

Strictly Confidential



REPUBLIC OF ZAMBIA

**CROP FORECAST SURVEY FOR THE 2009/2010 AGRICULTURAL
SEASON**

(For small and medium scale holdings)

INTERVIEWER'S INSTRUCTION MANUAL

**MINISTRY OF AGRICULTURE AND COOPERATIVES
(AGRICULTURAL STATISTICS AND EARLY WARNING SECTION)**

In conjunction with

**CENTRAL STATISTICAL OFFICE
(AGRICULTURE AND ENVIRONMENT DIVISION)**

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Chapter: 1

INTRODUCTION

1.1: Background and Purpose

In earlier years in 1978/79 agricultural season, the agricultural survey was called the Agricultural and Pastoral Production Survey, later renamed in 1982/83 as the Early Warning and Agricultural Survey to encompass the Crop Forecasting and Post-Harvest stages of the agricultural season during which period the two different types of surveys were conducted. However, in 1985/86 the two types of surveys were renamed the Crop Forecasting Survey and Post- Harvest Survey, respectively. The two surveys continue to be known as such.

The purpose of the Crop Forecast Survey is to obtain data for the current agricultural season. In general the estimates obtained usually relate to area planted to crops, expected and/or realized production, quantity and variety of seed, quantity harvested and type of fertilizer used, crop sales, carryover stocks, crop marketing and labour costs among other variables. Except otherwise stated, the reference period for this information is the current agricultural season starting 1st October 2009 ending 30th September 2010. It is very important for the interviewer to check which time period the questions refer to.

1.2 Coverage

This survey will cover the whole country. The survey will be conducted in the same SEAs that were covered for the 2008/2009 Crop Forecast.

1.3 Sample Design

A sample of 680 Standard Enumeration Areas (SEAs) involving 13,600 agricultural households was drawn using probability proportional to size sampling scheme. The measure of size of the SEAs is the number of agricultural households located within each SEA on the area sampling frame as per the 2000 Census of Population and Housing.

Following the 2000 Census of Population and Housing among whose objectives was the creation of a sampling frame for agricultural surveys, a frame of agricultural SEAs has been set up and this frame will be used to collect data during the subsequent Post-Harvest and Crop Forecast Surveys.

Drawing on the experiences from previous Crop Forecast Surveys, it was realized that estimates for crops that are not widely grown such as rice, cotton, soya beans, tobacco, sunflower, paprika, pineapple, cashew nut etc were far from being satisfactory. Because of this, it became necessary to redesign the frame in order to address the situation.

1.4 Survey instruments

The Crop Forecast Survey will focus on the current agricultural season which started on 1st October 2009 and ends on 30th September 2010. The small and medium scale survey includes several instruments which the enumerator must become familiar with. These include;

- The Small and Medium Scale questionnaire (CFS Form 2)
- Interviewers Instruction Manual
- Listing Book (CFS Form 1)
- List of Selected Households
- Table of random numbers
- Conversion tables
- SEA maps

Chapter: 2

DUTIES AND PERFORMANCE OF INTERVIEWERS

(a) Importance of Interviewer Performance

Field interviewers are the eyes and ears of the data collection team. The interviewer serves as a link between those who analyze and use the data and the respondents who furnish the data. The information collected in any survey is only as good as the interviewers working on the survey. Quality depends on all interviewers following the same procedures. Only when the same techniques have been used for all interviews can the data be effectively analyzed and interventions confidently implemented.

(b) Ethics and Rules of Conduct of Interviewers

As an interviewer, it is your responsibility to **keep completely confidential** anything you learn and observe during an interview. Never disclose any facts about anyone you interview to any unauthorized people outside the survey process. Respondents should be told that the information they provide will be used in statistical form only and that their names will not be associated with their answers when the data are analyzed.

Things You Must Do

- You must introduce yourself on every visit and explain to the respondent the reason for your visit before starting the interview.
- You must read and intensively study your manual to become thoroughly familiar with its contents in order to do your work efficiently.

- You must ask the questions in exactly the same way to each respondent and in the same order in which they are presented in the questionnaire. This will enable the interviews to be comparable. The question order needs to be standard from respondent to respondent.
- You must make every effort to write legibly, and keep the documents you are working on clean and free from damage.
- You must attend to all 'call-backs' as early as possible, and must be punctual in keeping all appointments made.

You are solely responsible for all documents issued to you in connection with the survey, and you must ensure that they are secure at all times. Remember that absolutely no one not employed and sworn-in by CSO/MACO to work on this survey can be allowed to see the information you collect, nor must you discuss such information with anyone.

Things You Must Not Do

- You must not solicit or permit any unauthorized person to assist you with your survey work. No matter how intelligent they are, they will not have had the training you have or the authority to participate in interviewing.
- You must not combine survey work with any canvassing for personal gain, church, political party or any other organization.
- You must **NEVER** become involved in religious or political discussions while you are on the job.

(c) List of Basic Duties and Responsibilities

You, the interviewer, are the key to the success of the survey. You alone have a direct influence on the accuracy of the data collected. Since it is more practical and economical to concentrate on collecting accurate data than correcting inaccurate data after collection, you must make every effort to become familiar with this survey and follow its instructions carefully. It will be of utmost importance that you:

- Attend the training course and all other scheduled meetings
- Study this manual very carefully and remember the main points that are explained here
- Become fully familiar with the questionnaire
- Complete all the data collection activities as required
- Review each completed questionnaire for accuracy and completeness
- Submit completed questionnaires to your Supervisor as promptly as possible
- Enumerate all the Households sampled in the SEA
- Ensure that all survey materials are looked after properly and returned to the supervisor after the survey exercise is over
- Perform any other Survey related functions which the supervisor may assign from time to time

- Keep all information received completely confidential.

At times you will find that the actual situation in the field will make your job somewhat difficult. For example, you may run out of pencils or your bicycle may break down temporarily. It is very important that you do not allow these obstacles to stand in your approach to this job. You should seek common-sense solutions to the kind of difficulties you are sure to encounter. If you are temporarily out of pencils, for example, borrow one from a friend; or if your bicycle breaks down, consider another form of transportation until you are able to have it repaired.

It will be up to you to find temporary solutions to the problems you face until a more permanent solution is found.

(d) Timeliness of the submission of questionnaires

Prompt submission of the questionnaires is absolutely crucial for timely processing. If submission of the forms is delayed, it will be impossible to process them on a timely basis. The value of the data for planning and decision-making is directly related to its timeliness.

Chapter: 3

GENERAL INTERVIEWING PROCEDURES

3.1 Preparing for the interview

There are four important steps that must be taken before you visit the household.

a) Reviewing the Interviewer's Manual

This includes reviewing the general interviewing procedures, the specific field procedures and the question-by-question instructions.

b) Reviewing the Questions on the Survey Questionnaire

Before you begin interviewing, practice using the questionnaire to build up your confidence. A successful interview requires an interviewer who fully understands the survey questionnaire and can use it easily and correctly. Stumbling through the questionnaire (losing your place, shuffling papers, etc.) can disturb the person being interviewed.

c) Organizing Survey Materials

Be sure you know what survey materials you need and that you have them with you before going into the field to interview.

d) Appearance and Behaviour

The first thing a respondent notices about the interviewer is his appearance. It is important to create a good impression by being polite, neat and courteous.

3.2 Establishing a good working relationship

Insert paragraph on translation of questions into the relevant local languages and dialects

A comfortable relationship between the interviewer and the respondent is the foundation for good interviewing. The person's impression of you during your visit will largely determine the atmosphere during the interview. If you seem bored, uninterested or hostile, the respondent will probably act in a similar way.

Remember that persons tend to react favourably if they think the interviewer is someone they will enjoy talking to. This means that you have to impress the respondent as being someone who is friendly and understanding. Through your behaviour you can create an atmosphere in which the respondent can talk freely.

3.3 Using the survey questionnaire and asking the questions

The goal of the interview is to collect accurate information by using the questionnaire and following standard interviewing practices. To reach this goal, the interviewer needs to understand the survey questionnaire, including how to ask the questions, how to follow the instructions in the questionnaire and how to identify the various types of questions.

In asking the questions, observe the following rules:

Remaining Neutral

You must maintain a neutral attitude with the respondent. You must be careful that nothing in your words or manner implies criticism, surprise, approval, or disapproval of either the questions asked or the respondent's answers.

You can put respondents at ease with a relaxed approach and gain their confidence. The respondent's answers to the questions should be obtained with as little influence as possible by the interviewer. Another interviewer should be able to obtain the same answers as you.

The questions are all carefully worded to be neutral. They do not suggest that any answer is preferable to another. When a respondent gives an ambiguous answer, never assume what the respondent means by saying something like 'Oh, I see, I suppose you mean... is that right?' If you do this, very often the respondent will agree with your interpretation, even though it is not correct.

Asking Questions in the Order Presented

Never change the order of the questions in the questionnaire. The questions follow one another in a logical sequence; to change that sequence could alter the intention of the questionnaire. Asking a question out of sequence can affect the answers you receive later in the interview.

Asking Questions as Worded

Do not change the question. If the respondent does not seem to understand the question, simply repeat it. In order for the information from the questionnaire to be put together as intended by the analysis team, each question must be asked in exactly the same way to each respondent.

In some unusual cases, the respondent may simply not be able to understand a question. If it is apparent that a respondent does not understand a question after you have repeated it using the original language, you can rephrase it in simpler or colloquial language. However, you must be careful not to alter the question when doing this.

Sometimes, respondents will ask you to define words in a question or explain some part of a question. When this occurs, consult the 'General concepts and definitions' in Chapter 4 of this manual. All the important words and terms are defined there.

Avoid Showing the Questions to the Respondent

Respondents can be influenced by knowing what questions are coming next or by seeing the answer categories that are not asked together with the questions.

3.4 Instructions in the questionnaire

In addition to the questions you must ask, the questionnaire contains instructions for you, the interviewer. The instructions are to enable you to use the questionnaire correctly and must be followed closely.

`Skip'= Instructions

`Skip' instructions usually are written out. You must read the `Skip' instructions with care, so that you do not skip questions, which should have been asked. Likewise, it is important that you skip to the correct question when necessary. If you are careless, you may skip some questions incorrectly and miss some essential questions. When questions are not asked because of a `Skip' instruction, leave the response boxes blank. The questionnaire has a good example of an important skip pattern.

EXAMPLE: Question CSS1 (Page 18, section 8)

INTERVIEWER: Does the household have any from last season's crops from own harvest **or purchase or gifts** in storage now?

1=Yes

2=No → go to CSS6

Question-specific Instructions

In addition, there are `question-specific' instructions for you in the questionnaire. These instructions usually alert you to a consistency check that has to be made at the time of the interview, or tell you how to record an answer. All these instructions are in **boldface** and *italicized*. E.g. the statement in CF10A (page 6) 'If none ***enter 0 and skip to CF12A***' is an instruction to you.

3.5 Probing

(a) Probing and Why It Is Necessary

Probing is the technique of questioning by the interviewer to obtain a full, complete and relevant answer. An answer is probed whenever it is not meaningful or complete, that is when it does not adequately answer the question.

In everyday social conversation, people normally speak in vague and loose terms. Therefore, it is understandable that respondents may at first answer questions in a way, which is not clear or specific. It is essential, however, to encourage respondents to express themselves more precisely and in very specific terms.

Respondents sometimes miss the point of a question. They will provide an answer of a kind but they do not answer the question. It is easy to be misled by a respondent who is talkative and gives a full and detailed response - a response, however, which is quite beside the point and irrelevant. In most cases, respondents give an irrelevant answer because they have missed an important word or phrase in the question.

Sometimes, respondents will think that they are answering a question when all they are doing is simply repeating an answer, which was already given, or repeating parts of the answer. A respondent can talk a great deal and still be merely repeating the already given answer in different words.

Probing therefore, has two major functions:

- \$ To motivate respondents to expand upon or clarify their answers;
- \$ To make the respondent's answer precise so that irrelevant and unnecessary information can be eliminated.

Probing must be done without introducing bias or antagonizing the respondent. Respondents must never be made to feel that you are probing because their answer is incorrect or unacceptable.

(b) Understanding the Intention of the Questions

The kind of probe to use must be adapted to the particular respondent and the particular answer given. There are some general types of probes that are frequently useful but the most important point is to avoid getting into the habit of using the same probe. Instead, you must seek to understand what the intention of each question is, so that you will always know in what way a particular answer falls short of being satisfactory. The probe, then, should be devised to meeting this gap. This will require ingenuity, tact and persistence.

(c) Neutral Probing Methods

It is always very important to use neutral probes. By 'neutral', we mean that you must not imply to the respondent that you expect a particular answer or that you are dissatisfied with an answer.

The reason for probing is to motivate the respondent to answer fully or precisely without introducing bias. Bias is the distortion of responses caused by the interviewer favoring one answer to another.

EXAMPLE of a biased probe: Question CF14A (page 6, section 2.3)

CF14A: What Quantity of this crop have you harvested/do you expect to harvest from this field?

ANSWER: 50 or 60 bags.

IMPROPER PROBE: Oh, you mean 60 bags?

(This improper probe is pushing the respondent to say 60 bags when it may be 50 bags!)

PROPER PROBE: Was it 50 or 60 bags?

Some respondents have difficulty putting their thoughts into words. Others may give unclear or incomplete answers; still others may be reluctant to reveal their attitudes. You must deal with such factors and use procedures that encourage and clarify responses. The following kinds of probes might help you obtain more accurate responses.

Repeat the Question

When the respondent does not seem to understand the question, when he/she misinterprets it, when he seems unable to make up his mind, or when he strays from the subject, the most useful technique is to repeat the question just as it was asked the first time.

An Expectant Pause

The simplest way to convey to a respondent that you know he has begun to answer the question, but that you feel he/she has more to say, is to be silent. A pause - often accompanied by an expectant look or a nod of the head - gives the respondent time to gather his/her thoughts.

Repeating the Respondent's Reply

Simply repeating what the respondent has said as soon as he/her has stopped is often an excellent probe.

Neutral Questions or Comments

Neutral questions or comments are frequently used to obtain unbiased, clearer and fuller responses. The following are examples of the most commonly used probes:

- Repeat question
- Anything else?
- Any other reason?
- Any other?
- Could you tell me more about your thinking on that?
- Would you tell me what you think?
- What do you mean?
- Why do you feel that way?
- Which would be closer to the way you feel?

These probes indicate that the interviewer is interested and they make a direct request for more information.

(d) Asking For Further Clarification

In probing, it will sometimes be useful to appear slightly puzzled by the respondent's answer and intimate with your probe that it might be you who failed to understand. For example, 'I am not quite sure I understand what you mean by that - could you please tell me a little more?' This technique can arouse the respondent's desire to co-operate with someone he/she thinks is trying to do a good job.

It should not be overplayed however; otherwise the respondent will get the feeling that you do not know when a question is properly answered. Occasionally, a respondent will give an 'I don't know' answer. This can mean any number of things. For instance,

- The respondent does not understand the question and answers 'I don't know' to avoid saying he/she does not understand.
- The respondent is thinking the question over and says 'I don't know' in order to fill the silence and to give himself time to think.
- The respondent may be trying to evade the issue, or he/she may feel that the question is too personal and does not want to hurt the feelings of the interviewer by saying so in a direct manner.
- The respondent really may not know, or may not have an opinion or attitude on the subject.

Try to decide which of the above is the case. Do not immediately settle for a 'don't know' reply. If you sit quietly, but expectantly - the respondent will usually think of something to say. Silence and waiting are frequently your best probes for an 'I don't know' answer. You will also find that other useful probes are, "well, what do you think?" or 'I just want your own ideas on that'. If you feel that the respondent has answered 'I don't know' because he/she was afraid of admitting ignorance, you should say that there are no right or wrong answers to the questions and that you just want the respondent's answer or opinion.

Likewise, if you think the respondent says 'I don't know' because a question is too personal, you should remind the respondent that the survey information is confidential.

Always probe at least once to obtain a response to a "don't know" before accepting it as the final answer, but be careful not to antagonize the respondent or force an answer if he/she says again 'I don't know'.

(e) When to Stop Probing

You should stop probing when you have a clear, relevant answer. However, if at any time the respondent becomes irritated or annoyed, stop probing that question. We do not want the respondent to refuse to complete the rest of the interview.

3.6 Controlling the Interview

While it is important to maintain a pleasant, courteous manner in order to obtain the respondent's co-operation, you must also be able to control the interview so that it may be completed in a timely and orderly fashion. For example, when answering questions, the respondent may offer a lengthy explanation of problems or complaints. In this situation, you must be able to bring the discussion to a close as soon as possible so that the interview may continue. Politely, tell the respondent that you understand what he is saying but that you would like to complete the interview. If necessary, you may try to postpone any outside discussion by saying 'Please, let's finish this interview first and we can talk about that later'.

In some cases, the respondent may start to provide information about some aspect of his farm that is covered at a later time during the interview. Again, you must control the interview by telling the respondent that you must ask other questions first and that he should wait until later to provide information on that particular aspect.

3.7 Recording the Answers

Asking the questions correctly and obtaining clear answers is only part of your job. Equally important is recording the answers given by the respondents.

(a) Legibility

It should be obvious to you that all the entries you make in the questionnaire must be legible. If your Supervisor cannot read an entry, the questionnaire will be returned to you for correction. When this happens, much time will be wasted. Since you must spend a great deal of time to go to a household and obtain the information in the first place, why not take care in recording information so that no one else will have difficulty in reading it later.

All responses that require written words should be clearly printed in block letters rather than script. All numbers should be clearly written so that one number is not confused with another. Remember that the numbers will be used in both hand and computer calculations. If they are not legible, mistakes will be made in hand calculations and in entering the numbers for computer processing.

(b) Recording information in the proper place

There are basically two types of responses required in the questionnaire i.e., writing words and recording numbers

Writing words

In some cases, you are required to write in the questionnaire; this may be the name of the head of the household, the village/locality name, or comments concerning the problems encountered.

To avoid the difficulty of reading script, you should print all words in block letters.

Recording numbers

Special care must be taken when entering numerical responses because they will be used in calculations and some will be key-punched directly from the questionnaire for computer processing. Special care should be taken with some numbers such as a '1' and a '7', a '4' and a '7', or an '8' and a '9', which can be misinterpreted.

Recording Fractions

In most cases, only whole numbers (for example: 4, 6, 7, 15, 21, etc.) will be recorded since this is the kind of information usually required. Sometimes, however, the respondent might provide you with an answer in fractions. This is especially the case with area. For example, if the respondent tells you that he/she has $2\frac{1}{2}$ hectares of cropland, which he cultivated during the 2009/2010 agricultural season, make sure that when you record his answer, you convert it to decimal

numbers. That is, change the fraction $\frac{1}{2}$ to 0.5 and record 2.5 hectares. Never record a fraction, always convert it.

The following are some commonly used fractions and their decimal equivalents rounded to the nearest tenth.

$$\frac{1}{4} = 0.25 \quad \frac{1}{2} = 0.50 \quad \frac{3}{4} = 0.75 \quad \frac{1}{3} = 0.33 \quad \frac{2}{3} = 0.67$$

3.8 Interviewer comments/calculations

The only kinds of entries that should be made in the spaces provided for answers are names or numbers. If any other notes or explanations are necessary or if you must do some arithmetic, use the spaces around the table or below the questions. Do not make any comments or calculations inside a space provided for an answer. If you require more space for comments/ calculations, use any available space on the page with reference to the item number on which the comments/calculations are being made. The use of the spaces around the table for comments or calculations is very important.

If you have any problems of any kind in obtaining the information that is required, make a note explaining it in the open space available on that page.

An important phrase to remember is 'When in doubt, write it out'. If you cannot understand what a respondent means, write out his response in the open space. This will be of great use to your Supervisor and to office staff in trying to resolve any problems in the questionnaire. Any arithmetic should also be done in the open space. When making a comment in the open space, always indicate the question to which the comment relates. If there are several parts to the question such as 1.1, 1.2, etc., be sure to indicate the part also of the question referred to.

3.9 Ending the interview

It is important that you leave the respondent with the idea that you are grateful for his or her co-operation. After all the questions have been asked, thank the respondent and mention that his or her co-operation has been most helpful in providing the information for the survey. Also inform the respondent that you may possibly be returning to collect more information.

Chapter: 4

GENERAL CONCEPTS AND DEFINITIONS

It is important that you acquaint yourself with the general concepts and definitions used for this survey before embarking upon the fieldwork.

Definitions

CSA Census Supervisory Area

SEA Standard Enumeration Area

Qualified Respondent is an adult member of the household who is knowledgeable about agricultural and other activities of the household. A child is not a suitable respondent. It is not necessary that all the information be given by one person. A respondent may consult any other member of the household on different items in the questionnaire. Knowledgeable female members are encouraged to also participate as respondents

Household consists of all members of one family who are related by blood, marriage, or adoption, including other persons, such as house-help or farm labourers, if any, who normally live together in one house or closely related premises and take their meals from the same kitchen. It may also consist of one member. A household considers one person as the head of the household

Household Member A household member is:

1. Any individual who in the last 12 months has lived with the household for at least six months regardless of whether they have intentions to stay or not;
2. An individual attending school away from home;
3. Newly born babies;
4. Individuals who are newly wedded-in;
5. Individuals who have stayed for less than six months but have come to live with the household

A non-household member is:

1. An individual who may have left the household with no intention of rejoining the household;

2. Individuals who are married away.
3. All other persons/individuals who do not meet the criteria for household membership

Agricultural Household is a household in which at least one member is carrying out some agricultural activity (defined below) on the holding belonging to the household.

Agricultural Activity is the growing of any crop and/or raising of livestock, raising of poultry and/or fish farming.

Head of Household is a person who is considered to be the head by the members of the household. The husband, in a matrimonial household is usually (but not always) taken as the head of the household. In his absence it is the wife or the eldest member of the household who assumes responsibility of head of household.

Adult member refers to persons who are 12 years or older.

Polygamous Marriage In a polygamous marriage, the husband is usually attached to the first wife. This helps to prevent double counting especially during listing

Holding is all land wholly or partly operated for agricultural purposes such as growing crops and/or raising livestock and/or raising poultry for production under single technical management. A holding may consist of one or more fields (defined below) located in one or separate areas, the fields share the same means of production e.g., labour.

Field a piece of land usually cultivated with one crop at a time. In some cases, a number of different crops (mixture) may be grown in a single field at the same time e.g. sorghum between groundnuts rows, or groundnuts between maize rows. A field can also be a piece of land under fallow.

Fallow field Fallow field includes land that has been cropped before but is not being cropped now. This could be intentional to allow the land regain its fertility.

This field could be fallowed unintentionally because the household does not have tools and labor to work on it. If a household abandons land because it has lost its original fertility but still maintain a claim on it, this land will also be considered to be under fallow.

Garden	This is land where vegetables e.g., cabbage, rape, carrots, green maize, tomatoes etc. are grown. Usually this land is located in a dambo, wetland or stream-bank
Orchard	This is land designated or allocated for growing fruit trees only. If the trees are scattered around on some undefined area, they do not constitute an orchard.
Rented-out Land	This is land that a household has, at a cost (in cash or in kind), given out for use temporarily (for one or more seasons) without claiming ownership.
Borrowed-out Land	This is land that a household has, at no cost, given out for use temporarily (for one or more seasons) without claiming ownership.
Rented-in Land	This is land that a household has, at a cost (in cash or in kind), rented for use temporarily (for one or more seasons) without claiming ownership.
Borrowed-in Land	This is land that a household has, at no cost, borrowed for use temporarily (for one or more seasons) without claiming ownership.
Chronic Illness	This is an illness that has lasted for more than three months continuously

Concepts and Guidelines

Crops

Mixed beans	Include all kinds of beans except soya-beans and ground (round) beans. The quantities of production and sales should relate to dried beans in any of the units listed in the questionnaire. If the respondent reports in units other than those provided in this
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questionnaire, convert the reported quantities to the most convenient of these units.

Seed-cotton Production and sales should be recorded in seed-cotton form in kilogrammes. Where the quantity is reported in bales/woolpacks, it should be converted to kilogrammes before recording. If the respondent reports in units other than those provided in this questionnaire, convert the reported quantities to kg.

Groundnuts production and sales of groundnuts should relate to shelled (where the shells have been removed) as well as unshelled (shells have not been removed) form. If the respondent reports in units other than those provided in this questionnaire, convert the reported quantities to the most convenient of these units.

Maize production and sales should be recorded in dried grain. If the respondent reports in units other than those provided in this questionnaire, convert the reported quantities to the most convenient of these units.

Rice production and sales should relate to "unthreshed" (which has not been de-husked) or "threshed" (which has been de-husked) units for paddy or polished, respectively. If the respondent reports in units other than those provided in this questionnaire, convert the reported quantities to the most convenient of these units.

Sorghum production, sales and purchases should be recorded in threshed grain form. If the respondent reports in units other than those provided in this questionnaire, convert the reported quantities to the most convenient of these units.

Millet production, sales and purchases should relate to "unthreshed" and "threshed" units for unshelled and shelled millet, respectively. If the respondent reports in units other than those provided in this questionnaire, convert the reported quantities to the most convenient of these units.

Soya-beans production and sales should be recorded in dried seed form. If the respondent reports in units other than those provided in this questionnaire, convert the reported quantities to the most convenient of these units.

Sunflower	production and sales should be recorded in dried seed. If the respondent reports in units other than those provided in this questionnaire, convert the reported quantities to the most convenient of these units.
Tobacco	(Burley and Virginia) production and sales should relate to cured tobacco in kilogrammes. Where the quantity is reported in bundles/bales/packs, this should be converted to kilogrammes before recording.
Irish/sweet Potatoes	production and sales should be recorded in any one of the units represented in the code list. If the respondent reports in units other than those provided in this questionnaire, convert the reported quantities to the most convenient of these units.
Fruits	include oranges, tangerines, lemons, bananas, pineapples, mangoes, etc.
Vegetables	includes all leafy crops e.g., cabbage, rape, etc. Green maize, fresh groundnuts, fresh ground (round) beans will also be included under vegetables and leaves from field crops e.g., cassava, sweet potatoes etc.

Note: Where conversions are necessary, refer to the conversion table at the end of the manual

Livestock and Poultry

Livestock	include cattle, pigs, goats, sheep and donkeys
Cattle	include bulls, oxen, tollies, cows, heifers, and calves
Poultry	includes chickens, ducks, geese, guinea fowls and rabbits
Chickens	includes cocks, cockerels, hens, pullets, and chicks

Miscellaneous

Mixed Cropping	is a cultivation practice whereby two or more different crops are grown simultaneously in the same field The apportionment of area under crops in mixture may be approached through
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asking the respondent what proportion of the field would be covered by each crop in mixture, if these were to be planted as pure stand on parts of the field. Another way would be to ask the respondent how much seed was used for each crop in the mixture, e.g., how many pockets and of what size (kg)? how many kilogrammes? or how many 20 litre tins? etc. Exception: If cassava is grown in mixture with millet, each of the two crops should be assigned the area of the entire field. E.g. 1 lima of cassava/millet should be recorded as 1 lima of cassava and 1 lima of millet.

Inter- cropping

is a cultivation practice whereby a crop is planted between the rows of another crop, e.g., sorghum between cotton rows, or sorghum between groundnut rows, or groundnuts between maize rows. For apportionment of the area to the individual crops, follow the same procedure as that for mixed cropping.

Area under mixed crops

is the area of the field in which two or more crops are grown almost simultaneously. This area has to be apportioned to the constituent crops in proportions occupied by the crops in the field. Thus, the area under each of the crops in mixture when added together will be equal or almost equal to the area of the field.

Crop Rotation

The practice of rotating crops that use nutrients differently e.g., legumes with cereals or crops that are prone to different pest attacks.

Irrigation

Supplying of water to crops through artificial means and not being dependent on rain as a supplier of water. This can be done through sprinklers, furrows and other methods.

Agricultural Season

Zambia's agricultural season extends from 1st October of one year to 30th September of the following year.

Payment in Cash

is payment made in cash and/or by cheque (in Zambian Kwacha). If payment is made in cash a currency other than Zambian Kwacha, convert to Zambian Kwacha.

Payment in kind	is payment made not in cash or by cheque but in form of goods or services.
Land Preparation	refers to all activities such as clearing the land, tree stumping, ploughing, etc.
Tillage Method	refers to land preparation activities just before planting such as, ploughing, ridging (by hand or plough), potholing, zero tillage etc.
Conventional hand-hoeing	A tillage method where a hand hoe is used to turn the soil in the field.
Pot-holing	A land preparation method of digging holes for water harvesting. These holes serve as a water collecting device
Planting basins	A land preparation practice where the crop is planted in planting holes or basins. This practice does not involve use of plough or conventional plough.
Zero tillage	A land preparation method where the land is left undisturbed, with the exception of planting stations.
Ploughing	A land preparation method that involves turning the soil with a plough
Ripping	A form of minimum tillage where land is left undisturbed, with the exception of planting lines, which are ripped with a ripper.
Ridging	A form of land preparation that involves making ridges with a ridger or hand-hoe
Bunding	A form of land preparation that involves making mounds, with hand-hoe
Agro-forestry	The growing of specific types of trees with crops in order to improve the soil fertility and crop production
Chitemene system	This is a form of land preparation on virgin fields where trees/branches are cut and heaped in one place and then burnt. The burnt area is the only area to be planted.

Animal Manure	refers to forms of livestock manure e.g., chicken droppings, cattle dung etc
Plant manure	refers to compost manure made from crop residues or grass
Hybrid seed	refers to an improved type of seed whose progeny is not recommended to be used as seed. Hybrid seeds are popular with maize.
Improved seed	refers to seed that has been improved by research but is not hybrid seed. Examples are open pollinated varieties (OPVs). The progeny of OPVs can be used in the next seasons without loss of vigor. There are also improved varieties for sorghum, cassava and sweet potatoes.
Local varieties	refers to seed that is recycled season after season. Examples include varieties for groundnuts and also maize. OPVs that have been recycled become local seed varieties over time.
NGO	A Non-Governmental Organization (NGO) is usually a non-profit making organization, whose purpose is to render assistance materially, financially or other services. Examples of NGOs are: Program Against Malnutrition (PAM), NGO-CC, Women for Change, World-Vision, CARE, Lutheran World Federation (LWF), ADRA, CRS etc
MACO	Ministry of Agriculture and Cooperatives (MACO)
FRA	The Food Reserve Agency (FRA) is a Government Agency that is involved in grain marketing
Mechanical Power	Energy to do work which is derived from machinery driven by either an engine or electricity, e.g. Tractor
Animal Draught Power	Energy to do work, derived from domesticated/trained work animals, e.g. oxen, donkeys etc
Manual Labour	Physical work done by human beings
Hired Labour	Energy to do work, obtained for temporal use, at a cost

Household Family**Labour**

Energy to do work derived from household members

Herbicides

Chemicals used to destroy weeds e.g round-up
(Glyphosate)-a chemical used in the Zamwibe,

**CONCEPTS & GUIDELINES RELATING TO FERTILIZER ACQUISITION
SECTION (Page 9)****GOVERNMENT****Government Farmers Input Support Programme (FISP) - Cash program through cooperatives**

This is a subsidy program that the Government started implementing in the 2002/2003 agricultural season under the name Fertilizer Support Programme (FSP). In the 2009/2010 agricultural season the Government decided to reduce the size of inputs pack from 8 X 50kg bags of fertilizer and 20kg of maize seed (corresponding to 1 hectare) to 4 X 50kg bags of fertilizer and 10kg of maize seed (corresponding to 2 lima). The programme's name has changed to **Farmer Input Support Programme (FISP)** so as to enhance diversification of the agricultural inputs. This is strictly a cash program and does not involve loans. Farmers who benefit are members of local cooperatives which work in collaboration with the District Agricultural Coordinator's (DACO's) office to access this subsidized fertilizer.

Government Food Security Pack - Programme Against Malnutrition (PAM) & Ministry of Community Development and Social Services (MCDSS)

The household can be a recipient of fertilizer from Government through PAM or directly through the MCDSS food security pack. This fertilizer is a grant

COMMERCIAL**Cash purchase of fertilizer**

Farmers with ready cash can purchase fertilizer from traders or other farmers.

Commercial fertilizer loans

Farmers can get a loan in cash or in kind to obtain fertilizer from a local supplier. The provider of the loan can be a trader, a neighbor or relative

Direct commercial exchange/barter for fertilizer

Farmers can exchange their maize or other crop for fertilizer with traders. Some traders prefer to get farm produce instead of cash. Traders can organize a group of farmers to bulk their produce in one location where the trader will deliver the fertilizer and pick up the grain. Farmers can also deliver their grain to the trader and load the fertilizer on the return trip.

Commercial Price of Fertilizer

This is the full market price for a bag of fertilizer from a shop/trader or other farmers

GIFT/FREE/GRANT

Other Sources of Free Fertilizer

The household can be a recipient of a fertilizer gift from a non-household member or NGO, which assists farmers.

Chapter: 5

SELECTION OF SAMPLE HOUSEHOLDS

The first step is to identify agricultural households among those listed in the SEA, i.e. households that reported having grown crops, and /or raised livestock, and/or raised chickens. Households that are non agricultural, those that are 'non-contact' and those that refused to cooperate should also be identified and indicated by writing 'NON AGRIC' 'NON CONTACT' or 'REFUSAL' in the margin against them. Put a mark (x) in the relevant column under column 11 for households that have been identified as either 'NON AGRIC' 'NON CONTACT' or 'REFUSAL'. Non-contact: i.e., if for some reason, no responsible adult member was available during the period of the survey.

Note: The Supervisor has to ensure that the interviewer visits these non-contact households at least three times during listing. If the enumerator comes across households cultivating more than 20 hectares of crops, such households must be regarded as large scale farming households. Such households should then be crossed out of the listing book. Note that these households should not be marked with an 'x' anywhere in column 11. However, if a household serial number has already been assigned, the serial numbering in the listing book should be maintained.

The next step is to stratify agricultural households by size of cultivated land (column 7) and, in certain cases, on the growing of some specified crops (column 8), on numbers of cattle, pigs and goats raised (column 9) and on number of chickens raised (column 10). The agricultural households will be stratified into three (3) categories: A, B and C.

Category C: Area under crops 5.0 - 19.99 ha. This category will also include:

1. Households reporting any of the specified crops when only 1 or 2 households in the SEA report the specified crop(s), even if they do not qualify basing on area under crops.
2. Households raising 50 or more cattle, 20 or more pigs, 30 or more goats, and/or 50 or more chickens, even if they do not qualify basing on area under crops.

Category B: Area under crops 2.0- 4.99 ha. This category will also include households reporting any of the specified crops, when 3 to 5 households in the SEA report the specified crop(s), even if they do not qualify basing on area under crops.

Category A: All the remaining agricultural households with area under crops less than 2.0 hectares.

Stratification Procedure

Category C

When stratifying households, start with category C.

1. Identify the households that reported area under crops (column 7) of 5.0 to 19.99 hectares and put a mark (x) in category C column under column 11 in the row of each of such households.
2. Identify the households that reported any of the specified crops (column 8). Count such households. If there are only 1 or 2 such households, include them in Category C by putting a mark (x) in category C column under column 11 in the row of these households.
3. Using column 9, identify households that reported raising 50 or more cattle, 30 or more goats, 20 or more pigs, and treat these in the same manner as explained in '2'.

4. Using column 10, identify households that reported raising 50 or more chickens and treat these in the same manner as explained in '2'.

Category B

1. Identify households that reported area under crops (column 7) of 2.0 to 4.99 hectares and put a mark (x) in category B column under column 11 in the row of each such households.
2. Identify households that reported any of the specified crops (column 8). Count such households. If there are 3 to 5 such households in the SEA, include them in Category B and put a mark (x) in category B column under column 11 in the row of each of these households.

NOTE: *if there are more than 5 households in the SEA reporting any of the specified crops, these households will not automatically be included in category 'C' or 'B' based on 'special crops' criteria but stratification will be based only on area under crops and livestock/poultry.*

Category A

First critically check the stratification of households in category C and B and when you are satisfied that everything is in order, verify that all the remaining households have area under crops of less than 2 hectares, are among the more than 5 households reporting any of the specified crops, and have reported raising less than 50 cattle, less than 30 goats, less than 20 pigs, and less than 50 chickens. All such households belong to category A. Put a mark (x) in category A column under column 11 in the row of each of these households.

Sampling of households

Assign **Sampling Serial Numbers**, within each category, following where you put (x). The sampling serial numbers will sequentially be assigned, starting with '1' in each category. In addition assign serial numbers to 'NON AGRIC' households in the appropriate column in col. 11 and then do the same for 'NON CONTACT' and 'REFUSAL' households in the 'NON CONTACT' column.

- NOTE: (a) The sum of the last sampling serial numbers in categories A,B and C must be equal to the total number of agricultural households listed in the SEA.
- (b) The sum of the last serial numbers in col. 11 must be equal to the last household serial number in the SEA (an exception is when a large scale hh was found and given a hh serial number).

Summary of Households Listed in SEA

- Column 1.** Gives the categories as allocated to households in Col. 11 of the Listing Book. Note that 'Non-Contact includes refusals.
- Column 2.** Enter, against each category, the serial number assigned to the last household in the category (Col.11).

Enter the sum of categories A,B,C and 'Non Agric' against 'SUB-TOTAL'. This will give the number of households that gave complete response during listing.

Add 'Non Contact' to 'Sub-Total' and enter the result against 'TOTAL'. This gives the total number of households in the Sea i.e it should be equal to the serial number assigned to the last household listed.

- Columns 3,4,5.** Completing of these columns is explained under 'Sample households Selection'. Sample households will be selected from categories A,B and C under Col. 11 of the Listing Book. This means that the sample will be drawn only from agricultural households that gave complete response during the listing exercise.

Sample Household Selection

The total sample size in each SEA is 20 households. Where all the three categories have adequate numbers of households (10 or more) listed, the sample households distribution will be, C-10, B-5 and A- 5.

In cases where there are shortfalls in category C, include all households in this category and allocate the difference from 20 equally to categories B and A. if the differences from 20 cannot be equally

allocated to the two categories, allocate category B one (1) more sample household than category A

Where there is no household in category C, allocate 10 sample households to category B, and 10 to category A.

Where there is no household in category C and less than 10 in category B, include in the sample all those in B and increase the allocation in category A to make up for the shortfall from the required number of 20 sample households.

Where all households in an SEA fall in category A, select all the required 20 sample households from that category

Examples of Sample Distribution

Households Listed			Sample Distribution		
<u>A</u>	<u>B</u>	<u>C</u>	<u>A</u>	<u>B</u>	<u>C</u>
51	22	15	5	5	10
70	22	2	9	9	2
100	14	1	9	10	1
102	12	0	10	10	0
111	7	0	13	7	0
89	0	0	20	0	0

Systematic Sampling Procedure

The allocated number of sample households to each category will be selected independently using the following procedure:

1. Divide the total number of households listed in the category by the number of households to be selected (according to sample allocation) to give the Sampling Interval (SI). Calculate this to two (2) decimal places.
2. Start with category A
3. From the table of random numbers, starting from the top of the column assigned by the supervisor, get the first random number you come across between '1' and the SI, inclusive. The random number obtained will give the first corresponding selected household in the sample. This number will be your random start (RS).
4. Add the SI to the random start (RS), and the integer part of the sum will give the second household to be in the sample.
5. Continue with the procedure, adding SI to each successive sum until you have all the allocated sample size for the category.
6. Put a triangle round the first sampling serial number to be selected. Put a circle round each subsequent sampling serial number (column 11), in the listing book, corresponding to the numbers you have worked out for each category. The sampling serial numbers circled will indicate the households selected for the sample.
7. Transcribe onto the 'LIST OF SELECTED HOUSEHOLDS' sheet, now copying the household serial numbers (column 2) of the selected households.

Summary of Households Listing and Sample Household Selection

Category	H/H's Listed	Sample size	Sampling interval	Random Start
(1)	(2)	(3)	(4)	(5)

A	91	6	15.17	7
B	47	7	6.71	3
C	7	7	1.00	1
Non agric	3			
Sub total	148			
Non contact	11			
Total	159			

Cat. A

Cat. B

Cat. C

$$\text{SI} = 91/6 = 15.17$$

$$\text{SI} = 47/7 = 6.71$$

All 7

$$\text{RS} = 7 \quad 7$$

$$7 + 15.17 = 22.17$$

$$22.17 + 15.17 = 37.34$$

$$37.34 + 15.17 = 52.51$$

$$52.51 + 15.17 = 67.68$$

$$67.68 + 15.17 = 82.85$$

$$\text{RS} = 3 \quad 3$$

$$3 + 6.71 = 9.71$$

$$9.71 + 6.71 = 16.42$$

$$16.42 + 6.71 = 23.13$$

$$23.13 + 6.71 = 29.84$$

$$29.84 + 6.71 = 36.55$$

$$36.55 + 6.71 = 43.26$$

In category A, households bearing sampling serial numbers 7, 22, 37, 52, 67, and 82 are selected. In category B, households bearing sampling serial numbers 3, 9, 16, 23, 29, 36 and 43 are selected. In category C all (7) households are selected.

Note: Two copies of the completed list of selected households sheet should be filled out. One copy will remain with the office of the Regional Statistician, and the second copy will be attached to the listing book(s) and sent to Lusaka.

Chapter: 6

CROP FORECAST (2009/2010) DATA COLLECTION PROCEDURES

Approaching a Household

The interviewer is expected on the onset to identify himself/herself by name and explain the purpose of the visit, the confidential nature of the interview, and the expected time the interview will take. The purpose of the interview is to collect data which when processed will provide information, which will assist policy makers plan and make better decisions. The interviewer is not expected to make promises. Just stick to the purpose of the interview. The interviewer can mention that he/she is merely the eyes and ears of Government.

Identification information

Cluster number and items 1 through 11 will be entered on each questionnaire prior to the interview. The Supervisor should ensure that the interviewer completes all the entries.

Note: Ideally, Cluster number and items 1 through 8 should be entered in all the questionnaires during training of enumerators

1. Cluster Number

Enter, in the boxes provided, the cluster number of the area in which you are operating.

2. Province

Write, in the space provided, the name of the province in which you are operating, and enter the province code in the box provided.

3. District

Write, in the space provided, the name of the district in which you are operating, and enter the district code in the boxes provided.

4. Constituency

Write, in the space provided, the name of the Constituency in which you are operating, and enter the Constituency code in the boxes provided.

5. Ward

Write, in the space provided, the name of the Ward in which you are operating, and enter the Ward code in the boxes provided.

6. Region

Enter the region code either '1' for Rural or '2' for Urban in the box provided.

7. Census Supervisory Area (CSA)

Your supervisor will give you the number of the CSA in which your work area is located. Enter this number in the boxes provided.

8. Standard Enumeration Area (SEA)

This is the area allocated to you for enumeration. Enter the number in the box provided.

9. Village/Locality name

Write the name of the village/locality in which the household is located. This is also indicated on the **LIST OF SELECTED HOUSEHOLDS**.

10. Household Serial Number

Enter the household serial number as shown on the **LIST OF SELECTED HOUSEHOLDS**, in the boxes provided.

11. Category

Indicate in which category the household's holding falls, 'A', 'B' or 'C'. This information is provided on the **LIST OF SELECTED HOUSEHOLDS**. Enter code '1' for category A, '2' for category B and '3' for category C.

12. Name of the Household Head

Write, starting with the family or second name, the full name of the head of the household you are interviewing. This is also shown on the **LIST OF SELECTED HOUSEHOLDS**. If there is a new head due to death or other reasons, cancel the old name and write the **new head's** name.

13. Name of Main Respondent

Identify the household head but if the head is not there, the interviewer should identify a qualified respondent who is knowledgeable and can answer questions. Write, starting with the family or second name, the name of the main respondent if this person is different from the head of the household.

Enumerator, after establishing the pre-entered member number of the main respondent in section 1 from table 1.1 on page 1 of questionnaire, enter it in MEMB, this can be done after the interview or after finishing asking questions in section 1.

14. Response Status

Record the response status for the questionnaire by using the following codes:-

- 1 - Complete Response: i.e., the interview was successfully completed.
- 2 - Refusal: i.e., the household refused to co-operate.

- 3 - Household moved out of SEA: i.e., the household established itself or settled somewhere else. If the household moved to another location within the SEA you will still cover the household. If the household moved to another CSA/SEA but is reachable, you will cover the household.

- 4 - Non-contact: i.e., for some reason, no responsible adult member was available during the period of the survey. The Supervisor has to ensure that the interviewer visits these non-contact households at least three times during the course of the survey.

- 5 - Household dissolved: e.g., after divorce or death of the head of the household, the remaining members may be absorbed in other households (and in the case of a one member household, when this person dies or is married off, in the case of a female, the household is no longer there).

Circle the appropriate response status code and enter it in the box provided.

The interviewer should report to the supervisor all response status entries other than 'completed' and the supervisor should investigate all such cases. Final entries of the response codes other than 'completed' should be done only after the supervisor has completed his/her follow ups.

15. Assignment Record

Write your name against '**Enumerator**' and the date on which you completed the interview against '**Date Completed**'. Leave the spaces for '**Supervisor**' blank. The Supervisor will complete this part

Section 1: Demographic Characteristics of Household Members

This part of the questionnaire tries to obtain basic information of household members.

Order of Questioning. It is recommended that you ask the same question to all members before moving on to the next question. This order of questioning helps improve recall for the respondent.

MEM	Pre-entered
Name	Find out from the household, the names of all the members of the household and enter the names, starting with the head of the household. Enter the surname first.
CFD01	Complete the sex of the household members. If you can observe the sex, you should record the response without asking. Indicate the sex of each of the household members by entering the sex code in the space provided. Enter code '1' if the member is male, or code '2' if female.
CFD02	Ask about the member's relationship to the household head. Enter the appropriate response code. The codes for possible answers are listed at the bottom of the table. There is need to probe further to ascertain the exact relationship, e.g., to differentiate between step child and own child. Enumerator, "1" is entered in the first row for the household head.
CFD03	Find out the year in which this person was born and record the response in four digits, e.g., 1996.
CFD04	Ask for persons born in 1998 and before only (12 years and above only). Find out from the respondent the current marital status of each adult household member. For those household members who are married, establish whether they are married monogamously or polygamously. Enter the appropriate response code
CFD05	Ask for persons born in 2005 and before only (5 years and above only). Ask the highest level of education the member completed. For example, a member who is attending Grade 10 will have completed Grade 9. We are interested in knowing the course level that has been completed. We are not counting the number of years spent at school. Enter the appropriate response code.

Enumerator: In a number of cases, wrong information for this question is entered. For instance a six year old child may be recorded to have completed secondary school education. Therefore, level of education (cfd05) and age (cfd03) should be checked and confirmed. This aspect should be emphasized during training of enumerators.

Section 2: FARM LAND AND USE

We would like to know what crops the household has grown this agricultural season. We would also like to collect information on area under fallow, virgin, orchard, garden and all other land owned, borrowed, and rented by the household. What area is under crops, what variety and quantity of seed was used for each crop, what the expected harvest and expected sales are, how much fertilizer was used and carryover stocks for cereals. This information is important for planning purposes.

- 2.1 We would like you to ask whether the household grew any crop including cassava this agriculture season (2009/2010). In HH01, enter '1' if the response is Yes. If the response is No enter '2'.

Sketching Fields

This sketching is not to be done to scale. We are only interested in indicating where the fields are in relation to the homestead in the space provided. Please ensure to capture the situation as in **the 2009/2010 agricultural season**.

The following steps will guide you in putting up the sketch.

- A. *Sketch all fields that the household has (cultivated fields, borrowed out fields, rented out fields, fallow fields, orchards, gardens, and virgin land). Also sketch all borrowed in or rented in fields that were used for the 2009/2010 agricultural season.*

Important note: Please also sketch cassava fields that may not exist now but were in existence when the season started on 1st October 2009.

Step 1: Ask which crops the household has grown and list the crops.

Step 2: Ask in how many fields the household grew each crop.

Step 3: Ask the direction in which each of the fields indicated in Step 2 is in relation to the homestead.

Step 4: Sketch the field in that direction and write the crop(s) grown in it.

Step 5: Sketch all other fields that the household may have such as virgin land, gardens, orchards, borrowed in and borrowed out fields indicating the direction in relation to the homestead.

Step 6: Assign a number to each field. Serially number all fields, starting with mono cropped fields, followed by fields in mixture without cassava, fields in mixture with cassava, pure cassava fields ending with gardens, orchards, rented out and borrowed out fields, fallow fields and virgin land.

- B. Once all the fields have been identified and numbered, establish what the area for each field is. Do not ask about the area before you have identified all the fields. The respondent may not be very keen to identify all the fields for you if he/she feels concerned about such an enumeration of his/her fields. Write the area of each field against each sketch. Write the area of the field as given by the respondent. **DO NOT CONVERT TO HECTARES.** In some instances, the respondent may not be able to give the area. Use some alternative ways to get the area. (for cassava fields, also indicate the year when most of the cassava in that field was planted)
- C. Once all the fields have been identified and their area established, enumerator, counter the different type of fields and enter the number in the appropriate box of the table 2.1. For mixture crops write the names of both crops in crop name column and enter "00" in CFSN01. Then sum all the field numbers to get the total number of fields the household has. Enter the figure in the last box of column CFSN02.

NOTE:

If a field was in crop mixture, the area in such a field should be apportioned to the constituent crops. For example, if a field was planted with maize and groundnuts in mixture, ask the respondent what part of the area would be under maize or groundnuts, if these two crops were to be planted separately within the same field. If the respondent reports that the area of the field is 4 lima and that maize occupies $\frac{3}{4}$ of the field, then the apportionment of this area to the two constituent crops will be:-

Maize is $\frac{3}{4}$ of 4 lima

Groundnuts is $\frac{1}{4}$ of 4 lima

The area under maize is $\frac{3}{4} \times 4 \text{ lima} = 3 \text{ lima}$

The area under groundnuts is $\frac{1}{4} \times 4 \text{ lima} = 1 \text{ lima}$

Show all calculations for such fields against their sketches.

For such fields shown as having been cultivated with several crops, in Table 2.3 of the questionnaire, question CF03A and CF04A, the area apportioned to each crop will be considered separately under each respective crop code in the 'CROP' column.

If a crop was grown more than once during the season, indicate the number of times the crop was grown in the sketch. The area to which the crop was grown during the season should be reported by each particular crop.

In the case of cassava planted in mixture with millet, assign the entire area of the field to each of the two crops.

2.2: From the sketch, confirm the total number of fields that the respondent indicated having in the 2009/2010 agricultural season. Enter the number of fields in HH02.

Table 2.2: This table asks field level questions. We would like to know the land use of the fields, the area, whether the fields were in mixture or not and where applicable, the reason the field was not cultivated.

FIELD: Pre-entered field number.

CFL01: Transfer the "land- use" information on the sketch to **CFL01**. Enter the appropriate response code.

CFL02: Transfer the quantity of area given on the sketch to **CFL02**. If the units are given in units other than hectares, DO NOT CONVERT THE AREA to hectares. Record the quantity of the area exactly as given.

CFL03: Record the unit of measure used for the quantity of area reported. Enter the appropriate unit code. If the units are given in units other than hectares, DO NOT CONVERT THE AREA TO HECTARES. The quantity and unit should match the sketch information.

CFL04: Was this field a mono-crop or a mixture? Transfer this information from the sketch. (Relevant CFL01 codes are 1,2 or 3 only).

CFL05: Ask the respondent the main reason the household did not cultivate this field. Enter the appropriate response code.

CFL06: Enumerator, ask this question only if the response to CFL01 is fallow field (6) or rented out field (7), borrowed out field (8) or virgin field (9). Ask the respondent whether the household plan to plant any crop in this field next agricultural season (2010/2011). If the response is "Yes" or "Do not know", skip to the next field.

CFL07: Enumerator ask this question only if the response for CF06 is "No" (2). Ask

the respondent the crop the household intend to plant in this field during the 2010/2011 agricultural season.

2.3 MONO CROPPED FIELDS ONLY (EXCLUDE CASSAVA)

Based on the sketches you have made, maintain the field numbers assigned on the sketch, summarize the data and record in Table 2.3. For each mono-crop field, transfer the information on the sketch to '**FIELDA**', '**CROPA**', **CF03A** and **CF04A**. Ask the following questions for each field.

- CROPA:** Enter the code of the crop grown in the field, using the list of crop codes provided.
- CF01A:** Ask the respondent what main tillage method was used in the field. Enter the appropriate response code. The list of tillage method codes is provided at the bottom of the table.
- CF02A:** Ask the respondent when tillage was done. If tillage was done before the rains enter '1'. If tillage was done during the rains enter '2'.
- CF03A:** Record the area of the field from the sketch.
- CF04A:** Record the unit of measure code for the area reported in CF03A. The unit code entered in CF04A should be the same unit as reported in the sketch.
- CF05A:** Find out if the whole area of the field is harvested/expected to be harvested. If the whole area of the field is harvested/expected to be harvested, then enter the area as in CF03A and CF04A and go to CF08A. If not all area of the field is harvested/expected to be harvested, then find out how much of the field is harvested/expected to be harvested and enter the response in the column.
- CF06A:** Record the unit of measure.
- CF07A:** Find out if the area harvested/expected to be harvested is equal to the area planted. Enter the appropriate unit code.
- CF08A:** If area harvested (CF05A) is less than area planted (CF03A), find out the main reason for not harvesting the whole area of the field. Enter the appropriate code using the code list provided
- CF09A:** Find out **what seed variety** of the crop the household used in the field. Record the variety using the code list provided on the opposite page of the questionnaire.

Note: Do not ask for liquid fertilizer (e.g. solubar).

- CF10A: Find out the type of basal dressing fertilizer the household applied. Record the type using the code list provided at the bottom of the page.
- CF11A: Find out how much basal dressing fertilizer was applied to the field. Enter the quantity in Kgs.
- CF12A: Find out the type of top dressing fertilizer the household applied. Record the type using the code list provided at the bottom of the questionnaire.
- CF13A: Find out how much top dressing fertilizer was applied to the field. Enter the quantity in Kgs.
- CF14A: Record the **quantity harvested/expected to be harvested** of the crop grown in the field.
- Note:** Enumerator, for seed cotton, Virginia tobacco, Burley tobacco, paprika and coffee, Calculate the quantity harvested/expected to be harvested in kilograms (kgs). This calculation is best done by asking the farmer the average weight in kgs, how much
- CF15A: Record the unit of measure used for the quantity reported in CF14A. Enter the unit code using the code list provided.
- CF16A: Ask the respondent whether the household plan to plant any main crop in this field next agricultural season (2010/2011). Enter the appropriate response code. If the response is "No" or "Do not know", skip to the next field.
- CF17A: Ask the respondent the main crop the household intends to plant in this field during the 2010/2011 agricultural season. Enter the appropriate code.

2.4 FIELDS IN CROP MIXTURE ONLY (EXCLUDE CASSAVA)

Based on the sketches you have made, maintain the field numbers assigned on the sketch, summarize the data and record in Table 2.4. For each field in crop mixture, transfer the field numbers on the sketch to '**FIELD B**', and by crop, to '**CROP B**', **CF03B** and **CF04B**. Ask the following questions for each field.

Note: Complete the remaining questions as explained in mono-cropped fields

SECTION 3: Fertilizer Acquisition during the 2009/2010 Agricultural Season

We would like to know whether the household acquired any fertilizer during the 2009/2010 agricultural season. We would like to find out how much fertilizer was acquired even for the smallest quantities used for vegetables etc. We would also like to know specific characteristics of each transaction or channel the household used to obtain fertilizer. These transactions should include fertilizer acquired through cash, credit, barter and gift or grant. In this section we would also like to know about the biggest quantity of commercial fertilizer the household purchased by cash and in 1 meda, 20 litre tin, 5kg bag, 10kg bag, 25kg bag and 50kg bag. We would also like to know the price paid by the household per 1 meda, 20 litre tin, 5kg bag, 10kg bag, 25kg bag and 50kg bag purchased in cash terms.

3.1 Ask the respondent if the household acquired fertilizer from any source during the 2009/2010 agricultural season. Enter "1" in **HH03** if the response is yes and ask questions in table 3.1. Enter "2" if the response is No and go to section 4.

Table 3.1: Acquisition of fertilizer from any source

Note: The assumption is that 1 hour on foot is about 5 km. This means that 12 min on foot is about 1 km.

For the 2009/2010 season where HH03 = 1, ask the following:

- CFF01:** Find out if the household acquired fertilizer from each type of source listed. Enter "1" if the response is yes. Enter "2" if the response is no and go to the **next source**.
- CFF02:** Find out how far the point of collection is from the household's homestead. Enter the reported distance in kilometers.
- CFF03:** Find out the quantity of Basal dressing fertilizer the household acquired in the 2009/2010 agricultural season. Record the figure reported in Kilograms. If the respondent reports in bags, convert the bags to kgs. This may require some probing.

Blank box: Enumerator; write in words the number of bags where applicable

- CFF04:** Find out the quantity of Top dressing fertilizer the household acquired in the 2009/2010 agricultural season. Record the figure reported in Kilograms. If the respondent reports in bags, convert the bags to kgs.

Blank box: Enumerator; write in words the number of bags where applicable

- CFF05:** Find out whether the Basal dressing fertilizer from a particular source was available at the time it was needed in the 2009/2010 agricultural season. Enter "1" if the response is yes. Enter "2" if the response is no. Enter "3" if the response is not applicable.
- CFF06:** Find out whether the Top dressing fertilizer from a particular source was available at the time it was needed in 2009/2010 agricultural season. Enter "1" if the response is yes. Enter "2" if the response is no. Enter "3" if the response is not applicable.

Table 3.2 Commercial Market Price of Fertilizer in the 2009/2010 season

Enumerator: Ask the following questions only if the household purchased fertilizer by commercial cash terms, that is where FERTCH was "Cash purchase from private trader/retailer" (3) or "Purchase from cooperative of farmer association" (4) or "Purchase from another farmer" (5) or "Purchase from another individual (not a farmer)" (6)

The following questions refer to when the household made its **biggest commercial purchase** only.

- 3.2.1:** Find out the price the household paid at any point of purchase when it made the biggest commercial purchase of basal dressing fertilizer. Enter the price in **HH04** and enter the unit of purchase in **HH04a**. Enumerator, write in words the "units" in the box next to **HH04a**.
- 3.2.2:** Find out the price the household paid at any point of purchase when it made the biggest commercial purchase of top dressing fertilizer. Enter the price in **HH05** and enter the unit of purchase in **HH05a**. Enumerator, write in words the "units" in the box next to **HH05a**.

Enumerator ask the next questions HH06 and HH07 only if HH04a and HH05a are equal to "4=10kg bag", "5=25kg bag" or "6=50kg bag"

- 3.2.3:** Find out how much the household spent on transport from point of purchase point to the homestead per bag when it made the biggest commercial purchase. Enter the cost of transport in **HH06** and the unit in **HH07**.

SECTION 4: SEED TYPE, USE AND SOURCE

The questions in TABLE 4.1 refer to MAIZE ONLY. If there is more than 1 field enter the information of each field in one row. There are situations when maize is intercropped with other crops, please just enter the information of maize only and the crop's information will be entered in table 4.2. Ensure that the area for each crop is apportioned accordingly.

FIELD C: Enter the field number for each maize field the household has in column FIELD C.

LOCAL SEED

CFSS1: Find out whether the household used local maize seed. If the response is "Yes" enter 1 and if the response is "No" enter 2 and skip to CFSS7.

CFSS2: Find out the total amount of local maize seed used by the household. Enter the quantity in CFSS2. Enter 0 if none was used.

CFSS3: Enter the unit code for the quantity of maize seed reported in CFSS2.

CFSS4: Find out how much in total was paid for the local maize seed. Enter the amount in CFSS4. Enter "0" if the local seed was not bought. Note: If payment was in kind, report in kwacha equivalent

CFSS5: Find out the source of most of the local maize seed used. Enter the appropriate response code from the code list provided.

CFSS6: Find out the main transaction the household used to acquire the local maize seed.

HYBRID/IMPROVED SEED

CFSS7: Find out whether the household used hybrid/Improved maize seed. If the response is "Yes" enter 1 and if the response is "No" enter 2 and skip to CFSS13.

CFSS8: Find out the total amount of hybrid/improved maize seed used by the household. Enter the quantity in CFSS8. Enter 0 if none was used.

CFSS9: Enter the unit code for the quantity of maize reported in CFSS8.

CFSS10: Find out how much in total was paid for the hybrid/improved maize seed. Enter the amount in CFSS10. Enter "0" if the hybrid/improved maize seed was not bought.

Note: If payment was in kind, report in kwacha equivalent

- CFSS11:** Find out the source of most of the hybrid/improved maize seed used. Enter the appropriate response code from the code list provided.
- CFSS12:** Find out the main transaction the household used to acquire the hybrid/improved maize seed reported in CFSS7.

RECYCLED SEED

- CFSS13:** Find out whether the household used recycled maize seed. If the response is "Yes" enter 1 and if the response is "No" enter 2 and skip to the next field.
- CFSS14:** Find out the total amount of recycled maize seed used by the household. Enter the quantity in CFSS14. Enter 0 if none was used.
- CFSS15:** Enter the unit code for the quantity of maize reported in CFSS15.
- CFSS16:** Find out how much in total was paid for recycled maize seed. Enter the amount in CFSS16. Enter "0" if the recycled maize seed was not bought.
Note: If payment was in kind, report in kwacha equivalent
- CFSS17:** Find out from the respondent, the source of most of the recycled maize seed used. Enter the appropriate response code from the code list provided.
- CFSS18:** Find out the main transaction the household used to acquire the recycled maize seed.

TABLE 4.2: Enumerator, ask the following questions for all the food crops planted excluding maize, cassava and tubers.

CROP

- NAME:** Write the crop name of the other food crops the household planted excluding maize, cassava and tubers.
- CROPSTB:** Enter the crop code of each of the food crops written in column crop name. The codes of the food crops are below.
- CFSS1B:** Find out whether the household used local seed of each food crop entered. If the response is "Yes" enter 1 and if the response is "No" enter 2 and skip to CFSS7B.
- CFSS5B:** Find out the source of most of the local seed used for each food crop entered. Enter the appropriate response code from the code list provided.

CFSS6B: Find out the main transaction the household used to acquire the local seed for each of the food crop entered.

CFSS7B: Find out whether the household used hybrid/Improved seed for each of the food crop/s reported. If the response is "Yes" enter 1 and if the response is "No" enter 2 and skip to CFSS13B.

CFSS11B: Find out the source of most of the hybrid/improved seed for each food crop entered. Enter the appropriate response code from the code list provided.

CFSS12B: Find out the main transaction the household used to acquire the hybrid/improved seed for each of the food crop reported.

CFSS13B: Find out whether the household used recycled seed for each of the food crop reported. If the response is "Yes" enter 1 and if the response is "No" enter 2 and skip to the next crop.

CFSS17B: Find out the source of most of the recycled seed for each food crop reported. Enter the appropriate response code from the code list provided.

CFSS18B: Find out the main transaction the household used to acquire the recycled seed for each of the food crop reported.

SECTION 5: CASSAVA PRODUCTION FORECAST

5.1 Based on the sketches, find out if the household has/had any cassava fields this agricultural season (2009/2010). If the household had cassava fields, enter '1' in HH08. If the household did not have, enter '2' in HH08 and go to section 6.

Based on the sketches made, maintain the field numbers as assigned on the sketch, summarize the data for cassava in the given table. Transfer the information to **FIELDC**, **CS02** and **CS03**, and then ask questions **CS01** and **CS04** to **CS06** about each field under cassava.

CS01: Find out from the respondent **what variety** of cassava was planted in the field. Enter the variety code using the code list provided.

CS02: Ensure that the area recorded is one that is on the sketch for the cassava field.

CS03: Record the unit code of measure entered in CS02.

CS04: Find out from the respondent in which year most of the cassava field was planted. Enter the year in four digits e.g 2006.

CS05: Find out from the respondent in which month of the year most of the cassava in the field was planted. Enter the month code.

- CS06:** If the cassava in the field is mature or expected to mature between now and 30th April 2010, enter '1' if the response is Yes. If the response is No enter '2' and if the response is field already harvested, enter '3'.
- HH08a:** Find out from the respondent if the household harvested any cassava between April 2009 and March 2010. Enter '1' if the response is Yes. If the response is No enter '2' and go to section 6.
- CS07 - CS18:** Enter the level of harvest for each respective month. i.e. 2 for heavy, 1 for little and 0 for none. All columns from CS07 - CS18 must be filled in.
- CS19:** Find out from the respondent the total number of times per month the household harvested cassava, in a typical **heavy** month. Enter the number of times per month in CS19.
- CS20:** Enter the unit code of measure used most frequently by the household in a typical heavy month.
- CS21:** For the **heavy** harvest months, find out from the respondent the quantity of raw cassava that was harvested **each time the household harvested**. Enter the quantity harvested.
- HH08b:** If the unit of measure is basket/dish/bafa, find out from the respondent the number of the baskets/dish/bafa that fill a 50kg bag.
- CS22:** Find out from the respondent the total number of times per month the household harvested cassava, in a typical **minor** month. Enter the number of times per month in CS22.
- CS23:** Find out the unit code of measure used most frequently by the household in a typical minor (little harvest) month.
- CS24:** For the **minor** harvest months, find out from the respondent the quantity of raw cassava that was harvested **each time the household harvested**. Enter the quantity harvested.
- HH08c:** If the unit of measure is basket/dish/bafa, find out from the respondent the number of the baskets/dish/bafa that fill a 50kg bag.

Section 6: LABOUR COSTS FOR THE LARGEST MAIZE FIELD

Labour is an important parameter in the production of crops. The labour and other input costs will determine the profitability of the crop. Due to the policy need on the part of the government to trace how much it costs a farmer to produce maize, labour costs will be collected from maize fields. This will cover all the activities in the production process. These activities include; land preparation, planting, application of fertilizers, weeding and harvesting.

- 6.1:** Enumerator; Tell the respondent that we would like to get information about their use and costs for their largest maize field. Enter the field number in **HH09**.

6.2: Find out if the largest maize field was cultivated last season? If cultivated enter "1", if the field was not cultivated and it was virgin enter "2" and if the field was not cultivated and it was fallow enter "3" in HH09a.

TABLE 6.1 Maize field labour cost for 2009/2010 agricultural season PART 1.

CFSL00: Under this variable all the field activities are shown. When asking the subsequent questions refer to each activity.

Enumerator; questions from CFSL01 to CFSL06 apply to household that used Mechanical power.

- CFSL01:** Find out if the household used mechanical power to do any of the field activities. If the response is "Yes" enter 1. If the response is "No" enter 2 and skip to CFSL07.
- CFSL02:** Find out the main type of mechanical/draught power the household used to do each activity. Enter the appropriate response in the box given for each activity.
- CFSL03:** If the household hired animal draught power (CFSL02=2) and paid in cash, find out the amount of money it paid. Enter the value in the appropriate box. If the household did not pay any cash enter "0".
- CFSL04:** If the household hired animal draught power (CFSL2=2) and made in-kind payments, ask the respondent to estimate the value of the in-kind payments. Enter the value in the appropriate box. If the household did not make any in-kind payment enter "0".
- CFSL05:** If the household hired a tractor (CFSL2=4) and paid in cash, find out the amount of money it paid. Enter the value in the appropriate box. If the household did not pay any cash enter "0".
- CFSL06:** If the household hired a tractor (CFSL2=4) and made in-kind payments, ask the respondent to estimate the value of the in-kind payments. Enter the value in the appropriate box. If the household did not make any in-kind payment enter "0".

Enumerator questions from CFSL07 to CFSL11 apply to household that used hired labour.

- CFSL07:** Find out the number of people the household hired to do any of the field activities. Enter the number in the box given. If the household will not hire enter "0" and skip to CFSL12.
- CFSL08:** Find out the number of days it took to complete each activity by the people mentioned in CFSL2. Enter the number of days given in the appropriate box.

- CFSL09:** Find out on average, the number of hours these people were working per day to do each activity. Enter the number of hours in the appropriate box.
- CFSL10:** If the household paid in cash, find out the total amount it paid all the hired people to doing that activity. Enter the amount in the appropriate box. If the household did not pay any cash, enter "0".
- CFSL11:** If the household made in-kind payment, ask the respondent to estimate the value of this in-kind payment/s. Enter the estimated value in the appropriate box. If the household did not pay any in-kind payment, enter "0".

Enumerator questions from CFSL12 to CFSL18 apply to household that used Household family labour.

- CFSL12:** Find out if the household used family labour to do any of the field activities. If the response is "Yes" enter 1. If the response is "No" enter 2 and skip to the next activity.
- CFSL13:** Find out the number of male adult members above 11 years that were involved in doing each activity. Enter the number of male adult members in the box. If there were no male adult members enter "0".
- CFSL14:** Find out the number of female adult members above 11 years that were involved in doing each activity. Enter the number of female adult members in the box. If there were no female young members enter "0".
- CFSL15:** Find out the number of male young members (boys) less than 12 years that were involved in doing each activity. Enter the number of male members in the box. If there were no male young members enter "0".
- CFSL16:** Find out the number of female young members (girls) less than 12 years that were involved in doing each activity. Enter the number of female young members in the box. If there were no female young members enter "0".
- CFSL17:** Find out the number of days it took to complete each activity in that field. Enter the number of days in the box.
- CFSL18:** Find out on average the number of hours per day the household worked in that field. Enter the number of hours in the box.

TABLE 6.2: Enumerator, information on labour for harvesting, shelling, packing and transportation of maize from the field to the homestead will be forecasted because the time you will be in the field these activities would not have happened.

Enumerator questions from CFSL01b to CFSL06b apply to household that anticipates to use Mechanical power.

- CFSL01b:** Find out if the household expects to use mechanical power to shelling/packing and transporting maize from the field to the homestead. If the response is "Yes" enter 1. If the response is "No" enter 2 and skip to CFSL12. Enumerator, do not ask question for rows shaded under mechanical power use.
- CFSL02b:** Find out the main type of mechanical power the household used to do each activity. Enter the appropriate response in the box given for each activity.
- CFSL03b:** If the household anticipates to hire animal traction (CFSL2=2) and will pay cash, find out the amount of money it will pay. Enter the value in the appropriate box. If the household does not anticipate to pay any cash enter "0".
- CFSL04b:** If the household anticipates to hire animal traction (CFSL2=2) and will make in-kind payments, ask the respondent to estimate the value of the in-kind payments. Enter the value in the appropriate box. If the household does not expect to make any in-kind payment enter "0".
- CFSL05b:** If the household anticipates hiring tractor (CFSL2=4) and will pay in cash, find out the amount of money it will pay. Enter the value in the appropriate box. If the household does not expect to pay any cash enter "0".
- CFSL06b:** If the household anticipates hiring tractor (CFSL2=4) and will make in-kind payments, ask the respondent to estimate the value of the in-kind payments. Enter the value in the appropriate box. If the household does not expect to make any in-kind payment enter "0".
- Enumerator questions from CFSL07b to CFSL11b apply to household that anticipates to use hired labour.**
- CFSL07b:** Find out the number of people the household is expected to hire to do any of the field activities. Enter the number in the box given. If the household will not hire enter "0" and skip to CFSL12b.
- CFSL08b:** Find out the number of days the household expects them to take to complete each activity. Enter the number of day/s given in the appropriate box.
- CFSL09b:** Find out on average, the number of hours the household expects these people to work per day to do each activity. Enter the number of hours in the appropriate box.
- CFSL10b:** If the household anticipates to paying in cash, find out the total amount it expects to pay all the hired people who will be doing that activity. Enter the amount in the appropriate box. If the household does not anticipate to paying cash, enter "0".

CFSL11b: If the household anticipates to making in-kind payment, ask the respondent to estimate the value of that in-kind payment/s. Enter the estimated value in the appropriate box. If the household does not anticipate to paying any in-kind payment, enter "0".

Enumerator questions from CFSL12 to CFSL18 apply to household that used Household family labour.

- CFSL12b:** Find out if the household anticipates using family labour to do any of the field activities. If the response is "Yes" enter 1. If the response is "No" enter 2 and skip to the next activity.
- CFSL13b:** Find out the number of male adult members above 11 years that will be involved in each activity. Enter the number of male adult members in the box. If no male adult members will be involved, enter "0".
- CFSL14b:** Find out the number of female adult members above 11 years that will be involved in each activity. Enter the number of female adult members in the box. If no female young members will be involved, enter "0".
- CFSL15b:** Find out the number of male young members (boys) less than 12 years that will be involved in each activity. Enter the number of male young members in the box. If no male young members will be involved, enter "0".
- CFSL16b:** Find out the number of female young members (girls) that will be involved in each activity. Enter the number of female young members in the box. If no female young members will be involved enter "0".
- CFSL17b:** Find out the number of days it is expected to take to complete each activity in that field. Enter the number of days in the box.
- CFSL18b:** Find out on average how many hours the household expects the family to work each day?. Enter the number of hours in the box.

6.3: Find out if the household used any herbicides on weeding. If the response is Yes enter "1" and if the response is No enter "2" in HH10 and skip to 6.5

6.4: Find out the total cost of the herbicides the household used in weeding. Enter the amount in ZMK in HH10a.

6.5: Find out the total cost if the household was to rent out the largest maize field to someone. Enter the amount in HH10b.

TABLE 6.3: Village labour cost per lima/acre of maize.

Enumerator; Tell the respondent that we would like to capture the village level labour cost per lima/acre of maize for the same field activities. A lima is (50m X 50m) or (0.25ha) and an acre is .405ha. LABACT shows the farm activities.

Enumerator; the questions from LAB02a to LAB02d apply to MANUAL LABOUR

- Lab02a:** Find out the costs in ZMK of hiring someone to do each of the following field activities manually per lima/acre of maize. Enter the value in the appropriate box
- Lab02b:** Enter the appropriate unit
- Lab02c:** Find out the number of days it takes this person to complete each of the activities manually per lima/acre of maize. Enter the number of days in the appropriate box.
- Lab02d:** Find out on average the number of hours it takes this person to complete each of the activities manually per lima/acre of maize. Enter the number of hours in the appropriate box.

Enumerator; the questions from LAB02e to LAB02h apply to only two activities Land preparations and planting under ANIMAL DRAUGHT POWER

Enumerator; take note that the questions for ANIMAL DRAUGHT POWER are the same as the questions for manual labour

- 6.6:** Find out the cost of shelling and packing a 50kg bag of maize in this village if you are using manual labour or mechanical sheller. Enter the cost for manual labour in LAB02i and the cost for mechanical labour in LAB02j

SECTION 7: CROP FORECAST SALES & SEED RETENTION FROM OWN PRODUCTION (EXCLUDE CASSAVA AND CASH CROPS)

This section will include all **FOOD CROPS HARVESTED** or **EXPECTED TO BE HARVESTED**, excluding cassava and cash crops such as tobacco and cotton. The information will be compiled crop-wise and **NOT** field wise.

Crop name: Identify, from Tables 2.3 and 2.4, food crops that the household has harvested/expects to harvest and enter the codes in this Column. The crops that are **not blocked** in the list of crop codes at the bottom of the table are food crops. Enter the crop name

Cropf Enter the crop code for the crop entered in crop name

CFS1 Find out the quantity the household expects to sell or exchange. Enter quantity in this column. Check to make sure sales and/or exchange do

not exceed production.

- CFS2** Record the unit of measure code for the quantity in CFS1.
- CFS3** Find out the quantity of seed the household expects to retain from what was/is expected to be harvested. Record the quantity.
- CFS4** Record the unit of measure code for the quantity entered in CFS3.

SECTION 8: CROP STOCKS

Enumerator: When asking the questions concerning food stocks, some respondents may provide inaccurate data. This is often in the belief that providing an under-estimate of the stocks they have at the homestead, may result in food relief/assistance from the Government. Probe carefully. The reference periods are 2008/09 and 2009/10. The questions will be asked only to food crops list in CROPSTK of table 8.1.

- CSS1:** Find out if the household has quantity of the listed crops from last season's **own harvest or purchase or gifts** in storage NOW? Enter '1' if the response is Yes. If the response is No enter '2' and skip to CSS6.
- CSS2:** Find out the quantity of the listed crops from last season's **own harvest or purchase or gifts** the household still has in storage **NOW** (on the day of interview). Enter the quantity given in this column.
- CSS3:** Record the code for the unit of measure reported in CSS2.
- CSS4:** Find out what quantity of the crop from last season's **own harvest or purchase or gifts** the household is expected to have by the end of April 2010. Enter the quantity given in this column.
- CSS5:** Record the code for the unit of measure reported in CSS4.
- CSS6:** Find out the month and year the stocks from listed food crop ran out. Enter the appropriate response code in that column.

CSS7 & CSS9 Refer to the purchases the household will make in addition to what they are expecting to harvest/have harvested in the 2009/2010 season. This question is attempting to capture the maize households will purchase to sustain them before the 2011 harvest. This question is independent of the questions CSS1 - CSS6. Ask this question for maize only.

- CSS7:** Find out the quantity of maize the household expects to purchase in cash or in-kind to meet their family needs, between now and the next seasons harvest (2011)
- CSS8:** Record the code for the unit of measure reported in CSS7.
- CSS9:** Enumerator ask this question if question CSS7 is not 0. Find out the

month the household expects maize from own harvest to run out. Enter the appropriate response code.

SECTION 9: Maize Sales to FRA and Private traders between May 2009 to November 2009

Table 9.1: Enumerator; Tell the respondent that we would like to know about their maize sales to FRA from May 2009 to November 2009. By "sell" we mean when a farmer is given a receipt by FRA.

- HH11: Find out if the household sold maize from own harvest to FRA directly or to FRA via a Cooperative. If the response is Yes, enter "1". If the response is No enter "2" and skip to table 9.2.
- HH12: Find out if the household sold maize to FRA directly or via a cooperative. Enter "1" if the response is "sold to FRA directly" and enter "2" if the response is sold via a Cooperative
- HH13: Find out where the transaction took place. Enter "1" if the response is within the village, enter "2" if the response is outside the village but within the district and enter "3" if the response is outside the district.
- HH14: Find out the number of 50kg bags of maize the household sold to FRA between May 1st 2009 and November 2009. Enter the quantity report in HH13.
- HH15: Find out the month and year when the household sold maize between May 1st 2009 and November 2009. Enter the appropriate response code HH14.
- HH16: Find out the amount in ZMK the household paid to transport a 50kg bag of maize from the homestead to the FRA depot or cooperative who then sold to FRA. Enter the value in the box provided. If the household did not pay, enter "0".

Households selling maize to Private Buyers

Table 9.2: Enumerator; Tell the respondent that we would like to know about their maize sales to the Private Buyers from May 2009 to present.

- HH17: Find out if the household sold or exchanged maize from own harvest to The private buyers. If the response is Yes, enter "1". If the response is No enter "2" and skip to question HH25.
- HH18: Find out the quantity of maize the household sold or exchanged. Enter the quantity sold in HH17.
- HH19: Record the units reported in HH17.
- HH20: Find out when the household made the largest cash/barter transaction.

Enter the appropriate response code in HH19.

HH21: Find out the type of the buyer the household sold their maize to. Enter the appropriate response

HH22: Find out where the transaction took place. Enter the appropriate response code.

HH23: Find out the distance from the homestead where the transaction took place. Enter the distance in kilometers. (Enumerator; 1 mile is equal to 1.6km).

HH24: Find out the price per unit for the largest cash transaction. Enter the value in ZMK in HH24.

HH25: Record the unit of measure in HH25.

HH26: Find out the number of private maize buyers that have come into the village since May 2009. Enter the number in HH26.

SECTION 10: Distance and Market Access

10.1: Find out the kilometers from homestead to the nearest FRA buying point or depot. Enter the kilometer in HH27. If the distance is less than 1 kilometre, enter '0'

10.2: Find out the kilometers from the homestead to the point where the household members can get vehicular transport. Enter the kilometers in HH28. If the distance is less than 1 kilometre, enter '0'

10.3: Find out the kilometers from the homestead to the nearest maize market. Enter the kilometers in HH29. If the distance is less than 1 kilometre, enter '0'

10.4: Find out how many kilometers it is from the homestead to the nearest boma. Enter the kilometers in HH30.

10.5: Find out how much would it cost to transport a 50kg bag of maize from your homestead to the nearest boma. Enter the cost in HH31

END CFS INTERVIEW

APPENDIX 1 **CONVERSION TABLE TO Kgs**

Maize (1)		Rice (3)	
	<u>Kgs</u>		<u>Kgs</u>
90kg bag	103	90Kg bag	180

50kg bag	57
25kg bag	29
10 kg Pocket	10
20 lt. tin	17.4

50kg bag	100
25kg bag	50
10kg packet	10
20 lt tin	30
90kg bag (unpolished)	85
50kg bag (unpolished)	47
25kg bag (unpolished)	23
20 lt. tin	14

Sorghum (2)

Unit	<u>Kgs</u>
90kg bag	98
50kg bag	54
25kg bag	27
10kg bag	10
20 lt. tin	16.36
90kg bag (unthreshed)	36
50kg bag (unthreshed)	20
25kg bag (unthreshed)	10.8
20kg tin (unthreshed)	4.09

Millet (4)

<u>Unit</u>	<u>Kgs</u>
90kg bag	99
50kg bag	55
25kg bag	28
10kg bag	10
20lt.tin	16.43
90kg bag (unthreshed)	40
50kg bag (unthreshed)	22
25kg bag (unthreshed)	11.2
20 lt. tin (unthreshed)	6.67

Sunflower (5)

Unit	<u>Kgs</u>
90kg bag	50
50kg bag	28
25kg bag	14
10kg bag	5.56
20 lt. tin	8.33

Mixed Beans (12)

<u>Unit</u>	<u>Kgs</u>
90kg bag	108
50kg bag	60
25kg bag	30
10kg bag	10
20 lt. tin	18.05

APPENDIX 2 **CONVERSION TABLE TO Kgs**

Groundnuts (6)

Unit	<u>Kgs</u>
90kg bag	95
50kg bag	53

Cow Peas (14)

<u>Unit</u>	<u>Kgs</u>
90kg bag	108
50kg bag	60

25kg bag	26
10kg bag	10.56
20 lt. tin	15.8
90kg bag (unshelled)	38
50kg bag (unshelled)	21
25kg bag (unshelled)	10
20 lt. tin (unshelled)	6.4

Soya Beans (7)

Unit	<u>Kgs</u>
90kg bag	90
50kg bag	50
25kg bag	25
10kg bag	10
20lt. tin	15

25kg bag	30
10kg bag	10
20 lt.tin	18.05

Sweet Potatoes (17)

<u>Unit</u>	<u>Kgs</u>
90kg bag	104
50kg bag	58
25kg bag	29
10kg bag	10
20 lt.tin	17.5

APPENDIX 3

CONVERSION TABLE

Acres to Hectares

1/4	ACRE	=	0.1	HECTARES
1/3	ACRE	=	0.13	HECTARES
1/2	ACRE	=	0.2	HECTARES
2/3	ACRE	=	0.27	HECTARES
3/4	ACRE	=	0.3	HECTARES
1	ACRE	=	0.4	HECTARES
2	ACRES	=	0.81	HECTARES
3	ACRES	=	1.22	HECTARES
4	ACRES	=	1.62	HECTARES
5	ACRES	=	2.02	HECTARES
6	ACRES	=	2.43	HECTARES
7	ACRES	=	2.84	HECTARES
8	ACRES	=	3.24	HECTARES
9	ACRES	=	3.64	HECTARES
10	ACRES	=	4.05	HECTARES
15	ACRES	=	6.08	HECTARES
20	ACRES	=	8.1	HECTARES

Lima To Hectares

1/4	LIMA	=	0.06	HECTARES
1/3	LIMA	=	0.08	HECTARES
1/2	LIMA	=	0.12	HECTARES
2/3	LIMA	=	0.17	HECTARES
3/4	LIMA	=	0.19	HECTARES
1	LIMA	=	0.25	HECTARES
2	LIMA	=	0.5	HECTARES
3	LIMA	=	0.75	HECTARES
4	LIMA	=	1	HECTARE
5	LIMA	=	1.25	HECTARES
6	LIMA	=	1.5	HECTARES
7	LIMA	=	1.75	HECTARES
8	LIMA	=	2	HECTARES
9	LIMA	=	2.25	HECTARES
10	LIMA	=	2.5	HECTARES
11	LIMA	=	2.75	HECTARES
12	LIMA	=	3	HECTARES

1 hectare = 100m x 100m = 10,000sq metres

0.5 hectares= 50m x 100m = 5,000sq metres

1 lima = 50m x 50m = 2,500sq metres

Seed variety codes					
Maize 68 = Local maize 69 = Hybrid maize - non specific 70 = Recycled hybrid maize 71 = OPV maize <u>ZAMSEED</u> 1 = Pool 16 (OP) 19 = GV 61 Yellow 6 = GV 408 3 = GV 412 5 = GV 470 12 = GV 512 13 = GV 607 14 = GV 702 15 = GV 703 18 = GV 704 16 = GV 722 4 = MM 441 7 = MM 501 8 = MM 502 9 = MM 601 10 = MM 603 11 = MM 604 177=MM 606 17 = MM 752 2 = MMV 400 (OP) 178= MMV 600 (OP) 141 = ZMS 402 179= ZMS 510 180= ZMS 528 181= ZMS 602 142 = ZMS 606 143 = ZMS 607 182= ZMS 616 144 = ZMS 737 145 = ZMV 600 <u>ZARI-MACO</u> 146 = ZM 421 147 = ZM 521 (OP) 148 = ZM 621 <u>AFGRI Cooperation</u> 183= AFRIC 1 (OP) 184 = AFG 4611 185 = AFG 4663	Maize (cont'd) <u>PANNAR</u> 186=PAN 4M – 17 187=PAN 4M – 19 188=PAN 6M – 55 152 = PAN 7M – 97 189=PAN 8M – 91 190=PAN 8M - 95 31 = PAN 14 (Y) 191=PAN 53 192=PAN 57 29 = PAN 61 24 = PAN 64 22 = PAN 67 - African Queen 153 = PAN 69 149 = PAN 77 26 = PAN 87 193=PAN 413 150 = PAN 5503 151 = PAN 6017 23 = PAN 6243 - in a class of its own 20 = PAN 6363 - Chipolopolo 25 = PAN 6479 21 = PAN 6549 - Mr. Reliable 27 = PAN 6573 28 = PAN 6777 30 = PAN 6823 154 = PAN 6966 (Y) <u>MRI</u> 194=MRI EP (OP) 195=MRI MP (OP) 196=MRI 404 67 = MRI 455 66 = MRI 514 157 = MRI 534 65 = MRI 594 63 = MRI 611 64 = MRI 614 62 = MRI 624 61 = MRI 634 158 = MRI 644 60 = MRI 651 (Y) 159 = MRI 694 197= MRI 704 161 = MRI 711 (Y) 160 = MRI 714 57 = MRI 724 59 = MRI 734 58 = MRI 744	Maize (cont'd) <u>SEED-CO</u> 56 = SC 206 (Y) 47 = SC 401 48 = SC 403 49 = SC 405 50 = SC 407 198=SC 411 42 = SC 501 55 = SC 506 (Y) 44 = SC 513 43 = SC 515 45 = SC 517 46 = SC 521 199=SC 525 40 = SC 601 53 = SC 602 (Y) 54 = SC 604 (Y) 41 = SC 621 39 = SC 625 38 = SC 627 155 = SC 633 200=SC 637 36 = SC 701 51 = SC 704 (Y) 52 = SC 706 (Y) 37 = SC 707 32 = SC 709 35 = SC 711 33 = SC 713 34 = SC 715 201=SC 719 <u>Progene Seeds</u> 202=PGS 53 <u>Monsanto</u> 203=DK 8031 204=DK 8051 205=DK 8071 206=DKC 8033 207=DKC 8053 208=DKC 8073	Sorghum 81 = Local sorghum 82 = Hybrid sorghum 83 = Recycle hybrid sorghum 84 = OPV sorghum <u>ZAMSEED</u> 75 = KUYUMA 76 = SIMA 77 = ZSV 15 78 = WP 13 162 = MMSH 375 163 = MMSH 413 <u>SEED-CO</u> 79 = MACIA (OP - white) 80 = NS5511 (Hybrid - brown) Sunflower 90 = Local sunflower 91 = Hybrid sunflower 92 = Recycled hybrid sunflower 93 = OPV sunflower <u>ZAMSEED</u> 85 = MILIKA 86 = RECORD <u>PANNAR</u> 87 = PAN 7369 88 = PAN 7353 89 = PAN 7351 Groundnuts 99 = Local groundnuts 100 = Hybrid groundnuts 101 = Recycled hybrid groundnuts 102 = OPV groundnuts <u>ZAMSEED</u> 94 = CHIPEGO 95 = MGV-4 96 = CHALIMBANA 164 = FLAMINGO <u>SEED-CO</u> 97 = FLAMINGO 98 = NYANDA	Soyabeans 109 = Local soyabeans 110 = Hybrid soyabeans 111 = Recycled hybrid soyabeans 112 = OPV soyabeans <u>ZAMSEED</u> 103 = KELEYA 104 = MAGOYE 165 = HERNON-147 <u>MRI</u> 166 = DINA 167 = MILA <u>SEED-CO</u> 105 = STORM 106 = SOLITAIRE 107 = SOPRANO 108 = SAFARI Cowpeas 115 = Local cowpeas 116 = Hybrid cowpeas 117 = Recycled hybrid cowpeas 118 = OPV cowpeas <u>ZAMSEED</u> 113 = LUTEMBWE 114 = BUBEBE Tobacco <u>BURLEY</u> 119=Buncnett 120=BO 1 121=BO 2 122=BO 3 123=A 1 124=A 2 125=A3 <u>VIRGINIA</u> 126=HG 127=T26 128=RK326 129=T29	Cotton 130= F135 131= Chureza 132= Ngwezi 133= CDT 1 Sweet Potatoes 300 = Chingovwa 301 = Mulungushi 302 = Lukulu 303 = Kalungwishi 304 = Lunga 305 = Zambezi 306 = other improved varieties 307 = local sweet potato varieties Other crops not listed 134= Local 135=Improved <u>SEED COMPANIES</u> 136= ZAMSEED 137= PANNAR 138= SEED-CO 139= MRI 209= AFGRI Coop 210= MONSANTO 211= PROGENE SEEDS 212= PIONEER 213= KAMANO 214= OTHER COMPANY 140 = Do not know

Table of Random Numbers

1	2	3	4	5	6	7	8
97	48	72	09	72	85	48	04
09	44	90	19	05	25	28	90
68	58	01	71	07	50	53	29
85	06	20	25	52	05	69	05
19	24	05	08	71	86	05	16
40	31	32	87	29	32	83	57
61	40	89	58	28	32	77	33
05	46	09	21	54	20	11	92
65	44	38	29	93	95	24	12
80	17	49	28	11	67	03	36
34	43	07	13	16	82	84	27
51	84	86	10	21	65	73	36
03	52	17	45	18	25	21	90
26	53	56	84	62	89	00	46
35	60	43	43	65	64	39	40
21	84	21	68	54	18	39	39
83	24	28	28	06	82	86	10
48	17	17	40	59	58	93	87
82	62	00	64	51	10	81	80
54	97	56	12	27	52	45	69
53	95	47	14	12	72	40	16
59	72	73	30	34	40	12	50
12	20	36	99	20	28	18	05
38	17	24	90	26	26	77	84
42	66	68	40	62	95	06	46
93	81	11	45	63	48	86	67
70	86	35	13	89	61	30	82
49	80	90	37	03	67	53	99