q17:** This question is restricted to only plots that have NOT been cultivated during the agricultural season 2016/2017, but have been left fallow. The number of years that the [PLOT] has been left fallow should be asked and recorded, and should not be greater than 5 years. SKIP INSTRUCTION: For any responses, skip to Q26.

Fallow land is land used for cultivating crops which has been left idle. An idle period is five years. A prolonged rest before re-cultivation may result in it being reclassified into permanent meadows and pastures.

Q18 – Q23: RENTED OUT PLOTS – NEW PLOTS ONLY

These questions gather information on uncultivated plot(s) that was (were) *rented out* during the agricultural season 2016/2017. *Rented out* plots are those uncultivated plots owned by the household but have been given out to another household for an agreed rental amount (based on agreed terms) over a specified period.

- Q18:** Record the size and unit of the [PLOT] that was *rented out* by the household during the agricultural season 2016/2017. Note that the size of the rented out plot cannot be more than the actual size of the plot list in Q02.
- Q19:** Ask for the amount received in cash for the rental of the [PLOT] in USD. Round up to the nearest dollar if the response given includes cent(s). If for instance the household received 125 dollars and 50 cents, then record 126 in the space provided. If none, record zero ('0'). SKIP INSTRUCTION: If the response is '0', skip to Q21, otherwise continue with Q20.
- Q20:** Record the number of months that the rental payment in Q19 covered. If more than a year, record the month equivalent. For instance, one year and 6 months should be recorded as 18 months.
- Q21:** Ask for the amount received in-kind for the rental of the [PLOT] in USD. Help the respondent to estimate these in-kind payments. Round up to the nearest dollar if the response given includes cent(s).
- Q22:** Ask for the period that the payment in-kind in Q21 covered in terms of months. If more than a year, record the month equivalent.
- Q23:** Ask for the duration of the *rented out* contract in completed years. Thus, if the duration was less than one year, write 0, less than two years, enter 1, in that order. If the respondent is not able to provide the duration, record '99'. SKIP INSTRUCTION: For any responses, skip to Q26.

Q24 - 25: SHARECROPPED OUT

Sharecropping is a tenure system where a land owner allows a person ("share cropper") to use the land in return for a share of the crop produced on the land.

- Q24:** This question concerns plots that the household gave out to non-household members for sharecropping purposes. As in the previous questions concerning contractual arrangement, note the different forms of contract that could be applicable here. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record '4' (other specify) *and clearly specify*.
- Q25:** This establishes the type of sharecropping arrangement agreed upon between the household and the farmer. This can be either equal proportion sharing arrangement, or unequal proportion sharing. You should, however, solicit for the proportion of the harvest that remained with the farmer in percentage (%).

Q26 – Q29: GPS MEASUREMENTS

Given the potential inaccuracy of the respondent's estimate of the plot size or total planted area of a given plot, it is important to measure ALL planted areas of plots of the sampled households. The GPS coordinates of the starting point of the plot measurement will also be taken. Follow the instruction in

Appendix D to measure and take the coordinates of the plots. Note that all questions in this sub-section are directed to the enumerator, and must not be asked to the respondent.

- Q26:** Indicate whether there is a “Yes” response in Q0a for this [PLOT] on the Plot Flap. SKIP INSTRUCTION: If the response is “Yes”, skip to next plot, otherwise, continue with Q27.
- Q27:** Indicate whether the [PLOT] was measured by GPS on this visit. SKIP INSTRUCTION: If the response is “Yes”, skip to Q29, otherwise, continue with Q28.
- Q28:** For those plots that were not measured using GPS, this question establishes the reason why the [PLOT](s) was (were) not measured.
- Q29:** The coordinates for the starting point (NW corner) of the [PLOT] measurement is asked here. On the GPS, the S reading refers to latitude while the E reading depicts longitude. Record the readings accordingly.
- Q30:** The total planted area of the [PLOT], as shown on the GPS under AREA CALCULATION after taking the measurement, should be recorded here. Ensure that the UNIT is in SQUARE METERS. If the unit of measurement is not in square meters, change the unit. ALL PLOTS SHOULD BE MEASURED IN SQUARE METERS.
- Q31:** This question asks the enumerator to record the weather condition at the time that the GPS measurement/coordinates were taken. Note that the answer here should not necessarily be the same for all plots. Moreover, assess the weather carefully before choosing an option.
- Q32:** GPS Accuracy is displayed as the “GPS + GLONASS” on the satellite page of the device. A good accuracy is 3m, but record the accuracy as displayed on the device.
- Q33:** Count the number of satellites displayed (Green and Blue) on the satellite page and record the total number here. More satellites ensure high accuracy of the information captured using the GPS device.

AG3: AGRICULTURAL LABOUR

The objective of this section is to collect information on agricultural labour for both **non-harvest activities between planting and harvesting** and **harvesting activities** during the agricultural season 2016/2017. The information is collected at Plot Level.

Here both household and hired (casual) labour information will be collected. For household labour, all household members 5 years and older who worked on [PLOT] will be selected, and then the relevant plot questions will be asked to the person or solicited for the person. On the hired labour, we disaggregate it into men (15 years and above), women (15 years and above), and children (5-14 years old). Note that we are concerned with casual labour, but not permanent labour.

Finally, we collect information on exchange labour or non-household members working on plot without pay. This type of labour activities can take two forms. First non-household members can work on a household’s plot in exchange for other services that the household might have rendered to those other households. Generally, a group of farmers agree to assist each other on their farms at different but agreed days and times. Second, other households can decide to work on a household’s plot for free (without pay) or to assist for no compensation.

RESPONDENT: The ideal respondent for this section is the manager of each plot. If the manager is not available, the respondent should be another adult member of the household, who is knowledgeable about operations on each plot

OPEN THE PLOT FLAP ON PAGE 27

As did in the previous section, **each row** of the section on the questionnaire represents a **single plot on a parcel**. Once plots are listed on the PLOT FLAP, all questions in this section should be asked per plot, starting with the first PLOT on PARCEL ONE, before moving to the next plot. Do not ask questions column-wise. Do not ask for plots that were rented out, sharecropped out or left under fallow during the agricultural season 2016/2017.

Q01–Q25: NON-HARVEST ACTIVITIES BETWEEN PLANTING AND HARVESTING

This subsection collects information on labour for non-harvest activities done on each plot between planting and harvesting during the agricultural season 2016/2017. Non-harvest activities include weeding, ridging, spraying, fertilizer and/or herbicide application, etc.

Q01a: Enumerator should indicate if the [PLOT] was cultivated during the agricultural season 2016/2017. The enumerator can use Q15 of AG2 and Q0b on the PLOT FLAP to confirm if the [PLOT] was cultivated during the 2016/2017 agricultural season. SKIP INSTRUCTION: If the response is ‘NO’, skip to next [PLOT], otherwise continue with Q01.

Q01 – Q2d: HOUSEHOLD LABOUR FOR NON-HARVEST ACTIVITIES BETWEEN PLANTING AND HARVESTING

Q01: This question asks for the total number of household members aged 5 years and older who worked on the [PLOT] during the agricultural season 2016/2017 for **non-harvest activities between planting and harvesting** only. If none, record zero (‘0’). SKIP INSTRUCTION: If the response is ‘0’, skip to Q03, otherwise continue with Q02.

Q02a – Q02d: These questions collect information on total number of weeks, days per week, and hours per day that each selected household member was engaged in **non-harvest activities** between planting and harvesting on the [PLOT].

- A. Refer to the household roster for the ID(s) of the person(s) that worked on [PLOT] for the reference activities during the agricultural season 2016/2017.
- B. It must be noted that here we are not interested in completed calendar week, but instead, the number of weeks. For instance, if the person worked 3 days in the first week of April and 4 days in the last week of May, the total number of weeks worked should be two and NOT one. The 3 days in the first week of April should not be added to 4 days in the last week of May to make a complete week. They should be counted as two separate weeks.
- C. For the example in B, the number of days can be either 3 or 4, but probe to solicit the right response from the respondent. Note that the total number of days cannot be more than 7.
- D. We ask for the number of hours that the individual usually work on the [PLOT] per day for those days that he/she worked on the [PLOT].

Record the information on work on each plot for each person. The questionnaire allows for up to 12 household members working on the individual plots. If for example, three persons in a household worked on plot (one) in parcel (one), we expect information about the three members to be entered in the first three member columns.

Example: If a person works for two days in a week on a [PLOT], he or she is considered to have worked for a week. If a person works for two hours in a day on a plot he or she is considered to have worked for a day.

Note:

- **Weeks** should cover only weeks in the agricultural season 2016/2017. This can be a minimum of one (1) week.
- **Days** should cover a minimum of one (1) to a maximum of seven days in a week.
- **Hours** can be a minimum of one (1) to a maximum of sixteen (16) hours in general per day.

Note: It must be made clear to the respondent that the work time must be specific to each plot. We should avoid situations where the response indicates that they worked on multiple plots simultaneously as this is impossible. Perhaps they might be working every day on two plots but spend 5 hours each day working on one plot and 5 hours each day on the other. This should not be recorded as 10 hours worked per day on both plots.

Again, it must also be made clear that the individual listed actually worked on the plot. We must avoid situations where respondents list their children as working full time on the plots. In situations where children only accompanied their parents to the field but did not perform any non-harvest activities related work on PLOT, the children should not be listed in this case – only members that performed work on the plot should be listed.

Q03 – Q15: HIRED LABOUR FOR NON-HARVEST ACTIVITIES BETWEEN PLANTING AND HARVESTING

This sub-section is about hired (casual) labour for **non-harvest activities between planting and harvesting** at different levels of disaggregation during the agricultural season 2016/2017. Record information for each plot on “number of men hired to work, the number of days, hours per day, payment per day” for hired casual labour. Similar questions are repeated for hired women and children 5-14 years old.

Note that Q04 – Q07 have been repeated in Q08 – Q11 and Q12 – Q15 for women (15 years and above) and for children (5-14 years old) respectively. Here we will be able to distinguish whether men, women, and children are paid differently for performing the same activities at the same time.

Q03: This is a filter question for questions on hired labour for non-harvest activities between planting and harvesting during the agricultural season 2016/2017. Hired labour are non-household members who work on the [PLOT] for pay. Note that here we are referring to hired casual labour instead of permanent labour. If the response to this question is NO, then the subsequent questions on HIRED CASUAL LABOUR FOR NON-HARVEST ACTIVITIES BETWEEN PLANTING AND HARVESTING will be skipped. SKIP INSTRUCTION: If the response is “No”, skip to Q16, otherwise, continue with Q04.

Q04: This question seeks information on the total number of hired **men** involved in non-harvest activities between planting and harvesting on the [PLOT] during the agricultural season 2016/2017. Exclude permanent hired labour.

Q05: Enquire for the total number of days that hired men (15 years and older) were involved in non-harvest activities between planting and harvesting on the [PLOT] during the agricultural season 2016/2017. Note that this question might be difficult to answer especially if the household hires different persons at different times. Probe and help the respondent to estimate if needed.

Q06: Ask for the number of hours that hired men usually work on the [PLOT] in a day. Here again, probe for the hours that hired men usually spend on the [PLOT] in a day as this question might be difficult to answer. Moreover, be careful to refer to a particular plot especially if multiple persons are hired in a day and they spend different hours working on different plots.

Q07: Ask how much is usually paid **per day** to **all men** hired to work on the [PLOT] for non-harvest activities between planting and harvesting during the agricultural season 2016/2017 in USD. This is how much the farmer usually pays per day to **all** the hired men to work on the [PLOT].

➤ Example 1: On Plot 1, five men were hired for 7 days and paid \$100 per day **each**, then the **TOTAL DAILY** payment by the farmer is \$500 (5 men multiplied by \$100 per day). Therefore, 500 should be recorded for Q07.

➤ Example 2: On Plot 3, three men were hired to work for a single day; the first was paid \$50 the second \$20 and the third \$30. Then the amount to record in Q07 is 100.

➤ Example 3: On Plot 2, three men were hired to work on Day 1 for US\$ 50 each. On day 2, two men were hired to work for US\$ 50 each. Then the amount to record is 125.

Q08 – Q11: Correspond to Q04 – Q07 but refer instead to **women** (15 years or older). Refer to the notes Q04 – Q07 above.

Q12 – Q15: Correspond to Q04 – Q07 but refer instead to **children** (5-14 years old). Refer to the notes Q04 – Q07 above.

Q16–Q25: EXCHANGE LABOUR FOR NON-HARVEST ACTIVITIES BETWEEN PLANTING AND HARVESTING

This sub-section is about exchange labour for **non-harvest activities between planting and harvesting** at different levels of disaggregation during the 2016/2017 agricultural season. Note that Q17 – Q19 have been repeated in Q20 – Q22 and Q23 – Q25 for women (15 years and above) and for children (5-14 years old) respectively.

Q16: This is a filter question for the exchange labour subsection for non-harvest activities between planting and harvesting. Exchange labour refers to non-household members working on the [PLOT] without pay or in exchange for services rendered by the household. If the response is NO, the subsequent questions on EXCHANGE LABOUR/NHIMBE FOR NON-HARVEST ACTIVITIES BETWEEN PLANTING AND HARVESTING will be skipped. SKIP INSTRUCTION: If the response is “No”, skip to Q26, otherwise, continue with Q17.

Q17: Asks for the number of men (exchange labour) that worked on the [PLOT] without pay or in the form of exchange labour for non-harvest activities between planting and harvesting during the agricultural season 2016/17.

Q18: Establishes the number of days that men from other households worked on the [PLOT] without pay for non-harvest activities between planting and harvesting during the agricultural season 2016/2017. If exchange labour worked on the [PLOT] at different days, ask for the **cumulative** number of days.

Q19: Here we ask for the number of hours per day that men from other households **usually** work on the [PLOT] without pay for non-harvest activities between planting and harvesting during the agricultural season 2016/2017. Follow previous examples to ask this question.

Q26 – Q50: HARVESTING

This subsection collects information on labour for harvesting done on each plot during the agricultural season 2016/2017.

Q26 – Q27d: HOUSEHOLD LABOUR FOR HARVESTING

Q26: This question asks for the total number of household members aged 5 years and older who worked on the [PLOT] during the agricultural season 2016/2017 for **harvesting** only. If none, put '0' and skip to Q28. Record 9999 if the household did not harvest any crop from the [PLOT] during the agricultural season 2016/2017.

Q27a – Q27d: These questions collect information on total number of weeks, days per week, and hours per day that each selected household member was engaged in harvesting activities on the [PLOT].

- A. Refer to the household roster for the ID(s) of the person(s) that worked on [PLOT] for harvesting during the agricultural season 2016/2017.
- B. It must be noted that here we are not interested in completed calendar week, but instead, the number of weeks. For instance, if the person worked 3 days in the first week of June and 4 days in the last week of July, the total number of weeks worked should be two and NOT one. The 3 days in the first week of June should not be added to 4 days in the last week of July to make a complete week. They should be counted as separate weeks.
- C. For the example in B, the number of days can be either 3 or 4, but probe to get the right response from the respondent. Note that the total number of days cannot be more than 7.
- D. We ask for the number of hours that the individual usually work on the [PLOT] per day for those days that he/she worked on the [PLOT].

Q28 – Q40: HIRED LABOUR FOR HARVESTING

This sub-section is about hired (casual) labour for **harvesting** at different levels of disaggregation during the agricultural season 2016/2017. Record information for each plot on “the number of days, hours per day, payment per day, number of men hired to work” for hired casual labour. Similar questions are repeated for hired women, and children 5-14 years old.

Note that Q29 – Q32 have been repeated in Q33 – Q36 and Q37 – Q40 for women (15 years and above) and for children (5-14 years old) respectively. Here we will be able to tell whether men, women, and children are paid differently for performing the same activities at the same time.

Q28: This is a filter question for questions on hired labour for harvesting during the agricultural season 2016/2017. Hired labour are non-household members who work on the household's plot for pay. Note that here we are referring to hired casual labour instead of permanent labour. If the response to this question is NO, then the subsequent questions on HIRED CASUAL

LABOUR FOR HARVESTING will be skipped. SKIP INSTRUCTION: If the response is “No”, skip to Q41, otherwise, continue with Q29.

- Q29:** This question seeks information on the total number of hired **men** involved in harvesting on the [PLOT] during the agricultural season 2016/2017. Exclude permanent hired labour.
- Q30:** Enquire for the total number of days that hired men (15 years and older) were involved in harvesting on the [PLOT] during the agricultural season 2016/2017. Note that this question might be difficult to answer especially if the household hires different persons at different times. Probe and help the respondent to estimate if needed.
- Q31:** Ask for the number of hours that hired men usually work on the [PLOT] in a day. Here again, probe for the hours that hired men usually spend on the [PLOT] in a day as this question might be difficult to answer. Moreover, be careful to refer to a particular plot especially if multiple persons are hired in a day and they spend different hours working on different plots.
- Q32:** Ask for how much is usually paid per day to **all men** hired to work on the [PLOT] for harvesting for the agricultural season 2016/2017 in USD. This is how much the farmer usually pays per day to all the hired men to work on the [PLOT].
- Example 1: On Plot 1, five men were hired for 7 days and paid \$100 per day **each**, then the **TOTAL DAILY** payment by the farmer is \$500 (5 men X \$100 per day). Therefore, 500 should be recorded for Q07.
 - Example 2: On Plot 3, three men were hired to work for a single day; the first was paid \$50 the second \$20 and the third \$30. Then the amount to record in Q07 is 100.
 - Example 3: On Plot 2, three men were hired to work on Day 1 for US\$ 50 each. On day 2, two men were hired to work for US\$ 50 each. Then the amount to record is 125.
- Q33 – Q36:** Correspond to Q29 – Q32 but refer instead to **women** (15 years or older). Refer to the notes Q29 – Q32 above.
- Q37 – Q40:** Correspond to Q29 – Q32 but refer instead to **children** (5-14 years old). Refer to the notes Q29 – Q32 above.

Q41 – Q50: EXCHANGE LABOUR FOR HARVESTING

This sub-section is about exchange labour for **harvesting** at different levels of disaggregation during the 2016/2017 agricultural season. Note that Q42 – Q44 have been repeated in Q45 – Q47 and Q48 – Q50 for women (15 years and above) and for children (5-14 years old) respectively.

- Q41:** This is a filter question for the question on exchange labour for harvesting. Exchange labour refers to non-household members working on the [PLOT] without pay or in exchange for services rendered by the household. If the response is NO, the subsequent questions on **EXCHANGE LABOUR/NHIMBE FOR HARVESTING** will be skipped. SKIP INSTRUCTION: If the response is “No”, skip to next plot, otherwise, continue with Q42.
- Q42:** Asks for the number of men (exchange labour) that worked on the [PLOT] without pay or in the form of exchange labour for harvesting during the agricultural season 2016/17.

- Q43:** Establishes the number of days that men from other households worked on the [PLOT] without pay for harvesting during the agricultural season 2016/2017. If exchange labour worked on the [PLOT] at different days, ask for the cumulative number of days.
- Q44:** Here we ask for the number of hours per day men from other households **usually** work on the [PLOT] without pay for harvesting during the agricultural season 2016/2017. Follow previous examples to solicit response for this question.

AG4: INPUT USE ON PLOT

This section collects detailed information on the use of various inputs including pesticides, herbicides, organic and inorganic fertilizers. The use of these inputs is an important factor that can determine how successful crop production is for the household. The information in this section is collected at the Plot Level.

RESPONDENT: The ideal respondent for this section is the manager of each plot. If the manager is not available, the respondent should be another adult member of the household, who is knowledgeable about inputs used on each plot.

OPEN THE PLOT FLAP ON PAGE 27

As in the previous section, **each row** of the section on the questionnaire represents a **single plot on a parcel**. Once plots are listed on the PLOT FLAP, all questions in this section should be asked per plot, starting with the first PLOT on PARCEL ONE, before moving to the next plot. *Do not ask questions column-wise.*

- Q01:** Indicate whether the [PLOT] was cultivated during the agricultural season 2016/2017. Refer to Q0b in the Plot Flap and Q15 in AG2 on page 11. **SKIP INSTRUCTION:** If the response is “No”, skip to next plot, otherwise continue with Q02.

Q02 – Q03: PESTICIDE USE

Pesticide is a substance used for destroying pests, especially insects and small animals like rats.

Insecticide is a specific type of pesticide used to kill insects.

Fungicide is a specific type of pesticide that inhibits or kills fungus.

- Q02:** This question determines whether any pesticide was used on the [PLOT] during the agricultural season 2016/2017. **SKIP INSTRUCTION:** If the response is “No”, skip to Q04. Otherwise, continue with Q03.
- Q03:** If pesticide was use on the [PLOT], ask for the quantity, either in solid or liquid forms or both, used during the agricultural season 2016/2017. If more than one kind of pesticide was used, record the TOTAL quantity used. The appropriate quantity and unit code should be recorded for each plot either in solid or liquid forms or both. If the unit code given does not correspond to a coded option, record ‘6’ (other specify) *and clearly specify*.
- Q04** Establishes the reason why the household did not use any pesticide on [PLOT] during the agricultural season 2016/2017. If the response code given does not correspond to a coded option, record ‘5’ (other specify) *and clearly specify*.

Q05 – Q07: HERBICIDE USE

Definition of herbicides

Herbicide is a toxic substance to some plants used to destroy unwanted vegetation called weeds.

1. **Pre-planting herbicides** are applied prior to **planting**.
2. **Pre-emergence** herbicides are applied before the emergence of a plant from the soil.
3. **Post-emergence** herbicides are used to kill weeds **after** they have germinated.

Some of the **pre-planting** and **pre-emergence** herbicides are as follows:

1. **Dual** is used to control broad leaf and nutsedge. An average of 1.5 litres is used per hectare.
2. **Glyphosate (round up)** is a non-selective herbicide used to control annual and perennial grasses. An average of one litre is used per hectare.
3. **Bateleur Gold** is used to control annual and broadleaf. An average of one litre is used per hectare.
4. **Atrazine** is used for both pre- and post-emergence. An average of 3.6 litres is used per hectare split application.
5. **Metalachlour** is a pre-emergent herbicide used for controlling annual grasses and some broadleaf weeds in all crops. An average of 1 litre is used per hectare.

Post-emergence herbicides are used to kill weeds **after** they have germinated. Some of the commonly used herbicides in Zimbabwe are listed below:

1. **Nicosulfuron** is used to control grasses and broadleaf weeds. An average of 850g is used per hectare.
2. **Stellar star** is a selective herbicide used to control grasses and broadleaf. An average of one litre is used per hectare.
3. **Halosulfuron** is a selective herbicide used to control purple and yellow nutsedge.
4. **Glyphosate (round up)** is used to control annual and perennial grasses. An average of one litre is used per hectare.

Q05: This question determines whether any herbicide was used on [PLOT] during the agricultural season. **SKIP INSTRUCTION:** If the response is “No”, skip to Q07. Otherwise, continue with Q06.

Q06: If herbicide was used on [PLOT], ask for the quantity used during the agricultural season 2016/2017. If more than one kind of herbicide was used, record the TOTAL quantity used either in solid or liquid forms or both. The appropriate quantity and unit code should be recorded for each plot for either in solid or liquid forms accordingly. If the unit code given does not correspond to a coded option, record ‘5’ (other specify) *and clearly specify*. After recording the response, please skip to Q08.

Q07 If no herbicide was used on [PLOT], then this question solicits for the reason why the household did not use any herbicide on [PLOT] during the agricultural season 2016/2017. If the response code given does not correspond to a coded option, record ‘5’ (other specify) *and clearly specify*.

Background information and definitions of commonly used fertilizers in ZIMBABWE

Below is a summary of commonly used inorganic and organic fertilizers in Zimbabwe.

- a. All compounds (e.g. compound D, K, S, X – “yepasi/eyaphansi”).
- b. All nitrates (ammonium nitrate, urea sodium nitrate – top dressing, yepamusoro/eyaphezulu”).
- c. All phosphates e.g. rock phosphate, superphosphate (used for rice and tomatoes).
- d. Gypsum (used in groundnut production).
- e. Lime (used to neutralise soils).
- f. Potash e.g. muriate of potash, sulphate of potash (used for crops such as potatoes, fruit trees).
- g. Liquid fertilizer should be recorded in litres, and specify under comments the type of liquid fertilizer e.g. nitrosol and African violet food.
- h. Manure purchased and own produce (organic).
- i. Other (specify). This category might include blended organic and inorganic fertilizers being produced.

Fertiliser definitions

The paragraphs below give detailed definitions of fertilizers and their uses.

A **fertilizer** is defined as any substance, solid or liquid, inorganic, natural or synthetic, single or combination of materials, that is applied to soil or to a plant to provide one or more of the essential elements for plant nutrition, growth yield, or quality, or for producing a chemical change in the soil that contributes to improved plant nutrition and growth.

1. **Inorganic fertilizer** is any fertilizer whose properties are determined predominantly by its content of minerals or synthetic chemical compounds. The term also refers to any chemical compound in liquid or solid form that contains considerable amounts of at least one of the essential plant nutrients, such as nitrogen, phosphorous, potassium, secondary macro and micro nutrients. Chemical fertilizers (also called inorganic, synthetic, artificial, or manufactured) are an example of these types of fertilizers.
2. **Organic fertilizer** is any product of plant and/or animal origin that has decomposed through biological, chemical and/or any other process such that the original materials are no longer recognizable, and free from plant or animal pathogens, are soil-like in texture, contain no less than 20 percent organic matter, and can supply nutrients to plants. Many organic fertilizers (such as compost, manure or other organic by-products) are generally less concentrated sources of nutrients than conventional fertilizers.

Note that broadcasting of fertilizers is of two types, i) Broadcasting at sowing or planting (**Basal** application). The main objective of broadcasting the fertilizers at sowing time is to uniformly distribute the fertilizer over the entire field and to mix it with soil; and ii) **Top dressing**.

Basal fertilization/Compound fertilizers: These are applied while the land is being prepared and/or sowed to improve nutrients e.g. Compound D and Compound C. **Compound fertilizers** contain at least two of the main plant nutrients. In general, the three main nutrients (N, P and K) are mixed in different ratios to make up the different types of fertiliser sold in the market.

Top dressing/ Straight fertilizers: Spreading or broadcasting of fertilizers in the standing crop (after emergence of crop) is known as top-dressing. Generally, urea and ammonium nitrates fertilizers are top dressing. The term top dressing refers to the fertilizer placed beside the rows of a crop (widely spaced) like maize or cotton. Care must be taken in top dressing so that the fertilizer is not applied when the leaves are wet or it may burn or scorch the leaves. **Straight fertilizers** contain one main plant nutrient, but they may also contain some minor nutrients. The main nutrients are nitrogen (provided in the form of nitrates or urea). Urea is a common high nitrogen content (46 percent) fertilizer manufactured commercially.

Lime is a white caustic alkaline substance consisting of calcium oxide, which is obtained by heating limestone and which combines with water with the production of much heat; quicklime. It is used to treat soil or water to reduce acidity and improve fertility or oxygen levels.

Questions Q08 and Q10 seek information on whether LIME was used and the amount of LIME used on each PLOT.

Q08: This question determines whether any lime was used on [PLOT] during the agricultural season. SKIP INSTRUCTION: If the response is “No”, skip to Q10. Otherwise, continue with Q09.

Q09: If lime is use on the [PLOT], enquire for the quantity used during the agricultural season. The appropriate quantity and unit code should be recorded for each plot. If the unit code given does not correspond to a coded option, record ‘6’ (other specify) *and clearly specify*. Skip to Q11 after recording the response for this question.

Q10 Establishes the reason why the household did not use any **lime** on [PLOT] during the agricultural season 2016/2017. If the response code given does not correspond to a coded option, record ‘5’ (other specify) *and clearly specify*.

Questions Q11 to Q13 ask for information on the use organic fertilizer and they questions are structured as follow:

Q11: This question will determine whether any ORGANIC fertilizer was used on the [PLOT] during the agricultural season 2016/2017. SKIP INSTRUCTION: If the response is “No”, skip to Q13. Otherwise, continue with Q12.

Q12: If ORGANIC fertilizer was used on the [PLOT], ask for the quantity used during the agricultural season 2016/2017. If more than one kind of ORGANIC fertilizer was used, record the TOTAL quantity used. The appropriate quantity and unit code should be recorded for each plot. If the unit code given does not correspond to a coded option, record ‘5’ (other specify) *and clearly specify*. Skip to Q14 after recording a response for this question.

Q13 Establishes the reason why the household did not use any organic fertilizer on [PLOT] during the agricultural season 2016/2017. If the response code given does not correspond to a coded option, record ‘5’ (other specify) *and clearly specify*.

Q14 – Q21: INORGANIC FERTILIZER USE

Inorganic fertilizer is artificially derived, chemical fertilizers, including compounds, phosphates, nitrates, gypsum, potash and liquid fertilizers.

Q14: This question will determine whether any INORGANIC fertilizer was used on the [PLOT] during the agricultural season 2016/2017. Be sure to read the examples of inorganic fertilizer so the respondent understands what INORGANIC fertilizer is and not confuse it with ORGANIC. SKIP INSTRUCTION: If the response is “No”, skip to Q21. Otherwise, continue with Q15.

Q15: This question will determine whether any INORGANIC fertilizer was used on the [PLOT] for **Basal application** during the agricultural season 2016/2017. SKIP INSTRUCTION: If the response is “No”, skip to Q18. Otherwise, continue with Q16.

Basal fertilizer application is applied at the time of planting/sowing.

- Q16:** If INORGANIC fertilizer was used on [PLOT] for **Basal application**, ask for the type of inorganic fertilizer applied to the [PLOT] for **Basal application**. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record '7' (other specify) *and clearly specify*. If there were multiple types of INORGANIC fertilizer applied on the [PLOT], report UP TO TWO main types.
- Q17:** Ask for the quantity of the fertilizer used for **Basal application** during the agricultural season 2016/2017 by the type(s) specified in Q16. The appropriate quantity and unit code should be recorded for each plot and type. If the unit code given does not correspond to a coded option, record '7' (other specify) *and clearly specify*.
- Q18:** This question will determine whether any INORGANIC fertilizer was used on the [PLOT] for **top dressing** during the agricultural season 2016/2017. SKIP INSTRUCTION: If the response is "No", skip to next plot. Otherwise, continue with Q19.
- Top dressing: Type of soluble fertilizer applied after the crop has germinated but before harvesting.*
- Q19:** If INORGANIC fertilizer is used on the [PLOT] for **top dressing**, ask for the type of inorganic fertilizer applied to the [PLOT] for **top dressing**. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record '7' (other specify) *and clearly specify*. If there were multiple types of INORGANIC fertilizer applied on the [PLOT] for top dressing, report UP TO TWO main types.
- Q20:** Ask for the quantity of inorganic fertilizer by type **specified in Q19** used for **top dressing** application during the agricultural season 2016/2017. The appropriate quantity and unit code should be recorded for each plot. If the unit code given does not correspond to a coded option, record '7' (other specify) *and clearly specify*. SKIP INSTRUCTION: For all responses, skip to next plot.
- Q21:** Ask why the household did not use any INORGANIC fertilizer on the [PLOT] during the agricultural season 2016/2017. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record '5' (other specify) *and clearly specify*.

AG5: SEED ACQUISITION

This section collects information on all seeds used for CROPS (field) that were planted on all PLOTS during the 2016/2017 agricultural season after the first visit to the household. It means that the questions are asked only for the crops that are newly listed during this second round visit to the household.

All the possible field/annual crops cultivated in Zimbabwe have been provided, together with their codes on the flip page of the questionnaire as well as in Appendix E of this manual. The enumerator should write the crop name and corresponding code for the CROP that is planted on PLOT within the respective PARCEL.

RESPONDENT: The ideal respondent for this section is the manager of each plot. If the manager is not available, the respondent should be another adult member of the household, who is knowledgeable about inputs used on each plot for the agricultural season 2016/2017.

OPEN CROPS ON PLOT FLAP ON PAGE 32

NOTE: This section is at the PARCEL-PLOT-CROP level. Each row of this section in the questionnaire represents **a single crop grown on a specific plot in a specific parcel**. For example, if maize was grown on plots 1 and 2 of parcel 1, there should be a separate line for the maize grown on plot 1 and the maize grown on plot 2.

All field crops captured in the previous visit should have had their information prefilled in the Crops on Plot Flap. Before proceeding to the questions in this section, the enumerator should read out the crops planted on each plot on each parcel listed in the first-round visit *to the respondent* and then **must** ask the respondent if the household has planted any new crop(s) since the last interview. New crops should then be listed starting on the first available row after the first-round crops. **IF THERE ARE MORE THAN 14 CROPS, AN ADDITIONAL QUESTIONNAIRE MUST BE USED FOR THE ADDITIONAL CROPS. IT IS NEVER ACCEPTABLE TO EXCLUDE A CROP ON ANY PLOTS IF THERE IS NO MORE SPACE ON THE QUESTIONNAIRE.**

Q00: Enumerator should indicate whether this [CROP] on [PLOT] is newly listed during this visit. SKIP INSTRUCTION: If the response is “No”, skip to next crop. Otherwise, continue with Q01.

Q01: Ask for the type of planting materials used for [CROP] on [PLOT] during the agricultural season 2016/2017. SKIP INSTRUCTION: If option ‘2’ is selected, skip to next crop. Otherwise, continue with Q02.

Q02 – Q04 is about the type of [CROP] seed used on PLOT and whether the seed is certified by the appropriate certification authority.

Q02: Asks whether the type of seed used or planted for [CROP] on [PLOT] during the agricultural season 2016/2017 is hybrid, improved, or traditional/local. SKIP INSTRUCTION: If option ‘1’ is taken, skip to Q03. If option ‘3’ is chosen, skip to Q04. Otherwise, continue with Q02b.

Definitions of Open Pollinated Variety, Hybrid, and Traditional seeds

Open pollinated variety (OPV) is one whose seed is produced by random cross pollination (that is there is no pollination control). The pollination of the plants in the field is not controlled, which means the crop will not be uniform, for example the crop will vary in plant height, the colour of silks will vary, the cobs will not be the same size and shape and the plants will mature at different times. Examples of Agriseeds varieties in this category include ZM 521, ZM401 and ZM309.

Hybrid seed is a seed produced by cross-pollinating two inbred lines, normally from unrelated parent populations. This typically results in plants of high uniformity, vigour, and yields. Seed covariates, Pannar seeds and Pioneer seeds fall in this category.

Certified seed is a seed that has been approved for sale and planting by the appropriate seed certification authority such as the Ministry of Agriculture.

Improved seed is a seed that has some better qualities/traits added to it by a farmer or a plant breeder. It may or may not have been certified. These new traits can be high yielding, drought resistant, or pest resistant.

Traditional seeds are the seeds produced by the varieties grown for a long period of time without modifying or enhancing its characteristics by local communities. For example, Hackery king red cork(maize), pearl millet, finger millet, rapoko, pumpkin (*nzunzu*, *ditimanga*, *ndodo*).

Q02b: Ask whether the seed used for [CROP] on [PLOT] during the agricultural season 2016/2017 was an Open Pollinated Variety (OPV) or not. This question is asked for *improved* seed only.

- Q03:** Ask whether the seed used for [CROP] on [PLOT] during the agricultural season 2016/2017 was CERTIFIED or not. This question is asked for both *hybrid* and *improved* seeds.
- Q04:** The quantity is measured using different units of measurement, both standard and non-standard measurement units. Note that here we refer to the total quantity of seeds used for [CROP] on [PLOT] during the agricultural season 2016/2017, irrespective of the source and the mode of acquisition. The appropriate quantity and unit code should be recorded. If the unit code given does not correspond to a coded option, record '11' (other specify) *and clearly specify*.
- Q05 – Q07:** These questions concern seeds from PREVIOUS HARVEST and/or CARRY OVER seeds and the rationale for using such seeds.
- Q05:** Ask whether the household used any seeds from PREVIOUS HARVEST and/or CARRY OVER seeds for [CROP] on [PLOT] during the agricultural season 2016/2017. Since it is a common practice for households to keep seeds from previous harvests for subsequent use in planting, it is important that we explore seeds from this source. SKIP INSTRUCTION: If the response is "No", skip to Q08, otherwise, continue with Q06.
- Q06:** Ask for the quantity of the seed used from previous harvest and/or carry over for [CROP] on [PLOT] during the agricultural season 2016/2017. The appropriate quantity and unit code should be recorded. If the unit code given does not correspond to a coded option, record '11' (other specify) *and clearly specify*.
- Q07:** This question requires information on the rationale behind the household's decision to use seeds from previous harvest and/or carry over for [CROP] on [PLOT] during the agricultural season 2016/2017. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record '7' (other specify) *and clearly specify*.

Free seeds

- Q8–Q12** solicit information on seeds used for [CROP] on [PLOT] during the agricultural season 2016/2017 that were obtained for FREE irrespective of the source.
- Q08:** Ask whether the household used any seeds obtained for FREE for [CROP] on [PLOT] during the agricultural season 2016/2017. SKIP INSTRUCTION: If the response is "No", skip to next crop, otherwise, continue with Q09.
- Q09:** Ask for the quantity of the free seed used for [CROP] on [PLOT] during the agricultural season 2016/2017. The appropriate quantity and unit code should be recorded. If the unit code given does not correspond to a coded option, record '11' (other specify) *and clearly specify*.
- Q10:** The *main* source of the free seed that was used for [CROP] on [PLOT] during the agricultural season 2016/2017 is solicited in this question. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record '6' (other specify) *and clearly specify*. SKIP INSTRUCTION: If any of the options '2' to '6' is provided, then skip to Q12. Otherwise, continue with Q11.
- Q11:** Ask whether the household received the free seed used for [CROP] on [PLOT] during the agricultural season 2016/2017 from the Government programs: Presidential input support program, vulnerable input support program and/or any other programs. If the household received the free seed from any other program, clearly *specify*.
- Q12:** This question asks for information on the main means of transporting the free seeds used for [CROP] on [PLOT] to the farm/plot from the source provided in Q10. Record the most

appropriate option from the list provided. If the response does not correspond to a coded option, record '8' (other specify) *and clearly specify*.

AG6: FIELD CROP HARVEST

This is one of the most important sections of the questionnaire. This section collects information on the harvest of crops, which allows for computation of yields. This is a critical determinant of the wellbeing of an agricultural household. The section also collects information on the time of harvest, whether the crop was harvested; and who in the household made decisions regarding how to use the harvested crop. Special attention must be paid to Q09 (the quantity harvested). This question is one of the most important questions in the entire survey.

This module uses the CROPS ON PLOT FLAP which should be partially prefilled prior to proceeding to the field.

NOTE: Questions in this section ask for information at the PARCEL-PLOT-CROP level. **Each row** of the section on the questionnaire represents **a single crop grown on a specific plot in a specific parcel**. For example, if maize was grown on plots 1 and 2 of parcel 1, there should be a separate line for the maize grown on plot 1 and the maize grown on plot 2.

RESPONDENT: The ideal respondent for this section is someone who is knowledgeable about the farming activities of the household, preferably a farmer, owner or manager of each plot.

OPEN THE CROPS ON PLOT FLAP ON PAGE 32

Q01: Enumerator should indicate whether this [CROP] on [PLOT] is newly listed during this visit. SKIP INSTRUCTION: If the response is "No", skip to Q4. Otherwise, continue with Q02.

Q02: Seeks to establish the cropping method employed to plant [CROP] on [PLOT] during the agricultural season 2016/2017. Note that both answer options must continue to Q03.

Monoculture: *The practice of growing a single crop on a plot at a time.*

Inter-cropping: *The practice of growing more than one crop in the same field/plot. Often, a fast-growing crop is grown with a slow growing crop so that the fast growing crop is harvested before the slow growing crop starts to mature e.g. maize and cowpeas.*

Q03: For those crops that were either intercropped or mono-cropped, find out the percentage of the PLOT area that was planted with the [CROP] on [PLOT] during the agricultural season 2016/2017. This is especially important when doing crop level productivity analysis as it avoids the problem of attributing the entire plot area to a given crop while the crop was not in a pure stand. Moreover, if a single crop didn't cover the entire [PLOT] area, it is important to establish the share of the [PLOT] covered by the [CROP].

Q03a and Q03b are only for MAIZE/WHEAT [CROP] on [PLOT] planted during the agricultural season 2016/2017. These questions serve as filters for the COMMAND AGRICULTURE and establishes whether the [CROP] on [PLOT] was under command agriculture.

Q04: Before asking detailed questions about the harvest, it is important to first determine whether the crop has been harvested. Ask if the [CROP] that was planted on the [PLOT] was harvested during the agricultural season 2016/2017. SKIP INSTRUCTION: If the response is "Yes", skip to Q06. Otherwise, continue with Q05.

- Q05:** If the [CROP] grown on the [PLOT] was not harvested, we want to know why it was not harvested. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record ‘11’ (other specify) *and clearly specify*. If there was more than one reason, record the most important reason. SKIP INSTRUCTION: If option ‘8’ or ‘9’ is chosen, skip to Q12. Otherwise, skip to next crop.
- Q06:** This question asks when the harvest of [CROP] planted on the [PLOT] commenced. This information can be used to determine how long after planting the [CROP] was harvested. Record the month (code) and year the harvest began.
- Q07:** Ask whether the area that the household harvested [CROP] from the [PLOT] was less than the area on [PLOT] that the household planted with [CROP]. SKIP INSTRUCTION: If the response is “No”, skip to Q09. Otherwise, continue with Q08.
- Q08:** Ask for the reason why the area on [PLOT] that the household harvested [CROP] from was less than the area on [PLOT] that the household planted with [CROP]. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record ‘8’ (other specify) *and clearly specify*.
- Q09:** This is one of the most important questions collected in the survey. It asks for the TOTAL amount of the [CROP] harvested from the [PLOT] during the agricultural season 2016/2017. THE ENUMERATOR SHOULD PAY EXTRA ATTENTION TO THIS QUESTION AND RECORD THE RESPONSE ACCURATELY. Record the quantity and unit code in the appropriate column. If the unit code given does not correspond to a coded option, record ‘14’ (other specify) *and clearly specify*. Confirm with the respondent whether the quantity given is shelled or unshelled when applicable and record the condition in the appropriate column. For maize, please DO NOT include Green Mealies.
- Q09a** This question should be asked only for maize. The question solicits information on the quantity of maize harvested as green mealies from [PLOT] during the agricultural season 2016/2017, irrespective of usage. Include all harvested green mealies consumed, sold, given out as green mealies.
- Q10:** In some situations and for some crops, it may be the case that the harvest has not been completed yet. The farmer may only have started harvesting very recently and has not completed or perhaps some of the crop had not yet fully developed to the point of harvesting. This question will identify whether this is the case for the [CROP] planted on the [PLOT]. SKIP INSTRUCTION: If the response is “No”, skip to Q12. Otherwise, continue with Q11.
- Q11:** If the harvest period has been completed, then we want to know when the harvest was completed. Record the month (code) and year the harvest was completed. SKIP INSTRUCTION: For all responses, skip to Q14.
- Q12:** If the harvest has not been completed, we want to know when the respondent expects to complete the harvest of the [CROP] from the [PLOT]. Record the month (code) and year.
- Q13:** This question is for both crops harvested and those that are yet to be harvested. If the harvest has not been completed, we want to know how much more the respondent expects to harvest of the [CROP] from the [PLOT]. Record the quantity and unit code in the appropriate column. If the unit code given does not correspond to a coded option, record ‘14’ (other specify) *and clearly specify*. Confirm with the respondent whether the quantity given is shelled or unshelled when applicable and record the condition in the appropriate column.

- Q14:** This question should be administered for all crops that were harvested. Ask if any of the decision maker(s) is a household member. If the response is a 'Yes' continue to Q15, otherwise, skip to Q16.
- Q15:** Ask for the person that made decisions concerning the use of the total harvested [CROP] grown on [PLOT] in the household. This is the person(s) that was (were) the primary decision maker(s) regarding how to use the harvested crop (e.g. how much to sell, how much to consume, etc.). Refer to the household roster for the ID(s) of the person(s). Record UP TO TWO applicable member(s) from the household roster.
- Q16:** Ask which non-household member made decisions concerning the use of the total harvested [CROP] grown on [PLOT]. Record the most appropriate option from the list provided.

AG7: PURCHASED SEEDS

This section collects information on all purchased seeds used for FIELD CROPS that were planted during the 2016/2017 agricultural season, but after the first-round visit to the household. It means that the questions are going to be asked only for the crops that were grown after the first visit and these crops much have been planted during the 2016/2017 agricultural season. Remember, the agricultural season 2016/2017 in general refers to the period beginning of October 2016 to the end of September 2017. All crops planted after the first-round visit and falling in the 2016/2017 agricultural season are supposed to be listed during this second round visit.

RESPONDENT: The ideal respondent for this section is the manager of each plot. If the manager is not available, the respondent should be another adult member of the household, who is knowledgeable about inputs used on each plot.

OPEN THE CROPS FLAP ON PAGE 34

NOTE: Data in this section is collected at the CROP LEVEL. Each row or record of the section on the questionnaire represents **a crop irrespective of the plot or parcel on which it is was grown**. For example, if white maize was grown on plots 1 and 2 of parcel 1, there should be only one line for the white maize. Here we are strictly interested in the combinations not the permutations.

Before starting this section, the enumerator should list all the field crops that were planted by the household **after** the first-round visit. Refer to Q00 in Section 5. If the response is "Yes", then the crop should be listed here.

- Q01:** Ask whether the household used any purchased seeds for [CROP] during the agricultural season 2016/2017. SKIP INSTRUCTION: If the response is "No", skip to next crop.
- Q02:** Ask for the quantity of the purchased seed that the household used for [CROP] during the agricultural season 2016/2017. Record the quantity and unit code in the appropriate column. If the unit code given does not correspond to a coded option, record '11' (other specify) *and clearly specify*.
- Q03:** The *total amount* spent on *purchased seeds* that the household used for [CROP] during the agricultural season 2016/2017 is captured. Round up to the nearest dollar.
- Q04 – Q08** solicit information on the financing of the purchased seed for the current agricultural season.

- Q04:** This is a filter question, establishing whether the person(s) who financed the purchases is or are member(s) of the household. SKIP INSTRUCTION: If the response is “No”, skip to Q06, otherwise, continue with Q05.
- Q05:** If a household member financed the purchases either fully or partially, then we want to know this person here. Refer to the household roster for the ID(s) of the person(s). Record UP TO TWO applicable member(s) from the household roster.
- Q06:** If a non-household member financed the purchases either fully or partially, then we want to know this person here. Only one response is required here. If more than one response, ask for the main one. Record the most appropriate option from the list provided.
- Q07:** Ask how the purchase was financed. Record the most appropriate option from the list provided. SKIP INSTRUCTION: If options other than ‘3’, skip to Q09. If option ‘3’ is taken, continue with Q08.
- Q08:** Ask for the amount that the household paid up-front for the purchased seeds. Help the respondent to estimate any in-kind payments. If none, record zero (‘0’). Round up to the nearest dollar if the response given includes cent(s).
- Q09:** Ask for the main place of purchase. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record ‘7’ (other specify) *and clearly specify*.
- Q10:** Ask for the distance from the farm to the place of purchase. Distance is measured in kilometres. If the distance is given in metres, round up to the nearest Km. 1,000 metres is equivalent to one Km.
- Q11:** Ask for the main mode of transportation to bring the purchased seeds from the place of purchase to the farm. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record ‘8’ (other specify) *and clearly specify*.
- Q12:** This question captures the total amount of money used for transportation for all purchased seeds. **INCLUDE ALL TRIPS FROM AND BACK TO THE FARM.** This information refers to all CROPS and is not specific to one crop.

AG8: FIELD CROP DISPOSITION

This section collects detailed information on how harvested crops were used (sold, consumed, stored, etc.). Data in this section is collected at CROP LEVEL as in the previous section. This information is critically important to account for commercialization/sale of crops including income from sales as well as the extent of own consumption from production.

RESPONDENT: The ideal respondent for this section is someone who is knowledgeable about the farming activities of the household, preferably a head of household.

OPEN THE HARVESTED CROPS FLAP ON PAGE 45

N.B. Unlike the previous flaps, this flap **should not be prefilled** before going to the field.

The first step in this section is to fill out the flap using information from the PARCEL-PLOT-CROP contained in the CROPS ON PLOT FLAP. The enumerator should look through the CROPS ON PLOT

FLAP and list **ALL CROPS THAT HAVE BEEN HARVESTED by the household** (even if the harvest is not complete). This consists of any crop listed on CROPS ON PLOT FLAP for which the response to Q04 is “Yes” in Section 6. Unharvested crops should not be listed on the CROP FLAP.

Unlike for the CROPS ON PLOT FLAP, **THE SAME CROP SHOULD NEVER BE LISTED TWICE ON THE CROP FLAP**. For example, if the household harvested two separate plots of white maize, white maize should only be listed **ONCE** on the HARVESTED CROPS FLAP. All responses in this section should reflect the entire amount of the harvested CROP and **each row** of the section represents **a single crop** regardless of the plot that the crop was harvested from.

Q01 – Q10: SALE OF UNPROCESSED CROP

Unprocessed crops are crops that are still in their raw state and have not been subjected to any mechanical or chemical reaction such as grinding, milling or roasting that transforms its physical state. Note that a dried shelled maize and groundnut are NOT processed.

For MAIZE CONSIDER ONLY THE DRIED HARVESTED QUANTITIES recorded in Q09 of AG6. DO NOT INCLUDE GREEN MEALIES.

Q01: This question will determine whether the household has sold any **unprocessed** [CROP] that was harvested during the agricultural season 2016/2017. SKIP INSTRUCTION: Where a response is “No”, skip to Q11; otherwise continue with Q02.

Q02: The month in which most of the **unprocessed** [CROP] was sold is also of interest. This can be used to determine how long after harvest the [CROP] was sold. Ask for the month during which the unprocessed [CROP] was sold and record the appropriate code.

NOTE: The month codes do not match the number of months. If the **unprocessed** [CROP] was sold over a period of months, record the month in which the most was sold.

Q03: The **TOTAL** quantity of the **unprocessed** [CROP] sold is one of the most important elements of this section. With the value of sales, this will inform as to how much of the crop was sold, the total revenue from sale of the unprocessed crop, as well as the price the farmer received for the unprocessed crop. Record the quantity and unit code in the appropriate column. If the unit code given does not correspond to a coded option, record ‘14’ (other specify) *and clearly specify*. Confirm with the respondent whether the quantity given is shelled or unshelled when applicable and record the condition in the appropriate column.

Q04: Along with the total quantity, the value of the sales is one of the most important variables of this section. Record the **TOTAL** value of sales of the **unprocessed** [CROP] in USD. Help the respondent to estimate any in-kind payments. Round up to the nearest dollar if the response given includes cent(s).

Q05: In addition to the quantity and value, the source of the sale should also be collected. Ask the respondent to whom they sold the **unprocessed** [CROP]. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record ‘9’ (other specify) *and clearly specify*.

Q06: Ask about the distance from the farm to the place that the household sold most of the **unprocessed** [CROP]. Distance is measured in kilometres. If the distance is given in metres, round up to the nearest Km. 1,000 metres is equivalent to one Km.

- Q07:** This question asks for the person(s) that is/are responsible for taking the **unprocessed** [CROP] to the place of sale and negotiating the sales. Refer to the household roster for the ID(s) of the person(s). Record UP TO TWO applicable member(s) from the household roster.
- Q08:** This question asks for the person(s) that decide how to use the earnings from the sale of the **unprocessed** [CROP]. Refer to the household roster for the ID(s) of the person(s). Record UP TO TWO applicable member(s) from the household roster.
- Q09:** If a non-household member decides how to use the earnings from the sale of the **unprocessed** [CROP], then we want to know this person here. Only one response is required here. If more than one response, ask for the main one. Record the most appropriate option from the list provided.
- Q10:** Lastly, the promptness of the payment for the sale of the **unprocessed** [CROP] should be indicated. This information will help determine whether the respondent was paid right away or had to wait for the payment. Record the most appropriate option from the list provided.

Q11 – Q19: INTENDED SALE OF UNPROCESSED CROP

- Q11:** Ask whether the household has any intentions to sell any **unprocessed** [CROP] that was harvested during the agricultural season 2016/2017. SKIP INSTRUCTION: If the response is “No”, skip to Q20; otherwise continue with Q12.
- Q12:** The month in which the household intends to sell the **unprocessed** [CROP] is also of interest. This can be used to determine how long after harvest the [CROP] will be sold. Ask for the month during which the household intends to sell **most** of the unprocessed [CROP] and record the appropriate code.
- Q13:** Along with the TOTAL quantity of the **unprocessed** [CROP] sold, the total quantity the household intends to sell is also important information. Record the quantity and unit code in the appropriate column. If the unit code given does not correspond to a coded option, record ‘14’ (other specify) *and clearly specify*. Confirm with the respondent whether the quantity given is shelled or unshelled when applicable and record the condition in the appropriate column.
- Q14:** Ask for the value of the sales that the household expects to receive from the intended sale of the **unprocessed** [CROP]. Record the TOTAL value in USD. Help the respondent to estimate in-kind payments. Round up to the nearest dollar if the response given includes cent(s).
- Q15:** Ask where the household intends to sell most of the **unprocessed** [CROP]. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record ‘10’ (other specify) *and clearly specify*.
- Q16:** Ask about the distance from the farm to the place that the household intends to sell most of the **unprocessed** [CROP]. Distance is measured in kilometres. If the distance is given in metres, round up to the nearest Km. 1,000 metres is equivalent to one Km.
- Q17:** This question asks for the person(s) that would be responsible for taking the **unprocessed** [CROP] to the place of the intended sale and negotiating the sale. Refer to the household roster for the ID(s) of the person(s). Record UP TO TWO applicable member(s) from the household roster.
- Q18:** This question asks for the person(s) that would decide how to use the earnings from the intended sale of **unprocessed** [CROP]. Refer to the household roster for the ID(s) of the person(s). Record UP TO TWO applicable member(s) from the household roster.

- Q19:** If a non-household member would decide on how to use the earnings from the intended sale of **unprocessed** [CROP], then we want to know this person here. Only one response is required here. If more than one response, ask for the main one. Record the most appropriate option from the list provided.

Q20 – Q26: STORAGE OF UNPROCESSED CROP

The series of questions ask for the quantity of harvested [CROP] that the household stored for different purposes.

- Q20:** This is a filter question to see whether the household stored any unprocessed [CROP] harvested during the agricultural season 2016/2017. **SKIP INSTRUCTION:** If the response is “No”, skip to Q27; otherwise continue with Q21.
- Q21:** Ask for the quantity of the harvested [CROP] that the household stored as seed for the next agricultural season 2017/2018. Record the quantity and unit code in the appropriate column. If the unit code given does not correspond to a coded option, record ‘14’ (other specify) *and clearly specify*. Confirm with the respondent whether the quantity given is shelled or unshelled when applicable and record the condition in the appropriate column. If none, record zero (‘0’) for quantity and leave the unit and the condition blank.
- Q22:** Ask for the quantity of the harvested [CROP] that the household stored as food for the household’s consumption. Record the quantity and unit code in the appropriate column. If the unit code given does not correspond to a coded option, record ‘14’ (other specify) *and clearly specify*. Confirm with the respondent whether the quantity given is shelled or unshelled when applicable and record the condition in the appropriate column. If none, record zero (‘0’) for quantity and leave the unit and the condition blank.
- Q23:** Ask for the quantity of the harvested [CROP] that the household stored for purposes other than seed or food for the household. Record the quantity and unit code in the appropriate column. If the unit code given does not correspond to a coded option, record ‘14’ (other specify) *and clearly specify*. Confirm with the respondent whether the quantity given is shelled or unshelled when applicable and record the condition in the appropriate column. If none, record zero (‘0’) for quantity and leave the unit and the condition blank. **SKIP INSTRUCTION:** If the response is ‘0’, skip to Q27; otherwise continue with Q24.
- Q24:** This question asks for the two main purposes for storing the harvested [CROP] besides for seed and household food consumption. Read the list of options to the respondent and wait for a response. Record the most appropriate option. If the response does not correspond to a coded option, record ‘6’ (other specify) *and clearly specify*. Record UP TO TWO responses.
- Q25:** Ask for the storage technique used by the household to store the harvested [CROP]. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record ‘3’ (other specify) *and clearly specify*.
- Q26:** In addition to the storage technique, ask for the storage structure used by the household to store the harvested [CROP]. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record ‘5’ (other specify) *and clearly specify*.

Q27 – Q33: OTHER UNPROCESSED CROP DISPOSITION

- Q27:** Ask for the quantity of the harvested [CROP] that the household used as feed for animals. Record the quantity and unit code in the appropriate column. If the unit code given does not

correspond to a coded option, record '14' (other specify) *and clearly specify*. Confirm with the respondent whether the quantity given is shelled or unshelled when applicable and record the condition in the appropriate column. If none, record zero ('0') for quantity and leave the unit and the condition blank.

- Q28:** Ask for the quantity of the harvested [CROP] consumed by the household members. Record the quantity and unit code in the appropriate column. If the unit code given does not correspond to a coded option, record '14' (other specify) *and clearly specify*. Confirm with the respondent whether the quantity given is shelled or unshelled when applicable and record the condition in the appropriate column. If none, record zero ('0') for quantity and leave the unit and the condition blank.
- Q29:** Ask for the quantity of the harvested [CROP] that the household used as (in-kind) payments for labour. This includes both agricultural and non-agricultural labour. Record the quantity and unit code in the appropriate column. If the unit code given does not correspond to a coded option, record '14' (other specify) *and clearly specify*. Confirm with the respondent whether the quantity given is shelled or unshelled when applicable and record the condition in the appropriate column. If none, record zero ('0') for quantity and leave the unit and the condition blank.
- Q30:** Ask for the quantity of the harvested [CROP] that the household used as (in-kind) payments for non-labour. Record the quantity and unit code in the appropriate column. If the unit code given does not correspond to a coded option, record '14' (other specify) *and clearly specify*. Confirm with the respondent whether the quantity given is shelled or unshelled when applicable and record the condition in the appropriate column. If none, record zero ('0') for quantity and leave the unit and the condition blank.
- Q31:** Ask for the quantity of the harvested [CROP] that the household used as reimbursement for sharecropping. Record the quantity and unit code in the appropriate column. If the unit code given does not correspond to a coded option, record '14' (other specify) *and clearly specify*. Confirm with the respondent whether the quantity given is shelled or unshelled when applicable and record the condition in the appropriate column. If none, record zero ('0') for quantity and leave the unit and the condition blank.
- Q32:** Ask for the quantity of the harvested [CROP] that the household used as gifts or transfers. Record the quantity and unit code in the appropriate column. If the unit code given does not correspond to a coded option, record '14' (other specify) *and clearly specify*. Confirm with the respondent whether the quantity given is shelled or unshelled when applicable and record the condition in the appropriate column. If none, record zero ('0') for quantity and leave the unit and the condition blank.
- Q33:** This question asks for the quantity of the harvested [CROP] that was post-harvest loss. Post-harvest loss consists of the crop that was harvested but was lost/damaged/made unusable after harvesting. For this question, the respondent can either report the quantity lost or the share of the harvest that was lost. The share is allowed in this question since the respondent may not know the exact quantity that was lost. If the quantity is given, record the quantity and unit code in the appropriate column. If the unit code given does not correspond to a coded option, record '14' (other specify) *and clearly specify*. Confirm with the respondent whether the quantity given is shelled or unshelled when applicable and record the condition in the appropriate column. If none, record zero ('0') for quantity and leave the unit and the condition blank.

Q34 – Q35: PROCESSING OF CROPS

Q34: This is a filter question to see whether the household processed any [CROP] harvested during the agricultural season 2016/2017. SKIP INSTRUCTION: If the response is “No”, skip to next crop; otherwise continue with Q35.

Processed crops are crops that went through the transformation from a raw or physical state through for example drying, grinding, milling and roasting. Note that shelled groundnut and maize are not processed.

Q35: Ask for the quantity of the harvested [CROP] that the household processed. Record the quantity and unit code in the appropriate column. If the unit code given does not correspond to a coded option, record ‘14’ (other specify) *and clearly specify*. Confirm with the respondent whether the quantity given is shelled or unshelled when applicable and record the condition in the appropriate column.

Q36 – Q45: SALE OF PROCESSED CROP

Q36: This question will determine whether the household has sold any **processed** [CROP] that was harvested during the agricultural season 2016/2017. SKIP INSTRUCTION: If the response is “No”, skip to next crop; otherwise continue with Q37.

Q37: The TOTAL quantity of the **processed** [CROP] sold is, again, one of the most important elements of this section. Together with the value of sales, this will inform as to how much of the crop was sold, the total revenue from sale of the processed crop, as well as the price the farmer received for the unprocessed crop. Record the quantity and unit code in the appropriate column. If the unit code given does not correspond to a coded option, record ‘14’ (other specify) *and clearly specify*. Confirm with the respondent whether the quantity given is shelled or unshelled when applicable and record the condition in the appropriate column.

Q38: Along with the quantity, the value of sales of the **processed** [CROP] is one of the most important elements of this section. Record the TOTAL value of sales of the **processed** [CROP] in USD. Help the respondent to estimate any in-kind payments. Round up to the nearest dollar if the response given includes cent(s).

Q39: This question asks for the person(s) that is/are responsible for processing the [CROP] harvested during the agricultural season 2016/2017. Refer to the household roster for the ID(s) of the person(s). Record UP TO TWO applicable member(s) from the household roster. Record '97' in the first column if it is all the household members.

Q40: This question asks for the person(s) that is/are responsible for taking the **processed** [CROP] to the place of the sale and negotiating the sale. Refer to the household roster for the ID(s) of the person(s). Record UP TO TWO applicable member(s) from the household roster. Record '97' in the first column if it is all the household members.

Q41: This question asks for the person(s) that decide how to use the earning from the sale of the **processed** [CROP]. Refer to the household roster for the ID(s) of the person(s). Record UP TO TWO applicable member(s) from the household roster. Record '97' in the first column if it is all the household members.

Q42: We are also interested in the promptness of the payment for the sale of the **processed** [CROP]. Record the most appropriate option from the list provided.

- Q43:** Since this series of questions refers to the sale of **processed** [CROP], we want to know exactly how the [CROP] was processed. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record '5' (other specify) *and clearly specify*. If there were multiple forms of processing for the [CROP], record the most common type of processing.
- Q44:** This question asks whether any energy was used to process [CROP]. SKIP INSTRUCTION: If the response is "No", skip to next crop; otherwise continue with Q45.
- Q45:** If any energy was used to process the crop, ask about a source of that energy. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record '9' (other specify) *and clearly specify*.

AG9: AGRICULTURAL LABOUR – POST-HARVEST ACTIVITIES

The objective of this section is to collect information on agricultural labour for **post-harvesting activities** during the agricultural season 2016/2017.

As in Section 3, both household, hired (casual) and free labour information will be collected here. For household labour, all household members 5 years and older who worked on post-harvest activities for crop will be selected, and then the relevant questions will be asked to the person. On the hired labour, we disaggregate it into men (15 years and above), women (15 years and above), and children (5-14 years old). Note that we are concerned with casual labour, but not permanent labour.

Finally, we collect information on exchange labour or non-household members working on post-harvest activities for crop without pay.

RESPONDENT: The ideal respondent for this section is someone who is knowledgeable about the farming activities of the household, preferably a head of household.

OPEN THE HARVESTED CROPS FLAP ON PAGE 45

As did in the previous section, **each row** of the section on the questionnaire represents a **single crop** regardless of the plot that the crop was harvested from.

Q01 – Q02d: HOUSEHOLD LABOUR FOR POST-HARVEST ACTIVITIES

- Q01:** This question asks for the total number of household members aged 5 years and older who worked on **post-harvest activities** for [CROP] during the agricultural season 2016/2017. If none, record zero ('0'). SKIP INSTRUCTION: If the response is '0', skip to Q03, otherwise continue with Q02.

Q02a – Q02d: These questions collect information on total number of weeks, days per week, and hours per day that each selected household member was engaged in post-harvest activities for the [CROP].

- A. Refer to the household roster for the ID of the person.
- B. It must be noted that here we are not interested in completed calendar week, but instead, the number of weeks. For instance, if the person worked 3 days in the first week of July and 4 days in the last week of August, the total number of weeks worked should be two and NOT one. The 3 days in the first week of July should not be added to 4 days in the last week of August to make a complete week. They should be counted as separate weeks.

- C. For the example in B, the number of days can be either 3 or 4, but probe to get the right response from the respondent. Note that the total number of days cannot be more than 7.
- D. We ask for the number of hours that the individual usually works on the post-harvest activities for [CROP] per day for those days that he/she worked on the [CROP]. Note that the number of hours worked per day cannot be more than 16.

Record the information of work on each crop for each person. The questionnaire allows for up to 12 household members working on the individual crops. If for example three persons in a household worked on crop we expect information about the three members to be entered in the first three member columns. As another example, if the member worked for an hour in week 1 and another hour in week 2, then record 2 in B, 1 in C, and 1 in D.

Example: *If a person works for two days in a week on a plot he or she is considered to have worked for a week. If a person works for two hours in a day on a plot he or she is considered to have worked for a day.*

Q03 – Q15: HIRED LABOUR FOR POST-HARVEST ACTIVITIES

This sub-section is about hired (casual) labour for **post-harvest activities** at different levels of disaggregation during the agricultural season 2016/2017. Record information for each crop on “number of men hired to work, the number of days, hours per day, payment per day” for hired casual labour. Similar questions are repeated for hired women and children 5-14 years old.

Note that Q04 – Q07 have been repeated in Q08 – Q11 and Q12 – Q15 for women (15 years and above) and for children (5-14 years old) respectively. Here we will be able to distinguish whether men, women, and children are paid differently for performing the same activities at the same time.

- Q03:** This is a filter question for questions on hired labour. Hired labour are non-household members who work on the [CROP] for pay. Note that here we are referring to hired casual labour instead of permanent labour. If the response to this question is NO, then the subsequent questions on HIRED CASUAL LABOUR FOR POST-HARVEST ACTIVITIES will be skipped. SKIP INSTRUCTION: If the response is “No”, skip to Q16, otherwise, continue with Q04.
- Q04:** This question seeks information on the total number of hired **men** involved in post-harvest activities for the [CROP] during the agricultural season 2016/2017. Exclude permanent hired labour.
- Q05:** Enquire for the total number of days that hired men (15 years and older) were involved in post-harvest activities for the [CROP] during the agricultural season 2016/2017. Note that this question might be difficult to answer especially if the household hires different persons at different times. Probe and help the respondent to estimate if needed.
- Q06:** Ask the number of hours that hired men usually work on the [CROP] in a day. Here again, probe for the hours that hired men usually spend on the [CROP] in a day as this question might be difficult to answer. Moreover, be careful to refer to a particular crop especially if multiple persons are hired in a day and they spend different hours working on different crops.
- Q07:** Ask how much is usually paid per day to **all men** hired to work on the [CROP] for post-harvest activities during the agricultural season 2016/2017 in USD. This is how much the farmer usually pays per day to all the hired men to work on the [CROP].

Q08 – Q11: Correspond to Q04 – Q07 but refer instead to **women** (15 years or older). Refer to the notes Q04 – Q07 above.

Q12 – Q15: Correspond to Q04 – Q07 but refer instead to **children** (5-14 years old). Refer to the notes Q04 – Q07 above.

Q16 – Q25: EXCHANGE LABOUR FOR POST-HARVEST ACTIVITIES

This sub-section is about exchange labour for **post-harvest activities** at different levels of disaggregation for the 2016/2017 agricultural season. Note that Q17 – Q19 have been repeated in Q20 – Q22 and Q23 – Q25 for women (15 years and above) and for children (5-14 years old) respectively.

Q16: This is a filter question for the questions on exchange/free labour for post-harvest activities. Exchange labour refers to non-household members working on the [CROP] without pay or in exchange for services rendered by the household. If the response is NO, the subsequent questions on EXCHANGE LABOUR/NHIMBE FOR POST-HARVEST will be skipped. SKIP INSTRUCTION: If the response is “No”, skip to next section, otherwise, continue with Q17.

Q17: Asks for the number of men (exchange labour) that worked for the [CROP] without pay or in the form of exchange labour on post-harvest activities during the agricultural season 2016/17.

Q18: Establishes the number of days that men from other households worked for the [CROP] without pay on post-harvest activities during the agricultural season 2016/2017. If exchange labour worked on the [CROP] at different days, ask for the cumulative number of days.

Q19: Here we ask for the number of hours per day that men from other households **usually** work for the [CROP] without pay on post-harvest activities during the agricultural season 2016/2017. Follow previous examples to solicit response for this question.

Q20 – Q22: Correspond to Q17 – Q19 but refer instead to **women** (15 years or older). Refer to the notes Q04 – Q07 above.

Q23 – Q25: Correspond to Q17 – Q19 but refer instead to **children** (5-14 years old). Refer to the notes Q04 – Q07 above.

AG10: INPUT ACQUISITION AND COSTS

This section obtains information on the sources of the inputs used during the agricultural season 2016/2017. How the input was acquired is considered, including inputs left over from the previous season, Government input support programs, acquired for free, and purchased. Own-production is also considered for organic fertilizer. Note that the information in this section is collected at the HOUSEHOLD LEVEL for each input and NOT specific to any PARCEL, PLOT or CROP.

RESPONDENT: The ideal respondent for this section is someone who is knowledgeable about the farming activities of the household, preferably a head of household.

OPEN THE INPUT COSTS FLAP ON PAGE 50

Q01: Ask whether the household used or received any [INPUT] during the agricultural season 2016/2017. Observe the instruction in CAPS/BOLD. Ask the question column-wise for all the

inputs before moving on to Q02. Enumerator should refer to AG4 to confirm if the household used any of the inputs.

- Q02:** If Q01 is “Yes”, ask if any [INPUT] used was left over from the previous season. This could be [INPUT] that the household may have used in the previous season or acquired more than a year ago. SKIP INSTRUCTION: If the response is “No”, skip to Q04. Otherwise, continue with Q03.
- Q03:** This question asks for the quantity of the leftover [INPUT] used by the household during the agricultural season 2016/2017. Record the quantity of leftover [INPUT] used and the appropriate unit code. If the unit code given does not correspond to a coded option, record ‘9’ (other specify) *and clearly specify*.

Q04 – Q09: GOVERNMENT INPUT SUPPORT PROGRAMS

- Q04:** This question determines whether the household received any [INPUT] from the Government input support programs during the agricultural season 2016/2017. Programs that we are interested in here include Presidential input support program and vulnerable input support program. **EXCLUDE any [INPUT] received as a part of Command agriculture.** SKIP INSTRUCTION: If the response is “No”, skip to Q11. Otherwise, continue with Q05.
- Q05:** This question determines whether the household used any [INPUT] received from the Government input support programs during the agricultural season 2016/2017. SKIP INSTRUCTION: If the response is “No”, skip to Q10. Otherwise, continue with Q06.
- Q06:** This question asks for the quantity of the [INPUT] used that came from the Government input support programs during the agricultural season 2016/2017. Record the quantity and record the appropriate unit code. If the unit code given does not correspond to a coded option, record ‘9’ (other specify) *and clearly specify*.
- Q07:** This question asks how much was paid to receive the [INPUT]. Record the cost in USD. Round up to the nearest dollar if the response given includes cent(s). Exclude transport cost.
- Q08:** The enumerator should ask the respondents how much they would have paid for the amount of the [INPUT] they used (recorded in Q06) if they had not received it from the Government input support programs. Probe and help the respondent to estimate if needed.
- Q09:** Establishes the distance from the farm to the place where most of the [INPUT] from the government was obtained or collected. SKIP INSTRUCTION: Once a response has been provided, skip to Q11.
- Q10:** Ask why the household did not use any [INPUT] received from the Government input support programs during the agricultural season 2016/2017. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record ‘5’ (other specify) *and clearly specify*.

Q11 – Q15: INPUT ACQUIRED FOR FREE FROM OTHER SOURCES

- Q11:** This question determines if any [INPUT] used during the agricultural season 2016/2017 was acquired for FREE. Note that the **free** [INPUT] **EXCLUDES** any leftover from the previous season or those received as part of the Command agriculture or government support programs. SKIP INSTRUCTION: If the response is “No”, skip to Q16. Otherwise, continue with Q12.

- Q12:** This question asks for the quantity of **free** [INPUT] used during the agricultural season 2016/2017. Record the quantity and unit code in the appropriate column. If the unit code given does not correspond to a coded option, record '9' (other specify) *and clearly specify*.
- Q13:** This question determines the source of **free** [INPUT] that the household received during the agricultural season 2016/2017. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record '7' (other specify) *and clearly specify*. If there are more than one source, record the source where the household received the most.
- Q14:** This question asks for the main mode of transportation used to bring the [INPUT] received for **free** during the agricultural season 2016/2017. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record '8' (other specify) *and clearly specify*.
- Q15:** Ask for the distance from the farm to the place where the free [INPUT] was obtained. Distance is measured in kilometres. If the distance is given in metres, around up to the nearest Km. 1,000 metres is equivalent to one Km.

Q16 – Q27: PURCHASED INPUT

- Q16:** Ask whether any [INPUT] was purchased during the agricultural season 2016/2017. **SKIP INSTRUCTION:** If the response is "No", skip to Q28. Otherwise, continue with Q17.
- Q17:** The enumerator should ask the respondent for the main source of the purchased [INPUT] during the agricultural season 2016/2017. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record '7' (other specify) *and clearly specify*.
- Q18:** This question asks for the total quantity of the [INPUT] purchased that the household used during the agricultural season 2016/2017. Record the quantity and unit code in the appropriate column. If the unit code given does not correspond to a coded option, record '9' (other specify) *and clearly specify*.
- Q19:** This question asks for the total value of the [INPUT] purchased that the household used during the agricultural season 2016/2017. Ask the respondent for the amount paid for [INPUT] that was purchased during the agricultural season 2016/2017. Record the response in USD. Round up to the nearest dollar if the response given includes cent(s).
- Q20:** Ask which household member(s) paid to purchase the [INPUT] that the household used during the agricultural season 2016/2017. Refer to the household roster for the ID(s) of the person(s). Record UP TO TWO applicable member(s) from the household roster.
- Q21:** If a non-household member financed the purchases, either fully or partially, then we want to know this person here. Only one response is required here. If more than one response, ask for the main one. Record the most appropriate option from the list provided.
- Q22:** Ask for the source of finance for the purchase of the [INPUT]. Record the most appropriate option from the list provided. **SKIP INSTRUCTION:** If option '1' is chosen, skip to Q26. If options '2' or '4' is selected, skip to Q24. Otherwise, continue with Q23.
- Q23:** Ask for the amount paid up-front for the [INPUT] purchased. **INCLUDE CASH PAYMENT AND ESTIMATED VALUE OF IN-KIND PAYMENTS.** If none, record zero ('0'). Record the response in USD. Round up to the nearest dollar if the response given includes cent(s).

- Q24:** Ask how much was repaid or that will be repaid for the [INPUT] purchased using credit. This should be the amount that will be paid in addition to how much was paid up front. Be sure to **INCLUDE CASH PAYMENT AND THE ESTIMATED VALUE OF ANY IN-KIND PAYMENTS**. Record the response in USD. Round up to the nearest dollar if the response given includes cent(s).
- Q25:** Lastly, ask the respondent for the source of credit for the purchase of the [INPUT]. If there was more than one source, record the source where the most credit was given. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record '11' (other specify) *and clearly specify*.
- Q26:** This question asks what the main mode of transportation used to bring the [INPUT] purchased that was used during the agricultural season 2016/2017. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record '8' (other specify) *and clearly specify*.
- Q27:** Ask for the distance from the farm to the place where the [INPUT] was purchased for use during the agricultural season 2016/2017. Distance is measured in kilometres. If the distance is given in metres, round up to the nearest Km. 1,000 metres is equivalent to one Km.

Q28 – Q29: ORGANIC FERTILIZER FROM OWN PRODUCTION

- Q28:** This question asks whether the household used any **ORGANIC FERTILIZER** out of own-production or own animals during the agricultural season 2016/2017. Note that this question is asked only for organic fertilizer. **SKIP INSTRUCTION:** If the response is "No", skip to next input. Otherwise, continue with Q29.
- Q29:** Ask for the quantity of the **ORGANIC FERTILIZER** used that was from household's own-production or own animals. Record the quantity and the appropriate unit code. If the unit code given does not correspond to a coded option, record '5' (other specify) *and clearly specify*.
- Q30:** Ask for the amount paid for transportation to acquire the inputs received for **free** during the agricultural season 2016/2017. **THIS AMOUNT SHOULD INCLUDE ALL TRIPS TO AND FROM THE FARM**. Record the **TOTAL** amount in USD. Round up to the nearest dollar if the response given includes cent(s).
- Q31:** Ask for the amount paid for transportation to acquire the purchased inputs. **THIS AMOUNT SHOULD INCLUDE ALL TRIPS TO AND FROM THE FARM**. Record the **TOTAL** amount in USD. Round up to the nearest dollar if the response given includes cent(s).
- Q32:** Ask for the amount paid for transportation to collect the inputs that were received from the government input support program during the agricultural season 2016/2017. **THIS AMOUNT SHOULD INCLUDE ALL TRIPS TO AND FROM THE FARM**. Record the **TOTAL** amount in USD. Round up to the nearest dollar if the response given includes cent(s).

AG11: COMMAND AGRICULTURE

This section collects information on the government's Command Agriculture program. As part of this program, agricultural input packages are given to selected farmers in the form of a loan to produce specific crops. The loan is repaid in the form of harvested output of those specific crops. **THE CROPS CONSIDERED UNDER THIS PROGRAM ARE MAIZE AND WHEAT**

RESPONDENT: The ideal respondent for this section should be someone who is more knowledgeable about the farming activities of the household, preferably a head of household or farm manager.

OPEN THE COMMAND AGRICULTURE FLAP ON PAGE 53

- Q01** This is a filter question to establish whether the household used and/or received any of the listed inputs as part of COMMAND AGRICULTURE program during the agricultural season 2016/2017. *Enumerator should check Q03b of AG4 to confirm if any of the Wheat/Maize crop on plots was under command agriculture.* If there is a 'YES' response to any Wheat/Maize crop on [PLOT], then this question must be asked for each of the listed [ITEM]s. The question must be asked column-wise for each [ITEM].
- Q02** Here we ask for the total quantity of the [ITEM] that the household received as part of the command agriculture program during the agricultural season 2016/2017. The total quantity received during the 2016/2017 agricultural season and the corresponding unit should be asked and recorded accordingly. Note that this question is blocked for [LAND PREPARATION], row 101, and therefore the enumerator should not ask the question for this ITEM.
- Q03** This question is restricted to only row 101, LAND PREPARATION, and asks for the liquidity received by the household from command agriculture to undertake land preparation for the agricultural season 2016/2017. Pay particular attention to the instruction in bold.
- Q04** This question concerns usage of the ITEM received from the command agriculture program. If the household received the ITEM but has not used any for the agricultural season 2016/2017, then select No and continue to Q05, otherwise, skip to Q06.
- Q05** Ask the respondent the main reason why his/her household did not use the ITEM received from the command agriculture program. If the given reason does not correspond to a coded option, record '10' (other specify) *and clearly specify*. Once the response has been indicated, please skip to Q07.
- Q06** For ITEMS that the household received and used, establish the quantity that the household used during the agricultural season 2016/2017. The corresponding unit of the quantity must be specified. If the unit code given does not correspond to a coded option, record '7' (other specify) *and clearly specify*.
- Q07** Ask for the total quantity of the ITEM that the household received during the agricultural season 2016/2017 that is still in stock, and yet to be used. The corresponding unit of the quantity must be specified. If the unit code given does not correspond to a coded option, record '7' (other specify) *and clearly specify*. Please ensure that the sum of Q06 and Q07 is not more than that of Q02, also ensure consistency in the units used for Q02, Q06 and Q07.
- Q08** Ask if the household used own inputs, either purchased, leftover, etc. in addition to those input received from the command agriculture program. If the household did use own additional input, then choose Yes, and No if vice versa.
- Q09 – Q20:** This block of questions capture information on command agriculture at the household level, and does not refer to any specific input/item.
- Q09** Establish the total area that the household planted to MAIZE under the command agriculture program for the agricultural season 2016/2017. Please select the appropriate unit for the specified quantity.

- Q10** Ask for the total amount of MAIZE that the household harvested or expects to harvest under the command agriculture program for the 2016/2017 agricultural season. The quantity, unit and condition of the MAIZE harvested or expected to be harvested must be recorded.
- Q11** Here we ask for the total quantity of MAIZE output that the household expects to reimburse the government as payment for the inputs received as part of the command agriculture program. Here the quantity, unit and condition of the MAIZE must all be indicated.
- Q12** Ask for how much MAIZE the household has already given to the government as payment/reimbursement for the input received as part of command agriculture. Here also, the quantity, unit and condition of the MAIZE harvested or expected to be harvested must be recorded.
- Q13** Establish the total area that the household planted to WHEAT under the command agriculture program for the agricultural season 2016/2017. Please select the appropriate unit for the specified quantity.
- Q14** Ask for the total amount of WHEAT that the household harvested or expects to harvest under the command agriculture program for the 2016/2017 agricultural season. The quantity, unit and condition of the WHEAT harvested or expected to be harvested must be recorded.
- Q15** Here we ask for the total quantity of WHEAT output that the household expects to reimburse the government as payment for the inputs received as part of the command agriculture program. Here the quantity, unit and condition of the WHEAT must all be indicated.
- Q16** Ask for how much WHEAT the household has already given to the government as payment/reimbursement for the input received as part of command agriculture. Here also, the quantity, unit and condition of the WHEAT harvested or expected to be harvested must be recorded.
- Q17 – Q20:** This block of questions collect information on households' participation in the command agriculture program for the 2016/2017 agricultural season and their intention to participate in the same program for the next agricultural season 2017/2018. The questions are applicable to ALL households, whether or not they participated in the command agriculture program during the 2016/2017 agricultural season.
- Q17** Ask if the household applied to participate in the command agriculture program during the agricultural season 2016/2017. This question should be 'Yes' for all households that participated in the command program following responses to Q01 – Q08. If the response is NO, then skip to Q19, otherwise, continue with Q18
- Q18** Establish whether the household received all the inputs that they applied for under the command agriculture program during the agricultural season 2016/2017.
- Q19** Ask if the household has applied to participate in the command agriculture program for the 2017/2018 agricultural season. If the response is NO, then skip to next section. Otherwise, continue with Q20
- Q20** For those who have not yet applied to participate in the command agriculture program for the 2017/2018 agricultural season, ask if they intend to apply to participate in the program for the coming agricultural season 2017/2018

AG12: AGRICULTURAL CAPITAL FORMATION

This section captures information on agricultural capital **possessed** by the household. These agricultural capital items include tractor, plough, trailer, planter, sprayer, etc., and have been documented to be important determinants of agricultural productivity and subsequently household welfare and standards of living.

Note that the reference period for this section is **from January 1, 2017 to August 31, 2017**. Do not confuse the reference period here with that of the previous sections.

RESPONDENT: The ideal respondent for this section is someone who is knowledgeable about the farming activities or agricultural capital ownership/acquisition of the household, preferably a head of household.

OPEN THE AGRICULTURAL CAPITAL FLAP ON PAGE 55

FOR QUESTION 1, ASK FOR ALL CAPITAL ITEMS COLUMN-WISE AND THEN THE REST OF THE QUESTIONS ROW-WISE. See Appendix F for vernacular translations of the capital items.

Q01: Ask whether any member of the household owned any [ITEM] between January 1, 2017 and August 31, 2017. Items(s) owned that is (are) not listed should be recorded in other specify, *and clearly specify*.

Q02: If Q01 is “Yes”, ask for the number of working [ITEM] that the household owned on January 1, 2017. If none, record zero (‘0’). This establishes the opening stock of the [ITEM] for the reference period, January 1, 2017.

Q02a: If Q01 is “Yes”, ask for the number of working [ITEM] that the household owned on August 31, 2017. If none, record zero (‘0’). This establishes the closing stock of the [ITEM] for the reference period, August 31, 2017.

NOTE: The item must be in good working condition. If the item is not functioning, it should be excluded.

Q03: This question seeks to determine whether the household has *acquired* any [ITEM] between January 1, 2017 and August 31, 2017. SKIP INSTRUCTION: If the response is “No”, skip to Q06. Otherwise, continue with Q04.

Q04: This question seeks to determine the number of [ITEM] that were *acquired* by the household between January 1, 2017 and August 31, 2017.

Q05: Ask for which household member(s) owns(own) the [ITEM]. Refer to the household roster for the ID(s) of the person(s). Record UP TO FOUR applicable member(s) from the household roster. If owned by all the household members, record ‘98’ in the first column.

Q06: Ask for the respondent how much they would receive if they *sold one of [ITEM] in its current state* in USD.

NOTE: This question refers to the value of a SINGLE UNIT OF ITEM. That is, if the household owns three ploughs, the current sale value of A SINGLE plough should be reported. If the household owns more than one of a particular item, the current sale value of THE NEWEST ITEM should be reported.

- Q07:** This question seeks to determine whether or not the household has *disposed of* any [ITEM] between January 1, 2017 and August 31, 2017. **SKIP INSTRUCTION:** If the response is “No”, skip to Q10. Otherwise, continue with Q08.
- Q08:** Ask for the number of [ITEM] that have been *disposed of* by the farming household between January 1, 2017 and August 31, 2017.
- Q09:** Determine the total value received for [ITEM]. Record the total amount in USD. Add cash amounts and estimated value of any in-kind payments. Round up to the nearest dollar.
- Q10:** This question seeks to determine whether or not the household has *rented/hired out* any [ITEM] between January 1, 2017 and August 31, 2017. **SKIP INSTRUCTION:** If the response is “No”, skip to next item. Otherwise, continue with Q11.
- Q11:** Ask for the number of [ITEM] that were *rented/hired out* by the household between January 1, 2017 and August 31, 2017.
- Q12:** Record the total value received by the household for *renting/hiring out* [ITEM] between January 1, 2017 and August 31, 2017. Record the amount in USD. Add cash amounts and estimated value of in-kind payments. Round up to the nearest dollar.
- Q13:** Ask for the number of days the household *rented/hired out* [ITEM] between January 1, 2017 and August 31, 2017. Record the response IN DAYS. If it was not continuous and/or rented out multiple times, ask for the cumulative number of days.
- Q14:** Ask for the amount of money that the household spent on repairs and maintenance for ALL items between January 1, 2017 and August 31, 2017. If None, record ‘0’.

AG13: AGRICULTURAL CAPITAL USE

This section captures information on agricultural capital **used** by the household during the agricultural season 2016/2017. These questions will determine the household’s access to the agricultural capital to increase the agricultural productivity.

Note that the reference period for this section is **during the agricultural season 2016/2017**. Do not confuse the reference period here with that of the previous section.

RESPONDENT: The ideal respondent for this section is someone who is knowledgeable about the farming activities of the household, preferably a head of household.

OPEN THE AGRICULTURAL CAPITAL USE FLAP ON PAGE 56

FOR QUESTION 1, ASK FOR ALL CAPITAL ITEMS COLUMN-WISE AND THEN THE REST OF THE QUESTIONS ROW-WISE.

- Q01:** Ask whether any member of the household **used or made use of** any [ITEM] during the agricultural season 2016/2017. Items(s) used that is (are) not listed should be recorded in other specify, *and clearly specify*.
- Q02:** If Q01 is “Yes”, then ask which household member(s) used the [ITEM]. Refer to the household roster for the ID(s) of the person(s). Record UP TO THREE applicable member(s) from the

household roster in order of frequency of use. If used by all the household members, record '98' in the first column.

- Q03:** This question seeks to determine whether or not the household has *rented/hired in* any [ITEM] during the agricultural season 2016/2017. **SKIP INSTRUCTION:** If the response is "No", skip to next item. Otherwise, continue with Q04.
- Q04:** Ask for the number of [ITEM] that were *rented/hired in* by the household during the agricultural season 2016/2017.
- Q05:** Ask for the number of days the household *rented/hired in* [ITEM] during the agricultural season 2016/2017. Record the response IN DAYS. If it was not continuous and/or rented in multiple times, ask for the cumulative number of days.
- Q06:** Record the total value paid by the household to *rent/hire in* [ITEM] during the agricultural season 2016/2017. Record the amount in USD. Add cash amounts and estimated value of in-kind payments. Round up to the nearest dollar.

AG14: ANIMAL HOLDINGS

In this section, all information about animal holdings and production of the household is collected. Animal holdings mean animal(s) owned by a person or jointly owned with another member of the household. Note that the reference period for this section is **from January 1, 2017 to August 31, 2017**. Do not confuse the reference period here with that of the previous sections.

RESPONDENT: The ideal respondent for this section is the most knowledgeable member of the household for example the owner or caretaker of animals, besides those with a YES response from the first-round closing stock.

OPEN THE ANIMAL HOLDINGS FLAP ON PAGE 60

FOR QUESTION 1, ASK FOR ALL ANIMALS FIRST COLUMN-WISE BEFORE MOVING TO NEXT QUESTION. AFTER COMPLETING QUESTION 1 COLUMN-WISE, THE REST OF THE QUESTIONS MUST BE COMPLETED ROW-WISE.

FIRST, QUESTION 1 SHOULD BE FILLED ('YES') FOR ALL [ANIMAL]S WITH A NON-ZERO VALUE ON THE PREFILLED SHEET, I.E. Q02. Once this is done, the enumerator **MUST** ask the respondent if the household owned any [ANIMAL] with an empty response in Q01 between January 1, 2017 and August 31, 2017. Further to this, the enumerator should solicit for the number of the [ANIMAL] owned in Q02 and proceed from there.

REFER TO **APPENDIX G** FOR VERNACULAR TRANSLATIONS OF ANIMALS

- Q01:** Ask whether a member of the household owned any [ANIMAL] between January 1, 2017 and August 31, 2017 as listed in the questionnaire.
- Q02:** For each [ANIMAL] that the household owned between January 1, 2017 and August 31, 2017, ask for the number of [ANIMAL] owned by the household now, either at farm or away and record it. Do not ask this question for [ANIMAL]S that were prefilled from the first-round visit.
- Q03:** Ask for the number of [ANIMAL] that the household owned on August 31, 2017 either at the farm or away. If none, record '0'.

- Q04:** This question seeks the current market value of **one** of the [ANIMAL]. Though there are of different ages and sizes of the [ANIMAL], we are interested in the average sale value of the [ANIMAL]. Record the amount in USD e.g. **300**. Round up to the nearest dollar if the response given includes cent(s).
- Q05:** Ask for the person(s) in the household who is/are responsible for keeping the [ANIMAL]. Refer to the household roster for the ID(s) of the person(s). Record UP TO TWO applicable member(s) from the household roster. If it is a non-household member, record '97' in the first column.
- Q06:** Ask for the number of [ANIMAL] born between January 1, 2017 and August 31, 2017. If none, record zero ('0'). This question is asked only for *young ones*. Consider all live births including those that died soon after birth.
- Q07:** Ask for the average number of [ANIMAL] born per litter or brood between January 1, 2017 and August 31, 2017. This question is asked only for young ones of pigs, rabbits, chickens and guinea fowls (*piglets, bunnies, chicks and keets*).
- Q08:** Ask for the number of batches produced/reared at the same time between January 1, 2017 and August 31, 2017. If none, record zero ('0'). This question is asked for Chicken broilers and Guinea fowls only. **SKIP INSTRUCTION:** If the response is '0', skip to Q10. Otherwise, continue with Q09.
- Q09:** Ask for the number/quantity produced/reared at one time (batch). Record the average number per each batch. This question is asked for Chicken broilers and Guinea fowls only.
- Q10:** Enquire for the number of [ANIMAL] *received* as **gifts and transfers** between January 1, 2017 and August 31, 2017. If none, record zero ('0'). Include [ANIMAL] that is given to the household by a programme where the household has to pay back or give away [ANIMAL] in the future.
- Q11:** Ask for the number of [ANIMAL] *received* as **bride price (LOBOLA)** between January 1, 2017 and August 31, 2017. If none, record zero ('0').
- Q12:** Ask for the number of [ANIMAL] *received* as **payment for services rendered** between January 1, 2017 and August 31, 2017. If none, record zero ('0').
- Q13:** Ask for the number of [ANIMAL] bought to be raise between January 1, 2017 and August 31, 2017. If none, record zero ('0'). **SKIP INSTRUCTION:** If the response is '0', skip to Q15. Otherwise, continue with Q14.
- Q14:** Ask for the total value of the purchased [ANIMAL] between January 1, 2017 and August 31, 2017. Record the total amount in USD for both cash and in-kind payments. Estimate the value of payments in-kind for purchases. Round up to the nearest dollar if the response given includes cent(s).
- Q15:** Ask for the number of [ANIMAL] that were *given out* as **gifts and transfers** between January 1, 2017 and August 31, 2017. If none, record zero ('0').
- Q16:** Ask for the number of [ANIMALS] that were *given out* as **payment for services received** between January 1, 2017 and August 31, 2017. If none, record zero ('0'). Include [ANIMAL] that was given away as payment that was agreed when [ANIMAL] was gifted to the household.

- Q17:** Asks for the number of [ANIMAL] that were lost or stolen between January 1, 2017 and August 31, 2017. If none, record zero ('0').
- Q18:** Ask for the number of [ANIMAL] that were *given out* as **payment for bride price (LOBOLA)** between January 1, 2017 and August 31, 2017. If none, record zero ('0').
- Q20:** Ask for the number of [ANIMAL] sold **alive** between January 1, 2017 and August 31, 2017. If none, record zero ('0'). **SKIP INSTRUCTION:** If the response is '0', skip to Q21. Otherwise, continue with Q20.
- Q21:** Determine the total value of sales of live [ANIMAL] between January 1, 2017 and August 31, 2017. Record the total amount in USD for both cash and in-kind payments. Estimate the value of payments in-kind for sales. Round up to the nearest dollar if the response given includes cent(s).
- Q22:** Ask whether or not the household slaughtered any [ANIMAL] between January 1, 2017 and August 31, 2017. This question is not asked for *young animals*. **SKIP INSTRUCTION:** If the response is "No", skip to Q23. Otherwise, continue with Q22.
- Q22:** Given that the household slaughtered [ANIMAL], this question seeks the number of [ANIMAL] slaughtered between January 1, 2017 and August 31, 2017. Separate the number of animals slaughtered for **sale**, for household **consumption** and both for **sale and household consumption**. Record responses of number of any slaughtered animals under the appropriate columns. If none, record zero ('0').
- Q23:** This question determines whether or not any [ANIMAL] died due to predation, diseases, injury, drought, etc. between January 1, 2017 and August 31, 2017. **SKIP INSTRUCTION:** If the response is "No", skip to next animal. Otherwise, continue with Q24.

***Predation** is defined as the act of killing and eating of one animal by another animals such as lion, hyenas, leopards, eagles etc.*

- Q24:** Ask for the number of [ANIMAL] that died between January 1, 2017 and August 31, 2017 due to each cause. If none, record zero ('0'). Record the number of [ANIMAL] that died due to PREDATION in **Q24A**. Record the number of died [ANIMAL] due to DISEASES in **Q24B**. Record the number of died [ANIMAL] due to INJURY in **Q24C**. Record the number of died [ANIMAL] due to DROUGHT in **Q24D**. Record the number of died [ANIMAL] due to OTHERS in **Q24E** and *clearly specify the cause*.

AG15A: PASTURE

This section captures information on pasture. These questions ask about ownership of pasture land for raising livestock between January 1, 2017 and August 31, 2017. Note that the questions in this section are asked at the household level, and not specific to any animal or animal groups.

RESPONDENT: The ideal respondent for this section is the most knowledgeable member of the household for example the owner or caretaker of animals.

- Q01:** Ask if the household grazed any livestock between January 1, 2017 and August 31, 2017. **SKIP INSTRUCTION:** If the response is "No", skip to next section. Otherwise, continue with Q02.

- Q02:** Ask if the household owned any pasture land for raising livestock between January 1, 2017 and August 31, 2017. **SKIP INSTRUCTION:** If the response is “No”, skip to Q05. Otherwise, continue with Q03.
- Q03:** Ask for the total pasture land area that the household owned for raising livestock between January 1, 2017 and August 31, 2017. Record the total area of pasture land owned by the household; and record the appropriate unit code.
- Q04:** Ask whether the size of the pasture land owned by the household for raising livestock between January 1, 2017 and August 31, 2017 was adequate. Again, note that these questions are not specific to any one animal group.
- Q05:** Ask where the livestock usually grazed between January 1, 2017 and August 31, 2017. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record ‘5’ (other specify) *and clearly specify*. Again, note that this question is not specific to any one animal group.
- Q05a:** Ask whether the household prepared any hay bales or silage for animals between January 1, 2017 and August 31, 2017.

AG15B: ANIMAL COST & PRODUCTION SYSTEMS

This section captures information on cost of raising animals and the production system employed. Note that some animals are aggregated here compared to animals listed in Section 14 – large ruminants, small ruminants, pigs, other poultry and rabbits. Ensure that you ask the questions at these aggregated levels to solicit the correct response. Information on the household’s ownership of pasture is collected, as well as household’s use of vaccines.

Before we delve into the questionnaire, below are some definitions that might help in clarifying some of the terms used in this section:

- i. ***Vaccination*** is the administration of antigenic material (a vaccine) to stimulate an individual's immune system to develop adaptive immunity to a pathogen.
- ii. ***Deworming*** is the treatment given to animals to free it of worms.
- iii. ***Dosing*** generally applies to feeding chemicals or medicines in small quantities into a process fluid or to a living being at intervals or to atmosphere at in sufficient time for the chemical or medicine to react or show the results.
- iv. ***Dehorning*** is removal of horns from an animal, mostly ruminants.

RESPONDENT: The ideal respondent for this section is the most knowledgeable member of the household for example the owner or caretaker of animals.

OPEN THE ANIMAL COSTS FLAP ON PAGE 6

Q01 – Q10: ANIMAL COSTS

- Q01:** Ask whether any member of the household owned any [ANIMAL GROUP] between January 1, 2017 and August 31, 2017. This is limited to animals owned by the household between

January 1, 2017 and August 31 2017. Information on this can be obtained from the ANIMAL HOLDING FLAP ON PAGE 60. Ask for each [ANIMAL GROUP] before moving on to Q02.

- Q02:** Ask who in the household owned the [ANIMAL GROUP] between January 1, 2017 and August 31, 2017. Refer to the household roster for the ID(s) of the person(s). Record UP TO TWO applicable member(s) from the household roster. If it is entire household, record '98' in the first column.
- Q03 - Q10:** These questions seek the amount spent between January 1, 2017 and August 31, 2017 for each [ANIMAL GROUP] on different cost items. Record the total amount in USD for both cash and any in-kind payments for each expense item paid to raise [ANIMAL GROUP]. Respondents should estimate the value of expenses paid in-kind in USD. Round up to the nearest dollar if the response given includes cent(s).
- Q03:** Ask for the amount of money spent on animal feed including salt. Impute household own production of feed where applicable
- Q04:** Ask for the amount of money spent on **veterinary services including vaccination, deworming, and medicine.**
- Q05:** Ask for the amount of money spent on **transport of animal to and from the farm.**
- Q06:** Ask for the amount of money spent on **maintenance of pens and stables.**
- Q07:** Ask for the amount of money spent on **transport of animal feed.**
- Q08:** Ask for the amount of money spent on **commission on sale of animals.** Commission also includes, veterinary permits, police clearance and Rural District Council levies.
- Q09:** Ask for the amount of money spent on **compensation for damages caused by animals** e.g. livestock feeding on neighbour's crop
- Q10:** Ask for the amount of money spent on **other related costs to raise each listed animals.**

Q11 – Q15a: PRODUCTION SYSTEM

- Q11:** This question asks about the main production system used for the [ANIMAL GROUP] owned between January 1, 2017 and August 31, 2017. Record the most appropriate option from the list provided.
- Q12 - Q13a:** These questions ask about dipping done for the [ANIMAL GROUP] between January 1, 2017 and August 31, 2017. These questions are asked only for ruminants (*cattle* and *goat/sheep*).
- Dipping sessions: Cattle are dipped once a week in summer and once in two weeks in winter.*
- Q12:** Ask whether any dipping was done for the [ANIMAL GROUP] between January 1, 2017 and August 31, 2017. SKIP INSTRUCTION: If the response is “No”, skip to Q14. Otherwise, continue with Q13.
- Q13:** Ask whether the dipping was enough for raising [ANIMAL GROUP].
- Q13a:** Ask which dipping method was used for [ANIMAL GROUP]. Record the most appropriate option from the list provided.

Plunge dip: *The animal is completely immersed in the dipping compound.*

Spray races: *The animal walks through a race where it is sprayed with the dipping compound*

Hand spraying: *The dipping compound is applied to each animal with a hand-operated spray*

Hand dressing or spot treatment: *Involves treating the sites where ticks commonly occur. Tick grease, oil or dipping compound can be used.*

Pour-ons: *Dipping compounds which are applied on the back of the animal. They are easy to use, but can be expensive compared to other options.*

Injectable compounds: *Injected into the animal and they work through the blood.*

Q14: Ask for the number of [ANIMAL GROUP] that were vaccinated between January 1, 2017 and August 31, 2017. Separate the number of *adult animals* vaccinated and the number of *young animals (calves, chicks, kids, piglets, bunnies)* vaccinated. If none, record zero ('0'). **SKIP INSTRUCTION:** If the responses are '0' for both columns, skip to Q15a. Otherwise, continue with Q15.

Q15: Ask for the main diseases the animals were vaccinated against. Record the most appropriate option from the list provided. Record UP TO THREE types of disease. If the response does not correspond to a coded option, record '12' (other specify) *and also, clearly write the specification.*

Q15a: Ask whether deworming was done for any [ANIMAL GROUP] between January 1, 2017 and August 31, 2017.

Q16: HIRED LABOUR

Q16: Ask for the TOTAL amount of money spent on hired labour for all livestock related activities between January 1, 2017 and August 31, 2017. Note that this question is asked at the household level, and not specific to any animal group(s). Round up to the nearest dollar if the response given includes cent(s).

AG16: AGRICULTURE PRODUCT AND BY-PRODUCT

This section collects information on the harvest of agricultural products and/or by-products that generates income for farmers. Examples of these include eggs, honey, manure, hides/skins, etc.

RESPONDENT: The ideal respondent for this section is the most knowledgeable member of the household for example the owner or caretaker of animals.

OPEN THE AGRICULTURAL BY-PRODUCT FLAP ON PAGE 65

Q01: Ask whether any member of the household produced any [BY-PRODUCT] from the household's farm and/or livestock between January 1, 2017 and August 31, 2017. Ask for all items before moving on to Q02.

- Q02:** Ask for the number of months between January 1, 2017 and August 31, 2017 that the household produced the [BY- PRODUCT]. Record the number of the months. E.g. for three months, record **3**. The response should never be more than 8 (it can only be 8 or less).
- Q03a:** Ask for the average monthly production of the [BY- PRODUCT] between January 1, 2017 and August 31, 2017. Record the average quantity of [BY- PRODUCT] produced per month and record the appropriate unit code. If the unit code given does not correspond to a coded option, record '7' (other specify) *and clearly specify*. This question is asked only for *cattle milk, goat milk, eggs and honey*.
- Q03b:** Ask for the total quantity of the [BY-PRODUCT] collected during these months indicated in Q02, and record the appropriate unit code. If the unit code given does not correspond to a coded option, record '7' (other specify) *and clearly specify*. This question is asked only for *hide/skins and manure*.
- Q04:** Ask whether the household sold any [BY- PRODUCT] between January 1, 2017 and August 31, 2017. SKIP INSTRUCTION: If the response is "No", skip to Q10 for *honey*; otherwise skip to the next item. If the response is "Yes", continue with Q05.
- Q05:** Ask for the quantity of the [BY- PRODUCT] sold between January 1, 2017 and August 31, 2017. Record the total quantity of the [BY- PRODUCT] sold, and record the appropriate unit code. If the unit code given does not correspond to a coded option, record '7' (other specify) *and clearly specify*.
- Q06:** Ask for the total value of sales of the [BY-PRODUCT] between January 1, 2017 and August 31, 2017. Record the total amount in USD after adding cash amounts and estimated value of in-kind payments. Round up to the nearest dollar if the response given includes cent(s).
- Q07:** Enquire for the distance from the dwelling of the household (farm gate) to the place where most of the [BY-PRODUCT] was sold between January 1, 2017 and August 31, 2017. Record the distance in KILOMETERS (KM). Round up to the nearest kilometres if the response given is in meters.
- Q08:** Ask which member(s) of the household was(were) responsible for marketing the [BY-PRODUCT] and negotiating sales. Refer to the household roster for the ID(s) of the person(s). Record UP TO TWO applicable member(s) from the household roster. If all household members, record '98' in the first column. If non-household member or agent, record '97' in the first column.
- Q09:** Ask which member(s) of the household makes decisions on the use of earnings from the [BY-PRODUCT] sales. Refer to the household roster for the ID(s) of the person(s). Record UP TO TWO applicable member(s) from the household roster. If all household members, record '98' in the first column. If non-household member or agent, record '97' in the first column.
- Q10 - Q13:** These questions are asked only for *honey*.
- Q10:** Ask for the number of beehives the household has for producing honey between January 1, 2017 and August 31, 2017. If none, record zero ('0'). SKIP INSTRUCTION: If the response is '0', skip to next by-product. Otherwise, continue with Q11.
- Q11:** Ask for the type of beehives the household has for producing honey between January 1, 2017 and August 31, 2017. Record the most appropriate option from the list provided. A Traditional

beehive includes a bucket and a tree bark. When a beehive cannot be classified as Kenyan Top Bar or Langstroth, classify it as a traditional bee hive.

See pictures of the three types of beehives.

Traditional Bee Hive	Kenyan Top Bar Bee Hive	Langstroth Bee Hive
		

Q12: Ask for the number of beehives that were colonised between January 1, 2017 and August 31, 2017.

Q13: Seek for the number of times the household harvested honey between January 1, 2017 and August 31, 2017.

AG17: SOURCES OF ENERGY FOR AGRICULTURAL ACTIVITIES

This section collects information on sources of energy that the household used for agricultural activities during the agricultural season 2016/2017. Note that we are interested in energy that the household used **specifically for agricultural activities**, and not for other activities

RESPONDENT: The ideal respondent for this section is someone who is knowledgeable about the farming activities of the household, preferably a head of household.

Q01: Ask whether or not the household used any [FUEL/ENERGY] for agricultural activities during the agricultural season 2016/2017. SKIP INSTRUCTION: If the response is “No”, skip to next fuel/energy. Otherwise, continue with Q02.

Q02 The enumerator should confirm from the CROPS ON PLOT FLAP if the household cultivated Tobacco during the agricultural season 2016/2017. If the response is ‘YES’, then proceed with Q03, otherwise, skip to Q04

Q03: If the household used any [FUEL/ENERGY] for agricultural activities, enquire for the total quantity used SPECIFICALLY FOR TOBACCO during the agricultural season 2016/2017. The appropriate quantity and unit code should be recorded. If the unit code given does not correspond to a coded option, record ‘5’ (other specify) *and clearly specify*.

Q04: If the household used any [FUEL/ENERGY] for agricultural activities, enquire for the total quantity used during the agricultural season 2016/2017, EXCLUDING THOSE USE FOR TOBACCO. The appropriate quantity and unit code should be recorded. If the unit code given does not correspond to a coded option, record ‘5’ (other specify) *and clearly specify*.

- Q05:** Record the TOTAL value of the [FUEL/ENERGY] used in USD. Help the respondent to estimate the value of any in-kind payments. Round up to the nearest dollar if the response given includes cent(s).

AG18A: EXTENSION SERVICES (TOPIC)

This section collects information on agricultural extension services or advice received regarding agricultural practices. This information will help indicate whether such programmes are effective at promoting improvements in smallholder agriculture in Zimbabwe.

Agricultural Extension Service is technical assistance/advice (or a demonstration of new agricultural techniques) given to a farmer or group of farmers to improve productivity.

RESPONDENT: The ideal respondent for this section is someone who is knowledgeable about the farming activities of the household, preferably a head of household.

- Q01:** Asks whether anyone in the household received any advice on the [TOPIC] during the agricultural season 2016/2017. Receiving “advice” here includes both sharing information and providing training to anyone in the household. Households can receive advice from the same source on more than one topic. Record the response against each topic. Ask Q01 column-wise before moving on to Q02. **SKIP INSTRUCTION:** If the response to the entire list is “No”, skip to section 19. Otherwise, continue with Q02.

- Q02:** We are interested in knowing the source of the information about the [TOPIC] received during the agricultural season 2016/2017. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record ‘11’ (other specify) *and clearly specify*.

Government Agricultural Extension Service includes farm visits, farmer meetings and village meetings where the extension worker was present.

Lead Farmer is a farmer, who is the most active in growing certain crops or who has the largest PLOT of a certain crop or an outstanding farmer in a community that most farmers look up to. They might also be the first to try a new agricultural technology.

Peer Farmer is a group of farmers, who grow the same type of crop in a single community.

Other (specify) could include product specific courses, such as a “onion course”.

NOTE: The responses to Q02 will be required to complete section 18B.

AG18B: EXTENSION SERVICES (SOURCE)

This section collects information on the SOURCE of agricultural extension services or advice received regarding agricultural practices. The source will be identified as well as who received the advice, how often the advice was received, as well as any payment incurred to receive the advice.

RESPONDENT: The ideal respondent for this section is someone who is knowledgeable about the farming activities of the household, preferably a head of household.

OPEN THE EXTENSION SERVICES SOURCE FLAP ON PAGE 68

Before asking questions in this section, mark “✓” to each identified source of advice FOR ANY TOPIC in the EXTENSION SERVICES SOURCE FLAP using information given in Q02 of Section 18A. Ensure that all topics are completed by marking “✓” against the identified source(s) before proceeding to the questions.

- Q01:** For each source marked “✓”, enquire for the household member(s) that received advice/information through the [SOURCE] during the agricultural season 2016/2017. Refer to the household roster for the ID(s) of the person(s). Record UP TO FOUR applicable member(s) from the household roster. If all household members, record ‘98’ in the first column.
- Q02:** Find out the number of times someone from the [SOURCE] visited any household member’s farm during the agricultural season 2016/2017. Record the **NUMBER of VISITS** per source accordingly. If none, record zero (‘0’). **Do not** complete the **block cells**.
- Q03:** Ask whether any household members solicited someone from the [SOURCE] to visit the household member’s farm during the agricultural season 2016/2017. SKIP INSTRUCTION: If the response is “No”, skip to Q08; otherwise, continue with Q04.
- Q04:** Enquire for the number of times any member of the household solicited/requested someone from the [SOURCE] to visit the household member’s farm during the agricultural season 2016/2017.
- Q04a** Ask for the number of times someone from [SOURCE] visited a household members’ farm in response to your request or a member’s request.
- Q05:** This question is seeking for the number of times that a member of the household visited or met with [SOURCE] at a location different from the household’s dwelling or farm plots during the agricultural season 2016/2017. Record the **TOTAL NUMBER for the entire household** for the [SOURCE] accordingly. If none, record zero (‘0’). **Do not** complete the **block cells**.
- Q06:** Enquire for the number of times any member of the household attended a meeting with this [SOURCE] during the agricultural season 2016/2017. Record the **TOTAL NUMBER for the entire household** for the [SOURCE] accordingly. If none, record zero (‘0’). **Do not** complete the **block cells**.
- Q07:** Ask whether any of the household members paid anything for receiving advice or information from the [SOURCE] during the agricultural season 2016/2017. **Do not** complete the block cells. SKIP INSTRUCTION: If the response is “No”, skip to Q09; otherwise, continue with Q08.
- Q08:** Get the total amount paid by the household for receiving advice or information from the [SOURCE]. Enter the **TOTAL AMOUNT for the entire household** in USD including the cash and in-kind payments. Help the respondent to estimate the in-kind payments.
- Q09:** One important element to measuring the effectiveness of an agricultural extension service is whether the recipient found the information useful. This question asks how useful the information/advice received from the [SOURCE] to the household regarding farming practices is. Record the most appropriate option from the list provided.

AG19: CREDIT

This section collects information on credit that the household accessed for agricultural activities during the agricultural season 2016/2017. Note that we define credit here as money that the household borrowed and must be repaid. We exclude any gifts or transfers that the household was given without any obligations of paying back. In addition, note that we are interested in credit that was borrowed to be spent specifically on agriculture during the agricultural season 2016/2017.

RESPONDENT: The ideal respondent for this section is someone who is knowledgeable about the farming activities of the household, preferably a head of household.

Q01: This is a filter to see whether any household member borrowed any money for **agricultural activities** during the agricultural season 2016/2017. Note that this should not include any money that was received as a part of the Command agriculture program. SKIP INSTRUCTION: If the response is “No”, skip to Q12; otherwise, continue with Q02.

Q02: This question asks the respondent to list all the sources of credit that the household borrowed money from during the agricultural season 2016/2017. Record the name of lender and record the appropriate lender type code. If the lender type code given does not correspond to a coded option, record ‘9’ (other specify) *and clearly specify*. List all the names and types before going to Q03.

Q03: Asks for the type of loan that the household received. Record the most appropriate option from the list provided.

Group loan is a loan that a member of household borrows collectively with non-household members.

Q04: This question seeks to identify the household members who were responsible for taking the [LOAN]. Refer to the household roster for the ID(s) of the person(s). Record UP TO THREE applicable member(s) from the household roster. Record the ID of the main person in the first column.

Q05: Ask for the main reason(s) why the household took the [LOAN]. Record the most appropriate option from the list provided. Record UP TO THREE options. If the response does not correspond to a coded option, record ‘10’ (other specify) *and clearly specify*.

Q06: Ask for the total value that the household borrowed under the [LOAN]. Record the amount in USD.

Q07: This question enquires whether the amount of the [LOAN] that the household received was enough to cover the cost necessary for the purposes stated in Q05.

Q08: Ask when the household got the [LOAN] during the agricultural season 2016/2017. Record the month (code) and year that the [LOAN] was received by the household.

Q09: This question asks whether or not the household has fully repaid the [LOAN] already. SKIP INSTRUCTION: If the response is “Yes”, skip to Q11; otherwise, continue with Q10.

Q10: If the [LOAN] has not been fully repaid, we want to know when the respondent expects to fully repay the [LOAN]. Record the month (code) and year.

Q11: Ask for the TOTAL amount that the household expects to pay at completion of repayment of the [LOAN]. This should be the sum of principal and interest payments. Probe and help the respondent to estimate if needed. Record the amount in USD.

Q12 – Q16: LOAN REFUSALS/PENDING

- Q12:** The question seeks to determine whether the household tried to borrow money, but all the attempts were turned down, refused or are still pending during the agricultural season 2016/2017. Note, again, that the loan applications in question here are for agricultural activities only. This question is not asked for any specific loan. SKIP INSTRUCTION: If the response is “No”, skip to Q17; otherwise, continue with Q13.
- Q13:** Ask for the main reason why the household tried to borrow money. Record the most appropriate option from the list provided. If the response does not correspond to a coded option, record ‘10’ (other specify) *and clearly specify*.
- Q14:** Ask if all the attempts were refused/turned down or they are still pending. SKIP INSTRUCTION: If the response is “Pending”, skip to Q17; otherwise, continue with Q15.
- Q15:** This question seeks to identify who refused or turned down the household’s attempts to borrow money. Record the most appropriate option from the list provided. Record UP TO TWO options. If the response does not correspond to a coded option, record ‘12’ (other specify) *and clearly specify*. If there are more than one attempt, refer to the two most recent attempts.
- Q16:** Ask for the main reason(s) why the household’s attempts to borrow money were refused or turned down. Record the most appropriate option from the list provided. Record UP TO TWO options. If the response does not correspond to a coded option, record ‘6’ (other specify) *and clearly specify*. SKIP INSTRUCTION: For any responses, skip to next section.

Q17 – Q18: NO LOAN ATTEMPTS

- Q17:** Ask whether or not the household needed a loan during the agricultural season 2016/2017 for any agricultural activities. SKIP INSTRUCTION: If the response is “No”, skip to next section; otherwise, continue with Q18.
- Q18:** Ask for the main reason(s) why the household did not attempt to borrow money. Record the most appropriate option from the list provided. Record UP TO TWO options in order of importance. If the response does not correspond to a coded option, record ‘7’ (other specify) *and clearly specify*.

AG20: FOOD SECURITY

In addition to food consumption information collected in the main PICES, we would like to know more about the coping strategies implemented by households and food access. This section is divided into two main categories, food insecurity experience index (FIES) and constraints to food access.

Respondent: The ideal respondent for this section is an individual primarily responsible for the preparation of food, preferably, an adult female member.

At the beginning of this section, a reminder to the respondent concerning the objective of the survey may be necessary. The respondents may be thinking that exaggerating answers may enable them to receive a certain service/product as to have a positive impact on their living standards.

- Q01:** The question is divided into parts (a) to (j) and the enumerator is to record responses for each of the cases. A “Yes” response should be provided even if only one member of the household experience the case in the past 30 days. Conversely, a “No” response should be provided if no

one in the household experience the specified case. For a 'YES' response, the enumerator should go further to establish the number of days during the past 30 days that the household used a particular coping strategy.

- Q02:** This question asks whether a household consistently consumes same meals every day. The question further wishes to know whether under five children eat the same number of meals compared to those above 5 years. As such, if all the members of the household consume the same number of meals every day then both columns will have the same number, while the opposite will be true if the household members have different number of meals a day served to individuals in different age categories. If there are no children in the household (from the household roster), then the enumerator must record 9999 in the first cell.
- Q03:** This question asks whether a household has been faced with a situation where it did not have enough food to feed its members in the last 12 months. **SKIP INSTRUCTION:** If the response is "No", skip to the next section. Otherwise, continue with Q04.
- Q04:** Ask when the household faced the situation where it did not have enough food to feed its members. Record all the months mentioned by the respondent separating them by a comma.
- Q05:** Ask for the causes of the situation where the household did not have enough food to feed its members. Record the most appropriate option from the list provided. Record UP TO THREE in order of importance as per the respondent's ranking. e.g. if floods/water logging is the most possible cause provided by the respondent, then select FLOODS/WATER LOGGING as the first reason; inadequate household food stocks due to lack of farm input, option INADEQUATE HOUSEHOLD FOOD STOCKS DUE TO LACK OF FARM INPUTS should be select as second reason; and food in the market was very expensive, FOOD IN THE MARKET WAS VERY EXPENSIVE must be selected as the third reason. If the response does not correspond to a coded option, record '9' (other specify) *and also, clearly write the specification.*

AG21: DIETARY DIVERSITY

In addition to food consumption information collected in the main PICES and the level of household food security explored in Section 20, we would like to know the level of household dietary diversity. The series of questions will be asked to determine whether certain foods/food groups were eaten by the members of the household. This helps us to see whether or not the household has an access to a variety of foods and whether or not its members have an adequate nutrient intake. The food items/groups listed in this section can be categorized into 9 main food groups: cereals, starchy tubers and roots; legumes and nuts; meat, fish, poultry and eggs; vegetables (including green leaves); fruit; oils and fats; milk and dairy products; and sugar/sweets. Data is collected on the number of days in the last 7 days a household ate specific food items. A seven-day recall period is used to make the Food Consumption Score as precise as possible and reduce recall bias.

- Q01:** Ask for the number of meals taken by the members of the household who are aged 5 years and above yesterday and record the number.
- Q02:** Ask if this number is the usual number of meals taken by these members per day.
- Q03:** Ask for the number of days that the members of the household consumed any sadza, mahewu, maize, maize porridge, rice, sorghum, millet, pasta, bread or other cereals IN THE PAST 7 DAYS. Record the number. If none, record zero ('0'). Note that the number cannot exceed 7. **SKIP INSTRUCTION:** If the response is '0', skip to Q05. Otherwise, continue with Q04.

Q04: Given that someone in the household consumed any sadza, mahewu, maize, maize porridge, rice, sorghum, millet, pasta, bread or other cereals, ask whether it was consumed YESTERDAY.

Note that Q03-Q04 are repeated as the following:

Q05 - Q06 for consumption of potatoes, sweet potatoes, yams, plantains, cassava, or any other type of tuber

Q07 - Q08 for consumption of beans, peas, groundnuts, peanut butter or cashew nuts

Q09 - Q10 for consumption of vegetables (leaves or root)

Q11 - Q12 for consumption of fruits

Q13 - Q14 for consumption of beef, goat, pork, chicken, rabbit, game

Q15 - Q16 for consumption of eggs

Q17 - Q18 for consumption of fish/kapenta

Q19 - Q20 for consumption of milk, yogurt or any other dairy products

Q21 - Q22 for consumption of sugar, honey, soda, juice, candy, or any other sugary foods or drinks

Q23 - Q24 for consumption of oils, fats, margarine or butter added to food or used for cooking

Q25 - Q26 for consumption of tea, coffee, salt, any type of spice, or tomato sauce (condiments).

REVIEWING COMPLETED QUESTIONNAIRES

It is important that enumerators and team leaders make sure data collection is accurate and consistent. Appendix H gives an indication of what is considered ‘basic’ checks that team leaders and supervisors will check to ensure completeness, consistency, and accuracy of completed questionnaires. The checks are not exhaustive and are in no way meant to limit the work of the supervisor as they review completed questionnaires.

To ensure data collected is of high quality, enumerators should consider them as they conduct interviews.

APPENDIX A: APM PREFILLING FORMS

GEOCODE: 1011511020 PROVINCE: Manicaland HEAD NAME: (PHILIPA TAANHIRA) CLEARANCE T

SECTION A: HOUSEHOLD IDENTIFICATION

	NAME	CODE
1. PROVINCE	<u>Manicaland</u>	<u>1</u>
2. DISTRICT	<u>Buhera</u>	<u>101</u>
3. WARD	<u>15</u>	<u>15</u>
4a. SECTOR		<u>1</u>
4b. IF RESETTLEMENT AREA, INDICATE THE MODEL TYPE		<u></u>
5. EA CODE		<u>20</u>
6. HOUSEHOLD ID		<u>14</u>
7. PICES INTERVIEW MONTH		<u>5</u>
8. NAME OF HOUSEHOLD HEAD	<u>(PHILIPA TAANHIRA) CLEARANCE T</u>	
9. PHYSICAL ADDRESS OF HOUSEHOLD	<u>DZENGA VILLAGE</u>	

GEOCODE: 1011511020 PROVINCE: Manicaland HEAD NAME: (PHILIPA TAANHIRA)
CLEARANCE

HH NO. 14
HOUSEHOLD ROSTER

INDIVIDUAL ID	1.	2.	3.	4.
	HOUSEHOLD MEMBER NAMES	What is the sex of [NAME]?	What is the relationship of [NAME] to the head of the household?	How old is [NAME]?
1	PHILIPA TAANHIRA	1	1	40
2	PATRICIA TAANHIRA	2	2	33
3	TATENDA TAANHIRA	2	3	12
4	TAKUDZWA TAANHIRA	2	3	9
5	TANAKA TAANHIRA	2	3	7
6	TINOTENDA TAANHIRA	2	3	5
7	TAFARA TAANHIRA	2	3	1
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

<u>GEOCODE: 1011511020</u>	<u>PROVINCE: Manicaland</u>	<u>HEAD NAME: (PHILIPA TAANHIRA) CLEARANCE T</u>
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HH NO.14
PARCEL FLAP

PARCEL ID	ENUMERATOR: PREFILL THE LIST OF PARCELS FROM THE FIRST-ROUND VISIT	PARCEL LOCATION AND DESCRIPTION	ENUMERATOR: PREFILL THE SECTOR TYPE OF THIS [PARCEL] LISTED IN THE FIRST-ROUND VISIT
	PARCEL NAME	LOCATION AND DESCRIPTION	SECTOR TYPE

1	HOMESTEAD PARCEL	PARCEL SURROUNDS HOMESTEAD	4
2			
3			
4			
5			
6			
7			
8			
9			
10			

<u>GEOCODE: 1011511020</u>	<u>PROVINCE: Manicaland</u>	<u>HEAD NAME: (PHILIPA TAANHIRA) CLEARANCE T</u>
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HH NO. 14

ANIMAL HOLDING ROSTER

CODE ANIMAL		3.	
	ANIMAL NAMES	How many [ANIMAL] were owned by your household on December 31 2016(located on your farm or elsewhere)	
101	CALF FEMALE	1	
102	CALF MALE	1	
103	HEIFER		
104	STEER		
105	COW	1	
106	BULL	1	
107	OX	2	
108	DONKEY		
109	GOAT - BUCK/BILLY		
110	GOAT- DOE		
111	GOAT - KID		
112	SHEEP - RAM		
113	SHEEP - EWE		
114	SHEEP - LAMB		
115	PIG - BOAR		
116	PIG - SOW		
117	PIG - PIGLET		
118	PIG - GILTS		
119	CHICKEN-LAYER		
120	CHICKEN- LOCAL/INDIGENOUS		
121	CHICKEN-BROILER		
122	TURKEY		
123	DUCK		
124	RABBIT - BUCKS		
125	RABBIT - DOES		
126	RABBIT - BUNNIES		
127	GUINEA FOWL		
128	OTHER (SPECIFY)_____		

APPENDIX B: AGE DETERMINATION TABLE:

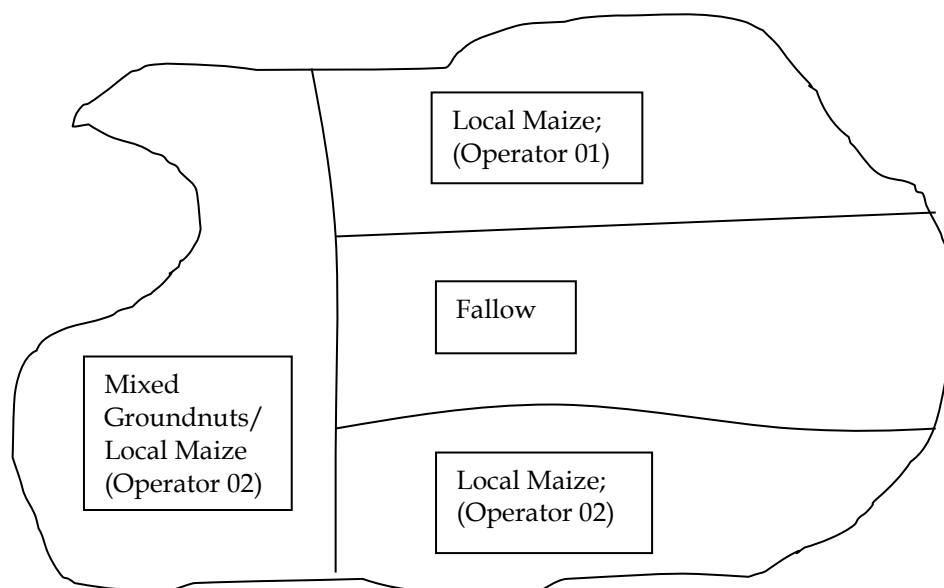
For the period 1 January – 31 December 2017

First Three Digits Of The Year	The age of somebody born in an identified year if his/her birthday is on or before the survey date, is the figure in the top left of a given box; if the birthday is after the survey date, the lower figure applies.									
	0	1	2	3	4	5	6	7	8	9
191	-	-	-	-	-	-	-	-	-	97
192	97 96	96 95	95 94	94 93	93 92	92 91	91 90	90 89	89 88	88 87
193	87 86	86 85	85 84	84 83	83 82	82 81	81 80	80 79	79 78	78 77
194	77 76	76 75	75 74	74 73	73 72	72 71	71 70	70 69	69 68	68 67
195	67 66	66 65	65 64	64 63	63 62	62 61	61 60	60 59	59 58	58 57
196	57 56	56 55	55 54	54 53	53 52	52 51	51 50	50 49	49 48	48 47
197	47 46	46 45	45 44	44 43	43 42	42 41	41 40	40 39	39 38	38 37
198	37 36	36 35	35 34	34 33	33 32	32 31	31 30	30 29	29 28	28 27
199	27 26	26 25	25 24	24 23	23 22	22 21	21 20	20 19	19 18	18 17
200	17 16	16 15	15 14	14 13	13 12	12 11	11 10	10 09	09 08	08 07
201	07 06	06 05	05 04	04 03	03 02	02 01	01 00	00		

APPENDIX C: DEFINITION OF PARCEL AND PLOT

The farmer(s) and you need to be on the same page regarding the definition of PARCEL and PLOT as there is an inherent tendency to use the word PARCEL to refer to PLOT. It is important for the farmer to understand the distinction between PARCEL and PLOT. The correct identification of PLOTS in AG2 PLOT ROSTER, DETAILS & GPS MEASUREMENTS, where each plot is listed as a separate item and associated with a PARCEL listed in AG1 **REQUIRES** you to be sure that the farmer is listing plots, and NOT a PARCEL with multiple plots. Below are some examples that are useful for establishing the existence of parcels and plots.

Example 1: One PARCEL that is divided into four PLOTS:



Example 2: The 1st piece of land has an area of 3.0 acres, and is planted only with local maize. The land is divided into two equal portions by a river that is 2 meters in width. Both sides are managed by James, the son to the head of household.

Explanation: First, we identify that there are two parcel as the land is split by a river that is more than one metre wide. The 1st parcel is managed by a single operator – hence, the management system is uniform and consistent throughout this piece of land. The parcel is also pure-stand, planted only with local maize. Hence, the same cropping arrangement is seen throughout. These features along with the fact that the plot is continuous would qualify the parcel as containing a single plot. The same can be said for the 2nd parcel, so each of the two parcels contains one plot.

Example 3: The *parcel* has an area of 1.0 acre, and is divided by a path 0.5 meters in width. It is mixed-stand, intercropped with hybrid maize and beans in its entirety, and managed only by Elizabeth.

Explanation: The parcel is managed by a single operator – hence, the management system is uniform and consistent throughout this piece of land. The parcel is mixed stand, with hybrid maize intercropped with beans. The same cropping arrangement is seen throughout the parcel which can also be considered continuous, as it is divided by a path that is only 0.5 meters in width, i.e. less than 1 meter. Hence, there is only one plot in this case.

Example 4: The *parcel* has an area of 1,000 square meters, and is an undivided piece of land, managed by Abraham. Approximately ½ of the *parcel* is mixed-stand, intercropped with hybrid maize and beans

with pumpkin planted along the edges. The remaining portion of the *parcel* is cultivated with oriental/burley tobacco.

Explanation: The PARCEL is managed by a single operator – hence, the management system is uniform and consistent throughout this piece of land. It is also continuous. So far, these features would qualify the PARCEL as a single plot. However, the cropping arrangement is not consistent throughout; $\frac{1}{2}$ is cropped with hybrid maize, beans and pumpkins, whereas the other half is cultivated with oriental/burley tobacco. Since there are two unique mixture of crops planted in different halves of the PARCEL, we can conclude that it is made up of two plots.

Example 5: The *parcel* has an area of 1 hectare, and is pure-stand, planted only with groundnuts. Approximately $\frac{1}{4}$ of the *parcel* is managed by Moses, while the rest is managed by Abraham.

Explanation: The parcel can be assumed to be continuous, and the same cropping arrangement (pure-stand groundnuts) is witnessed throughout. So far, these features would qualify the parcel as a single plot. However, there are two different operators on two different portions of the parcel. Hence, the management system is not uniform and consistent throughout, implying that the parcel is made up of two plots.

APPENDIX D: AREA MEASUREMENT USING A GPS

When the plots are identified and a sketch map is drawn where possible, the plots are to be measured using a GPS, named Garmin eTrex 30x. For each plot to be measured, you MUST use the sketch map for orientation. You MUST mark your starting point with a stick and walk clockwise along the perimeter (outline) of each plot with the GPS activated for area measurement. When you return to the starting point and tell the GPS to stop the area measurement, the GPS will display the area measurement directly in SQUARE METERS. You should then record the results in the questionnaire with TWO decimals.

A GPS uses the information from satellites to find the geographical position on the earth surface by longitude and latitude. The position is found by a continuous measurement of the time a satellite signal takes to reach your GPS from a satellite in the sky. With clear signals from at least four satellites, the GPS is able to calculate the geographical position with sufficient accuracy. The better sight to a large part of the sky a GPS has, the more signals and clearer signals are received. Shadows of buildings and even large trees should be avoided while using the GPS in the field. You should also make sure to stretch your hand holding the GPS forward when you do area measurement to avoid that your own body shadows for the satellite.

Batteries and buttons

The GPS uses two AA batteries. Each enumerator will get two sets of batteries. You MUST take the batteries out of the GPS when it is not in use. Make sure to put in the batteries in opposite direction, just as marked at the bottom of the battery compartment. You open the battery compartment by using the small triangle as handle and turn it anti-clockwise ¼ round (= 90°) and carefully removing the rubber-lid. You close it by turning the handle clockwise ¼ round.

The GPS has five buttons, including one double button. We are mostly going to use only four of them. The GPS has two buttons on the right side, the START button, marked with a light bulb and the BACK button, located above the light button.

In addition, the GPS has three buttons on the left side, one of these is the DOUBLE button, marked with arrowheads pointing up and down, used for zooming (in/out). The other is the MENU button, located below the zooming-in button. On the front side of the unit, there is the round, rubber THUMB STICK button. The THUMB STICK button can be pressed in or moved around to left, right, up and down. All other buttons are only to be pressed in.

Instructions for using the GPS for finding the geographical coordinates of a plot

- Proceed to the starting point (North Western corner), which should be the starting corner of the plot you will measure.
- Switch on the GPS by pushing and holding the START (left lower button) for up to 2-3 seconds or until you hear a beep or see a GARMIN picture on the screen.
- Make sure you are on the main MENU screen.
- Use the THUMB STICK button to move between the various menu-icons to the MARK-WAYPOINT and push the THUMB STICK button in to open the Mark Waypoint page. There, you will be able to read your location in south and east coordinates.
- Record the south coordinate and east coordinate on the appropriate plot roster. Write down all digits given on the screen. The south coordinate will start with an S and comprise degrees, minutes and seconds, all together 7 digits. The east coordinate will start with E 0 and again be followed by 7 digits. Write down these 7 digits.

Saving the coordinates of the PLOTS

After recording the coordinates of the starting point of the PLOT, you MUST save these coordinates using the “HHID-ParcelID-PlotID” combinations. For example, if the HHID of the household is 123 and the PARCEL ID is 01 and the PLOT number on parcel 01 is 03, then save the coordinates as 123-01-03. Follow these steps to save the coordinates of the starting point of the plot:

- Stand at the NW Corner (starting point) of the PLOT
- Check that you have enough satellites!!
- Go to Main Menu
- Select Mark Waypoint
- Go to the top field and press the Thumb Stick
- Enter the HHID-ParcelID-PlotID
- Record the GPS Coordinates in the questionnaire.
- Select “DONE”

Viewing the saved coordinates of the PLOTS

To view the saved coordinates of the PLOT, use the following simple steps:

- From the Main Menu, select WAYPOINT MANAGER
- Highlight the track name you would like to review and press the THUMB STICK
- The coordinates and other information on the starting point of the saved PLOT is displayed here
- Press the MENU button twice to arrive back at the main menu and ready to do other tasks

Instructions for using the GPS for measuring the area of a plot

You may measure the area just after taking the location.

- Go to the starting point which should be the North Western corner of the plot you will measure and mark the starting point by fixing a stick in the ground.
- Switch on the GPS by pushing and holding the LIGHT key for up to 2-3 seconds or until you see a screen picture.
- Make sure you are on the main MENU screen.
- Use the THUMB STICK button to move between the various menu-icons to the AREA CALCULATION and push the THUMB STICK button in to open the AREA CALCULATION page.
- You will now see a sketch map on the screen and at the bottom of the screen you will see the text: Start highlighted green (this means start area calculation). This DOES NOT mean the GPS has started the area calculation, but only that the GPS is READY to start the area calculation.
- You start the area calculation by pressing the THUMB STICK button. Subsequently, the text at the bottom of the screen will read Calculate. This DOES NOT mean the area calculation has stopped, but only that the GPS is READY to stop the area calculation. In fact, the GPS has just started the area calculation.

- You are to start the area measurement by walking slowly clockwise around the perimeter of the plot. You should hold the GPS flat in your hand and stretch the hand slightly forward. You MUST walk on the edge of the field (NOT a meter outside or inside the field). At every corner, you MUST stop for 5 seconds (counting slowly 1001, 1002, 1003, 1004, and 1005) and then continue walking. You MUST walk all the way around the plot or parcel until you have returned to the location of the marking stick, with the GPS facing the direction in which it started the area calculation.
- Check that the text below the screen still reads Calculate. If the text does read Start, it means that you failed to push the THUMB STICK button properly when you started. If you read Save Calculated Track, it means that you pushed in the THUMB STICK button while you were walking. In both cases, you will need to repeat the measurement by starting over again.
- If the screen reads Calculate, you may stop the measurement by pushing in the THUMB STICK button and the screen will now display the area at the second line from the bottom. It is NOW time to write down the area measure on the appropriate plot roster. RECORD THE AREA IN SQUARE METERS AS IT APPEARS AT THE BOTTOM OF THE GPS.
- The second to last line on this screen has the text – Save Track, and you will be able to save the area measurement by pushing the THUMB STICK button. After selecting Save Track, delete the default track name (will be the date and time). Enter the track name as the “HHID-ParcelID-PlotID”. For example, if the HHID of the household is 123 and the PARCEL ID is 02 and the PLOT number on parcel 02 is 03, then save the measure area as 123-02-03

It is recommended that you measure the area of each plot with the GPS at least twice to get a consistent value and confirm that the rotation around the plot has been completed properly.

If you lose the right position with the GPS system/menu, you are always able to back track to the main menu by pressing the MENU button twice. Once there, you can use the THUMB STICK button to select the AREA CALCULATION-icon, and repeat area measurement-related steps specified above.

You switch off the GPS by pressing and holding the START button for at least 2-3 seconds or until the screen light disappears.

Instructions for other GPS functions needed from time to time

You may also want to use the GPS for other purposes as well, such as for the following tasks:

- Having a look of the track you have recorded and area measured.
- Cleaning the stored tracks. The GPS storage will only be able to store 50 tracks and areas and hence you will need to clean the storage when you have finished an EA.
- Making sure to set the screen to low light in order to save batteries.

Having a look at the map (perimeter) of the area measured

- Go to the main menu by pressing the MENU button twice. Move to the TRACK MANAGER-icon and push in the THUMB STICK button.
- You will then open the Track Manager Page. Use the THUMB STICK button to move to the saved track you want to open and push in the THUMB STICK button. Now select the View Map icon using the THUMB STICK. The map of the selected track will be displayed on the screen.
- Move back to the main menu by pressing the MENU button twice.

Retrieving saved track/plot measurement

In situations where you save the track but forgot to record the calculated area on the questionnaire, you use the following easy steps to retrieve the measured area.

- From the Main Menu, select TRACK MANAGER
- Highlight the track name you would like to review and press the THUMB STICK
- Select VIEW MAP
- Now press the MENU button once
- From the three displayed options, select Review Track using the THUMB STICK. The displayed screen contains the area measured as the second line item

Cleaning the storage of tracks

- Go to the main menu by pressing the MENU button twice. Move to the TRACK MANAGER icon and push in the THUMB STICK button.
- You will then open the Saved Tracks Log Page. Use the THUMB STICK button to move to the Saved Track that you want to delete. Move the THUMB STICK down until you see Delete and then press the THUMB STICK to delete the selected track. Next, move the THUMB STICK to select Yes option, and then press the THUMB STICK button to confirm deletion of the saved track. Repeat this procedure for all saved track in this EA.

PLEASE NOTE: DO NOT DELETE THE SAVED TRACKS OR WAYPOINTS UNTIL ALL THE SAVED FILES HAVE BEEN UPLOADED UNTO THE TEAM'S LAPTOP BY THE DATA ENTRY PERSON.

- Move back to the main menu by pressing the MENU button twice.

Set screen light to low in order to save battery

Switch on the GPS by pressing the LIGHT button. While the GPS is locating the satellites, press the LIGHT button once more and a light meter will appear. Press the LIGHT button again for the light to get brighter and the light meter to go one step up. Press the LIGHT button several times until the light meter goes down to the lowest level. Leave the GPS alone for one minute and the light meter will disappear. The light is now at the lowest level to save battery capacity.

APPENDIX E: CROP CODES

<u>FIELD/ANNUAL CROPS</u>				<u>TREE/PERMANENT CROPS</u>	
CROP CODE	CROP NAME	CROP CODE	CROP NAME	CROP CODE	CROP NAME
1	<u>Grain Crops</u>	4	<u>Vegetables</u>	2	<u>Industrial Crops</u>
1110	White Maize	4110	Onions	2111	Coffee
1111	Yellow Maize	4111	Peas	2116	Jatropha
1112	Red Sorghum	4112	Tomatoes	2117	Tea
1113	White Sorghum	4113	Watermelon	2120	Sugarcane
1114	Wheat	4114	Pumpkin	4	<u>Vegetables</u>
1115	Barley	4115	Cucumber	4116	Grapes
1116	Pearl millet (Mhunga/ Nyawuti)	4117	Cabbage	5	<u>Fodder Crops</u>
1117	Finger millet (Rapoko/ Rukweza)	4118	Carrot	5110	Lurcene/Alphaph a
1118	Rice	4119	Leafy green	5111	Sorghum fodder
1119	Oats	4120	Beetroot	5112	Rhode grass
1120	Sesame/Uninga	4121	Okra	5113	Star grass
1121	Other grain crops	4122	Green-mealies	6	<u>Citrus Fruits</u>
		4123	Butternut	6110	Oranges
2	<u>Industrial Crops</u>	4124	Other vegetables	6111	Grapefruit
2110	Tobacco			6112	Lemons
2112	Cotton	7000	Other crops	6113	Nartjies
2113	Groundnuts			6114	Tangerine
2114	Sunflowers				<u>Tropical Fruits</u>
2115	Soybeans			6115	Bananas
2118	Castor Beans (Pfuta)			6116	Mangoes
2119	Popcorn			6117	Avocadoes
2121	Hops			6118	Paw paws
				6119	Guavas
3	<u>Other Crops</u>			6120	Pine apples
3110	Roundnut (Nyimo or Ndlubu)			6121	Granadillas
3111	Sweet Potatoes			6122	Litches
3112	Yams			6123	Apples
3113	Cassava			6124	Peaches
3114	Butter beans			6125	Plums
3115	Sugar beans				<u>Tree nuts</u>
3116	Cowpeas Nyemba)			6126	Pecan nuts
3117	Potatoes			6127	Macadamia nuts

3118	Paprika		6128	Other nuts
				<u>Other Fruits</u>
			6129	Strawberries
			6130	Pomegranate
			6131	Other fruits
			8000	Other tree/permanent crops

APPENDIX F: AGRICULTURAL CAPITAL TRANSLATION

CODE	ITEM	NDEBELE TRANSLATION	SHONA TRANSLATION
301	Tractor: 90 KW (120hp) or	Ithalakitha enkulu	Tarakita hombe
302	Tractor: 37 KW -89KW	Ithalakitha ephakathi laphakathi	Tarakita iripakati nepakati
303	Tractor: Less than 37 KW	Ithalakitha encane	Tarakita diki
304	Tractor drawn plough	Ikhuba lethalakitha	Gejo rinodhonzwa neTarakita
305	Animal drawn plough	Ikhuba lezifuyo	Gejo rinodhonzwa neMombe kana
306	Tractor drawn trailer	Isigengela sethalakitha	Ngoro inodhonzwa neTarakita
307	Animal drawn trailer	Isigengela esidonswa yizifuyo	Ngoro inodhonzwa neMombe kana
308	Tractor drawn ridger	Irija edonswa yithalakitha	Rija rinodhonzwa neTarakita
309	Animal drawn ridger	Irija endonswa yizifuyo	Rija rinodhonzwa neMombe kana
310	Tractor drawn harrow	Ihara edonswa yithalakitha	Chikoforo chinodhonzwa neTarakita
311	Animal drawn harrow	Ihara edonswa yizifuyo	Chikoforo chinodhonzwa neMombe kana
312	Tractor drawn planter	Umtshina wokuhlanyela ngethalakitha	Muchina wekudyara unodhonzwa
313	Animal drawn planter	Umtshina wokuhlanyela odonswa yizifuyo	Muchina wekudyara unodhonzwa
314	Tractor drawn harvester	Umtshina wokuvuna ngethalakitha	Muchina weku wekukohwa unodhonzwa
315	Pickup truck	Imota yokuthwala	Motokari yekutakurisa
316	Water pump	Impompi yamanzi/umtshina odonsa amanzi	Muchina wekudhonza Mvura
317	Sprinkler	Umafafaza	Muchina wekupfapfada
318	Scotch carts	Inqola	Ngoro
319	Water Bousers	Isithelamanzi	Ngoro yemvura/bhauza
320	Tobacco baler	Umtshina wokubumba igwayi	Muchina wekutsindira mabhero efodya
321	Sheller - Mechanical	Umtshina wokuhloba	Muchina wekutsokonyora chibage
322	Sheller - Manual	Umtshina wokucacada/wokuhlubangezandla	Muchina wekutsokonyora chibage
323	Tractor boom sprayer	Umtshina wokufafaza odonswa yithalakitha	Muchina wekusprayer unoshanda
324	Motorized sprayer	Umtshina woku'spreya' odonswa yipetrol' kumbe	Muchina wekusprayer unoshandisa petrol
325	Knapsack sprayer	Ispreyi sokugaxa	Sprayer yemaoko inoberekwa kumusana
326	Wheelbarrow	Ibhara	Bhara
327	Yoke	Ijoqwe	Joko/Joki
328	Other (Specify)	Okunye elilakho engingakubuzanga yikuphi?	Kozvimwe zvamunazvo zvandisina

APPENDIX G: ANIMAL HOLDINGS TRANSLATION

NAME	MEANING	NDEBELE TRANSLATION	SHONA TRANSLATION
Calf Female	Female cattle that is less than one	Ithole elinsikazi	Mhuru hadzi
Calf Male	Male cattle that is less than one year	Ithole eliduna	Mhuru hono
Heifer	Female cattle that is over one year	Ithokazi	Tsiru/Tokazi
Steer	Male cattle that is over one year old,	Ijongosi	Jongosi
Cow	Mature female cattle that is over one	Inkomokazi	Mhou
Bull	Male cattle that is over one year that	Inkunzi	Handira/Bhuru
Ox	Male cattle that is over one year old	Inkabi	Dhonzha/Ngavi
Donkey		Ubabhemi	Dhongi/Mbongoro
Goat-Buck/Billy	A male goat	Impongo/Intondolo	Gotor/Nhongo/ Gotokoto
Goat-Doe	A female goat	Imbuzi ensikazi	Sheshe
Goat-Kid		Izinyane	Mbudzana
Sheep-Ram	A male sheep	Inqama	Gondohwe
Sheep-Ewe	A female sheep	Imvukazi/Imvu ensikazi	Hwai hadzi
Sheep-Lamb	A young sheep	Izinyane	Hwayana
Pig-Boar	A mature male	Ingulube enkulu enduna	Mukono wenguruve
Pig-Sow	A fully grown female	Ingulube enkulu ensikazi	Nguruve hadzi yakambobereka
Pig-Piglet	A young pig	Umdlwane	Chigwi/ Ngurwana
Pig- Gilts	A young female swine, generally	Ingulube encane ensikazi	Nguruve hadzi isati yambobereka
Chicken-Layer		Inkukhu yamaqanda	Huku dzemazai
Chicken-		Inkukhu yekhaya	Huku yapamusha/ huku yechibhoi
Chicken-broiler		Inkukhu yesikhiwa	Bhuroira/ Hukuyenyama
Turkey		Ingalukhuni	Toki/Garikuni
Duck.		Idada	Dhadha/Dhakisi
Rabbit-Bucks	A male rabbit	Imbila enduna	Mukono wetsuro
Rabbit-Does	A female rabbit	Imbila ensikazi	Tsuro hadzi
Rabbit-Bunnies	A young rabbit	Abantwana bembila/Abomvundla	Vana vetsuro
Guinea Fowl		Ithendele	Hanga
Other (specify)		Okunye engingakuqambanga	Zvimwewo zvipfuwo zvandisina

APPENDIX H: REVIEWING COMPLETED QUESTIONNAIRES

Checking for completeness, consistency, and accuracy

Below are what is considered ‘basic’ checks that supervisors are expected to check to ensure completeness, consistency, and accuracy of completed questionnaires. The checks are not exhaustive and are in no way meant to limit the work of the supervisor as they review completed questionnaires.

1. Cover page

Check that the cover page is fully completed. Also, check for consistency between the questionnaire cover page and the corresponding prefilled cover page for each household.

2. Skip instructions

Ensure that the skip instructions are observed fully by enumerators, therefore avoiding missing data for applicable questions.

3. Household roster

Ensure that prefilled information have been carefully transferred from the prefilling form to the household roster in the questionnaire. Also, ensure that the transfer of the prefilled information is done well before the start of the interviews, preferably, the night before the interview date.

4. Parcel and plot sketch

- a) The sketch of parcels and plots should be clearly done, with lines separating individual plots within a given parcel.
- b) Names and descriptions of parcels and plots should be unique to each parcel and plot. Landmarks and bearings should be used to distinguish between plots and describe them, avoiding using crop names as parcel/plot names and/or description. Use of landmarks and bearing as names and/description of parcels/plots makes it easy for parcels and plots to be identified in subsequent visits of the survey.
- c) The link between the sketch of the parcel and plot, and the list of such on the individual flaps should be consistent.
- d) Any new parcel/plot listed on the parcel/plot roster should be reflected in the sketch accordingly, including any crops planted on those plots.

5. Section AG1: Parcel roster and details

- a) Ensure that prefilled information have been carefully transferred from the prefilling form to the parcel flap in the questionnaire.
- b) Any newly sketched parcel that the household has acquired since the last interview should be listed at the end of the prefilled parcels.
- c) Please emphasize to the enumerator the need and importance of listing all parcels (and subsequently plots) that the household owns or has access to, excluding garden plots.
- d) Ensure that Q02 – Q06 are asked only for old parcels listed during the first-round visit, while subsequent questions in this section are addressed for newly acquired/used parcels listed during the current visit.
- e) Ensure that a newly listed parcel is owned by someone, either by a household member or a non-member. Thus, Q13 and Q14 cannot be both empty, or if Q13 is empty Q14 cannot be equal ‘NONE’, code 4.

6. Section AG2: Plot roster, details and GPS measurement

- a) The number of new plots listed on the plot flap should be consistent with the number indicated in Q10 of AG1 for the corresponding parcel. Q10 of AG1 asks for the number of plots in a new parcel.

- b) Ensure that for each newly listed plot, there is an indication of who makes decisions for managing the plot. This could either be a household member or a non-household member. Thus, if Q04 is empty, following a NO response to Q03, then Q05 cannot be NONE.
- c) Observe filter on Q15 if a plot was cultivated during the 2016/2017 agriculture season.
- d) The size of *rented out* plot indicated in Q18 should not be more than the size of the plot provided in Q02 of AG2 on page 9. Q02 of AG2 establishes the total area of the plot. Area rented out cannot be more than the total area/size of the plot.
- e) Ensure GPS information is captured for all newly listed plots on this visit, as well as for plots that were not measured during the first-round visit.
- f) Do not measure the area for fallow, rented out, and sharecropped out plots.
- g) GPS coordinates should be recorded accurately in the corresponding block of cells for latitude (S) and longitude (E).
- h) Further, the GPS measurement of the planted area of plots should be recorded in Square Meters, with leading zeros where necessary (Q30).

7. Section AG3: Agricultural labour

- a) This section should not be asked for fallow, rented out, and sharecropped out plots.
- b) When observing interviews, ensure that the interviewer makes a clear distinction between the reference activities. This section focus on two groups of activities (reference activities): non-harvest and harvest activities for the 2016/17 agricultural season. Non-harvest activities are those conducted between planting and harvesting, and include for example fertiliser application, weeding, and chemical application.
- c) Confirm Q01a by following the instructions on page 14.
- d) If the response to Q01 is '0', then skip to Q03.
- e) Similarly, if the response to Q26 is '0', then skip to Q28.
- f) Use your knowledge and understanding of agricultural wages in local areas to validate the values provided in Q07, Q11, and Q15 for payment towards labour hired for non-harvest activities, and Q32, Q36, and Q40 for payment towards labour hired for harvest activities.

8. Section AG4: Input use on plot

- a) Ensure there is consistency between Q01 and the responses to Q0b of AG4 and Q15 of AG2. Q0b of AG4 indicates whether a plot *listed from the first-round visit* was cultivated or not. Q15 of AG2 indicates whether a *new* plot was cultivated or not.
- b) Where inorganic fertilizers selected for basal and top dressing application are agronomically inappropriate for the crop(s) planted on the respective plot, probe for clarification. An indication of what is considered agronomically appropriate or inappropriate is provided in the Enumerator Instruction Manual.
- c) The type of fertilizer(s) selected for Q16 and Q19 should be what is appropriate for basal and top dressing fertilizer(s), respectively. An indication of what is used for basal and top dressing application is provided in the Enumerator Instruction Manual.
- d) Considering the size of the plots, the total amount of the inputs used on plots should be realistic. A rough guide on this is provided in the Enumerator Instruction Manual.

9. Section AG10: Input Acquisition and Costs

- a) Ensure consistency between Q01 of this section and Q02, Q05, Q08, Q11, and Q14 of section AG4 for respective inputs. Q02, Q05, Q08, Q11 and Q14 of AG4 establishes if a household used pesticides, herbicides, lime, organic fertiliser or inorganic fertiliser, respectively. Thus, if there is a Yes response for any input in section AG4, then that input should have a YES answer in Q01 of this section.
- b) Ensure that the sum of input quantities from all sources cannot be more than the quantity used in section AG4. For instance,

- i. The sum of all pesticides quantities from all sources, $Q03 + Q06 + Q12 + Q18$, must equal the quantity of herbicide that the household indicated to have used in Q03 of section AG4 for liquid and solid forms accordingly.
 - ii. The sum of all herbicides quantities from all sources, $Q03 + Q06 + Q12 + Q18$, must equal the quantity of herbicide that the household indicated to have used in Q06 of section AG4 for liquid and solid forms accordingly.
 - iii. The sum of all lime quantities from all sources, $Q03 + Q06 + Q12 + Q18$, must equal the quantity of herbicide that the household indicated to have used in Q09 of section AG4.
 - iv. The sum of all organic fertilizer quantities from all sources, $Q03 + Q06 + Q12 + Q18$, must equal the quantity of herbicide that the household indicated to have used in Q12 of section AG4.
 - v. the column sum of the quantities of all inorganic fertilizers used in $Q03 + Q06 + Q12 + Q18$ must be equal to the total quantities for Q17 and Q20 of section AG4.
- c) Make sure that the consistency checks on (b) are based on the same units for each of the questions.
 - d) If the household indicated to have used an input in section AG4, then that input should have been sourced from somewhere, and thus, Q03, Q06, Q12, and Q18 in this section cannot all be missing or zero.

10. Section AG11: Command agriculture

- a) Ensure that $Q06 + Q07$ is not more than Q02. Q02 establishes the quantity the household received from COMMAND AGRICULTURE while Q06 and Q07 establishes how much of this quantity was used or is still in stock, respectively. This condition means what has been used plus what is still in stock cannot be more than what was received in total.
- b) Check for consistency between Q03b of AG4 and Q01 in this section. Ensure that Q17 – Q20 are asked for all household irrespective of whether the household participated in command agriculture program for the 2016/2017 agricultural season.

11. Section AG5 (Seed Acquisition) and AG7 (Purchased Seeds)

- a) Ensure that seeds used for newly listed crops on plots are sourced from somewhere. There is no way a farmer used say 20kg Maize seed, but none of them came from either PREVIOUS HARVEST/CARRY OVER, FREE, or PURCHASED sources.
- b) For instance, ensure that under AG5, if $Q01=1$ (that is, household used seeds for planting material) then Q04 (quantity of seeds used by household) must be non-zero. Given that Q04 is non-zero, if $Q05=2$, then Q06 is empty, $Q08=2$ implies Q09 is empty, and then under AG7, if $Q01=2$ for that specific [CROP], then Q02 is empty. Given this scenario, one can conclude that the seed used on PLOT for a particular crop came from nowhere, which should not be the case.
- c) Moreover, ensure that the “adding-up property” holds for the total quantity of seed *used* on a plot and the quantity coming from ALL sources.
 - For instance, ensure that the total quantity of seed used on PLOT 1 for MAIZE, Q04 (on page 28) is not greater than the sum of Q06 & Q09 in AG5 and Q02 (AG7), assuming the same units of measurements are used in each of these questions. That is, the total quantity *used* by a household cannot be more than quantities received from all sources.
 - Thus, there should be consistency across the quantity used and the quantity obtained from each of the sources.

12. Section AG6 and AG8: Field crops harvest and Field crop disposition

- a) Where possible, ensure consistency in units and condition of harvested crops across all quantity questions.
- b) Ensure that Q09 of AG6 DOES NOT INCLUDE GREEN MEALIES for MAIZE.

- c) Similarly, for all quantity questions in AG8 (Q03, Q13, Q21, Q22, Q23, Q27, Q28, Q29, Q30, Q31, Q32, Q33), ensure that they do not include green mealies for maize.
- d) Q03 and Q04 of AG8 should be realistic such that the revenue realized from the sale of unprocessed [CROP] is not too high relative to the quantity sold and vice versa.
- e) Ensure that the ID chosen for Q07 (*person responsible for taking the unprocessed crop to the place of sale and negotiating sales*) and Q08 (*person making decisions on the use of earnings from sales of unprocessed crop*) and other related questions belongs to someone who is currently a member of the household.
- f) Total disposition of a particular [CROP] cannot exceed the sum of that crop's harvest from all applicable plots. Thus, the following formula must be observed:

$$Q03+Q13+Q21+Q22+Q23+Q27+Q28+Q29+Q30+Q31+Q32+Q33+Q35 \text{ of AG8}$$

$$= \text{Sum of CROP quantities across plots in Q09 of AG6}$$

- g) Ensure that Q37 is not more than Q35 in AG8. That is, the quantity of the processed crop that was sold (Q37) should not exceed the total quantity that was processed (Q35).

13. Section AG14: Animal holdings

For consistency in the total number of animals owned by the household on January 1, 2017 and August 31, 2017, please ensure that the following are observed by all interviewers:

The number of ANIMAL, say COW owned by the household on January 1, 2017 (Q02) plus the number that were born (Q06), plus the number received as gift (Q10) plus the received as bride price (Q11), plus the number received as payment for services rendered (Q12) plus the number bought to raise (Q13), minus the sum of all the decreases (Q15+Q16+Q17+Q18+Q19+Q22+Q24) must equal Q03 (the number owned on August 31, 2017). That is,

$$Q02 + Q06 + Q10 + Q11 + Q12 + Q13 - (Q15 + Q16 + Q17 + Q18 + Q19 + Q22 + Q24) = Q03$$

Please use this formula to obtain consistent numbers for these questions. Except for CALF FEMALE and CALF MALE that might have graduated over the reference period, this formula applies in all cases.

14. Section AG16: Agricultural by-product

- a) The skip instruction on Q04 says, if the response is NO (2), then skip to Q10 if you are on row number 4 which is for HONEY.
- b) For any other product/by-product, skip to the next item. Please observe this so we capture all the additional information for HONEY.

15. Section AG12: Agricultural Capital

- a) For consistency in the total number of agriculture capital owned by the household on January 1, 2017 and August 31, 2017, please ensure that the following are observed by all interviewers:

The number of agricultural capital for example ‘planters’ owned by the household on January 1, 2017 (Q02) plus the number that were acquired (Q04) minus the number disposed (Q08) should be equal to the number owned on August 31, 2017 which is the closing stock. Thus,

$$\textit{Opening Stock on January 1 (Q02) + Acquisition between January 1 and August 31 (Q04) -} \\ \textit{Disposed between January 1 and August 31 (Q08) = Q02a (Closing Stock)}$$