REPUBLIC OF ZAMBIA

CROP FORECAST SURVEY FOR 2007/2008 & POST HARVEST SURVEY FOR 2006/2007

(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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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 crop forecast data for 2007/2008 agricultural season. The estimates obtained are on area planted to crops, realized production, quantity and variety of seed, quantity and type of fertilizer used, sales, area under cassava, area under mature cassava and carryover stocks. Except otherwise stated, the reference period for this information is the agricultural season starting 1st October 2007 ending 30th September 2008. It is very important for the interviewer to check which time period the questions refer to.

The purpose of the PHS is to obtain actual estimates, as opposed to estimates based on anticipations during the Crop Forecasting phase. The estimates obtained are on area planted to crops, realized production, sales made and value of these sales, numbers of livestock and poultry, agricultural inputs purchased and used. The reference period for this information is the agricultural season starting 1st October, 2006 ending 30th September, 2007.

1.2   Coverage

These surveys will cover the whole country. The surveys will be conducted in the same 680 SEAs that were covered for the 2006/2007 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.

from previous Post-Harvest and Crop Forecast Surveys, ates for minor crops such as rice, cotton, soya beans, a, pineapple cashew nut etc were far from being is, it became necessary to redesign the frame in order to address the situation.

1.4   Survey instrument

The Crop Forecast Survey Instrument will focus on the current agricultural season's (2007/2008) crops under cultivation, area planted, area already harvested and expected to be harvested, reasons for poor harvests, seed variety and quantity used to plant, quantity of fertilizers used, expected total production and sales for the season.

The Post Harvest Survey Instrument will focus on last agricultural season farm land and use, crop management, crop stocks and sales, food purchase behavior and food relief, fertilizer acquisition, livestock production, vegetable and fruit production and the possession of production assets by households.

Chapter: 2

PERFORMANCE OF ACTIVITIES

(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 someone else. 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, since, if the interviews are 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.

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or permit any unauthorized person to assist you with ... how intelligent they are, they will not have had the training you have or the authority to participate in interviewing.

- You must not combine with the survey work 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

AL 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

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 with whom 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.

erve the following rules:

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 that the information from the questionnaire can be put together, 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.

questionnaire

s you must ask, the questionnaire contains instructions
. The instructions are for you to use the questionnaire
correctly and must be followed closely.

<u>`Skip'= Instructions</u>
`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 CSS4

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 next crop

<u>Question-specific Instructions</u>
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 either **boldface** and or in *italics*. E.g. the statement in CF11A '**Enter "0" if they did not apply**' 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. However, such a response could be 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.

think that they are answering a question when all they ... an answer, which was already given, or repeating parts ... can talk a great deal and still be merely repeating the ... erent 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 favouring one answer to another.

EXAMPLE of a biased probe: Question CF15A

CF15A: How much 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

...th such factors and use procedures that encourage and ...lowing kinds of probes might help you obtain more

Repeat the Question

When the respondent does not seem to understand the question, when he 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 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 thoughts.

Repeating the Respondent's Reply

Simply repeating what the respondent has said as soon as he 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?
- How do you mean?
- 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 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,

s not understand the question and answers `I don't
he does not understand.

inking the question over and says `I don't know' in order
to give himself time to think.

- The respondent may be trying to evade the issue, or he 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 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 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.

...tly and obtaining clear answers is only part of your job. ...ng 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 on diskettes 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

<u>Writing words</u>

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.

<u>Recording numbers</u>

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.

<u>Recording Fractions</u>

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 has $2\frac{1}{2}$ hectares of cropland, which he cultivated during the 2007/2008 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.

commonly used fractions and their decimal equivalents …h.

$$\frac{3}{4} = 0.75 \qquad \frac{1}{3} = 0.33 \qquad \frac{2}{3} = 0.67$$

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.

AL 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

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.
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.

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 stay 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 household 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.

...o is considered to be the head by the members of the ... husband, in a matrimonial household is usually taken ... the household. In his absence it is the wife or the eldest ... household who assumes responsibility of head of household.

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.
Fallowed field	Fallow land 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 land 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 were vegetables e.g., cabbage, rape, carrots 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, given out for use temporarily (for one or more seasons) without claiming ownership.
Lent-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.
Chronic Illness	This is an illness that has lasted for more than three months continuously

Mixed Beans	Include all kinds of beans except soyabeans 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 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 as well as unshelled 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" or "threshed" 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.
Soyabeans	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

convert the reported quantities to the most convenient

(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.

Livestock and Poultry

Livestock	include cattle, pigs, goats, sheep and donkeys
Cattle	include bulls, oxen, tollies, cows, heifers, and calves
Bulls	bulls are un-castrated adult male cattle
Oxen/Tollies	are castrated male cattle. Not all oxen are trained to pull the plough
Cows	are female cattle that have given birth at least once. Include female cattle that have not yet given birth but are beyond the stage of being termed heifers
Heifers	are female cattle that have not yet given birth and have not reached the stage of being termed cows
Calves	are both male and female cattle that are not yet weaned
Poultry	includes chickens, ducks, geese, guinea fowls and rabbits
Chickens	includes cocks, cockerels, hens, pullets, and chicks

practice whereby two or more different crops are grown in the same field

The apportionment of area under crops in mixture may be approached through 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.
Adult member	refers to persons who are 12 years or older.

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activities such as clearing the land, tree stumping,

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/ Planting Holes	A land preparation practice where the crop is planted in planting holes or basins, with the latter also serving as a moisture retention device. This practice does not involve use of plough or conventional ploughing.
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.

...d that is recycled season after season. Examples include ...groundnuts and also maize. OPVs that have been recycled ...eed varieties over time.

NGO	a Non-Governmental Organization (NGO) is a group of individuals in a non-profit making organization, whose purpose is to render assistance materially and in some cases financially to the under-privileged. Their main objective is alleviation of poverty and the uplifting of the living standards of the under-privileged. They rely on donor support which may be bi-lateral or multi-lateral in nature (among the donors that render such support are NORAD, IFAD, FINIDA, SIDA, etc). Their efforts are also supported by Government. Examples of NGOs are: Program Against Malnutrition (PAM), NGO-CC, Women for Change, etc.
Demonstration Fields	These are fields where the performance of technologies (improved farming practices) is shown to the farming communities
Field day	This is a day when farmers and other stakeholders observe and learn technologies (improved farming practices) that have been developed
MACO and its Agencies	Includes Government Agricultural Research stations (excluding GART), agricultural training colleges such as ZCA, NRDC etc, the Food Reserve Agency operating under the Ministry of Agriculture and Cooperatives

...TION 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 in the relevant column under column 11 for households that have been identified as either 'NON AGRIC' 'NON CONTACT' or 'REFUSAL'.

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

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, 20 or more pigs, 30 or more goats and treat these in the same manner as explained in '2'.

entify households that reported raising 50 or more ese 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 household.

2. Identify households that reported any of the specified crops (column 8). Count such households. If there are 3 to 5 such households, 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 an SEA reporting any of the specified crops, these households will not automatically be included in category 'C' OR 'B' but stratification will be based only on area under crops.**

Category A

First critically check the stratification of households in category C and B and when you are satisfied that everything is in order, 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 20 pigs, less than 30 goats 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.

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.**

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.

ategory, the serial number assigned to the last ategory (Col.11).

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.

Column 3. Complete this column by distributing 'Non – Contact' households among categories A,B,C and 'Non Agric' proportionately. To proportionately allocate number of 'Non – Contact' household to Category A, divide the number of households entered for Category A by the 'Sub-Total and multiply the result by the number entered for 'Non-Contact'. Enter the rounded whole number in this column against Category A. Follow the same procedure for Category B,C, and 'Non-Agric'. Add the entries and enter the sum against 'Sub-Total'. This figure must be equal to the one entered against 'Non-Contact' in Col 2.

Column 4. For Category A, add the number in Col.2 to that in Col.3, and enter the result in Col4. Follow the same procedure for Categories B,C and 'Non-Agric' to complete this column. Add the entries in the column and enter the result in the 'TOTAL' row. This total must be equal to the 'TOTAL entry in Col 2.

Columns 5,6,7. 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.

...usehold in category C and less than 10 in category B,
...l those in B and increase the allocation in category A to
...ll from the required number of 20 sample households.
...n an SEA fall in category A, select all the required 20
sample households from that category

Examples of Sample Distribution

Households Listed   Sample Distribution

A	B	C		A	B	C
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. From the table of random numbers, get a random number (RS) between '1' and the SI, inclusive. The random number obtained will give the first household that will be in the sample.

3. Add the SI to the random number (RS), and the integer part of the sum will give the second household to be in the sample.

4. Continue with the procedure, adding SI to each successive sum until you have all the allocated sample size for the category.

5. Put a circle round each 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.

6. Transcribe onto the 'LIST OF SELECTED HOUSEHOLDS' sheet, now copying the household serial numbers (column 2) of the selected households.

...ds Listing and Sample Household Selection

(1)	contact tion (2)	(3)	Adjusted list of H/H's (4)	Sample size (5)	Sampling interval (6)	Random Start (7)
A	91	7	98	6	15.17	7
B	47	3	50	7	6.71	3
C	7	1	8	7	1.0	1
Non agric	3	0	3			
Sub total	148	11				
Non contact	11					
Total	159		159			

Cat. A	Cat. B	Cat. C

$$SI = \frac{91}{6} = 15.17 \qquad SI = \frac{47}{7} = 6.71 \qquad All\ 7$$

RS = 7   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

RS = 3   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.

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. The interviewer can mention that he/she is merely the eyes and ears of government.

Identification information

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.

1. 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.

2. 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.

3. 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.

4. 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.

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

6. 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.

7. Standard Enumeration Area (SEA)
This is the area allocated to you for enumeration. Enter the number in the box provided.

ge/locality in which the household is located. This is also indicated on the **LIST OF SELECTED HOUSEHOLDS.**

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

10. 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.

11. Name of Head of Household
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.

12. and 13. Age and Sex of Household Head
Find out the age of the household head and indicate the complete years in the two boxes provided. For household heads aged above 90, enter 90. **Please do not** ask the sex of the household head where it is obvious except where the name of the head of the household who would not be present at the time is unisex, eg Mulenga, Madaliso, Mwinga etc.

14. Marital Status of Head of Household
Find out the marital status of the head of the household and enter the appropriate code in the box provided.

15. 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.

16. Household size
Find out from the respondent the total number of usual household members and enter the number in the boxes provided. Find out how many are male and female members and enter the numbers in the appropriate boxes provided.

17. 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.

f SEA: i.e., the household established itself or settled ...sehold moved to another location within the SEA you will ... 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, 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.

<u>18. Assignment Record</u>
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: FARM LAND AND USE
We would like to know what crops the household has grown this agricultural season. 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.

1. We would like you to ask whether the household planted/grew any crop including cassava this agriculture season (2007/2008). In HH01, enter '1' if the response is Yes. If the response is No enter '2' and **end interview**.

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 **2007/2008.**

The following steps will guide you in putting up the sketch.
A. If the household indicates they have grown some crops in 2007/2008 , sketch the fields first
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.

at direction and write the crop(s) grown in it.
ch field. **Number cassava fields last.**

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. In some instances, the respondent may not be able to give the area. Use some alternative ways to get the area.

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 ¾ of the field, then the apportionment of this area to the two constituent crops will be:-

Maize is ¾ of 4 lima
Groundnuts is ¼ of 4 lima
The area under maize is ¾ x 4 lima = 3 lima
The area under groundnuts is ¼ x 4 lima = 1 lima

Show all calculations for such fields against their sketches. For such fields shown as having been cultivated with several crops, in Table 1.1 of the questionnaire, question CF03A, the area apportioned to each crop will be considered separately under each respective crop code in the 'CROPA' 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.

1.1(a) MONO CROPPED FIELDS ONLY (EXCLUDE CASSAVA)

Based on the sketches you have made, summarize the data and record in Table 1.1. For each single crop field, transfer the information on the sketch to **'FIELD1', 'CROPA' and CF03A.** Ask the following questions for each field. (Maintain the field numbers assigned on the sketch).

CF01A: Ask the respondent what main tillage method was used in the field.
Enter the code of the tillage method used in CF01A, using the code   list provided.

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'

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the crop grown in the field, using the crop code list

he field from the sketch.

CF04A: Record the unit of measure code for the area reported in CF03A.

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 go to CF08A. If not the whole 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 used for the area reported in CF05A.

CF07A: 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 for the main reason using the code list provided

CF08A: Find out **what seed variety** of the crop the household used in the field. Record the variety using the code list provided at the end of the questionnaire.

CF09A: Find out what **quantity of seed** was planted for the crop. Record the quantity. **Exclude tubers and tobacco**.

CF10A: Enter the unit code of the quantity recorded in CF09A, using the code list provided.

CF11A: Find out how much basal dressing was applied to the field. Enter the quantity in Kgs. If no basal dressing was applied to the field, enter '0'.

CF12A: Find out the source of most of the Basal dressing fertilizer used by the household. (For response codes 6 & 10, do not probe further from the respondent to find out whether the relative is also a farmer or vice versa, just record as given.)

CF13A: Find out how much top dressing was applied to the field. Enter the quantity in Kgs. If no top dressing was applied to the field, enter '0'.

CF14A: Find out the source of most of the Top dressing fertilizer used by the household. . (For response codes 6 & 10, do not probe further from the respondent as to whether the relative is also a farmer or vice versa, just record as given.)

CF15A: Record the **quantity already harvested/expected to be harvested** of the crop grown in the field.

CF16A: Record the unit of measure used for the quantity reported in CF15A. Enter the unit code as provided in the code list provided.

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ONLY (EXCLUDE CASSAVA)

...made, summarize the data and record in Table 1.1b. For ...er the field numbers on the sketch to '**FIELD2'**, and by crop, to **CROPB , CFO3B and CFO4B.** Ask the following questions for each field. (Maintain the field numbers assigned on the sketch).

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

Section 2: CASSAVA PRODUCTION FORECAST

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

HH02   Based on the sketches, find out if the household has/had any cassava fields this agricultural season (2007/2008). If the household had, enter '1' in HH02. If the household did not have, enter '2' in HH02 and go to section 3.

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:   Record the area of the field under cassava.

CS03:   Record the code of the unit of measure and entry in CS02.

CS04:   Find out from the respondent in which year most of the cassava field was planted. Enter the year code as provided at the bottom of the table in the questionnaire.

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 2007. Enter '1' if the response is Yes. If the response is No enter '2' and go to next field or otherwise go to the next section.

CS07   Find out from the respondent the quantity of Cassava the household harvested from 1st October 2007 to date.

CS08   Record the code of the unit of measure and entry in CS08.

CS09   Find out from the respondent the quantity of Cassava the household expect to harvest between the survey date and 30th September 2008

CS10   Record the code of the unit of measure and entry in CS10.

SALES **(EXCLUDE CASSAVA AND CASH CROPS)**

ll FOOD CROPS HARVESTED or EXPECTED TO BE HARVESTED in the 2007/2008 agricultural season, excluding cassava and cash crops such as tobacco and cotton.

The information will be compiled crop-wise and **NOT** field wise.

CROP: Identify, from Tables 1.1 and 1.2, food crops that the household has harvested/ expects to harvest and enter their Code in this Column

CFS1: Find out from the respondent what 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

Section 4: CROP STOCKS AND SALES

CSS1: Find out from the respondent if the household harvested any of the listed crops in 2006/07. Enter '1' if the response is Yes. If the response is No enter '2' and skip to **CSS4.**

CSS2: For the households that answered 'Yes' to any of the listed crops in CSS1, find out from the household what quantity of that crop from last season's **own harvest** was sold and/or exchanged. Enter the quantity given in this column.

CSS3: Record the code for the unit of measure in CSS3.

CSS4: Find out if the household has any ……… from last season's crops from   **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 next crop

CSS5: For the households that answered 'Yes' to a crop in CSS4, find out what quantity of the crop 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.

CSS6:   Record the code for the unit of measure in CSS6.

CSS7: For the households that answered 'Yes' to a crop in 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 2008. Enter the quantity given in this column.

CSS8:   Record the code for the unit of measure in CSS8.

G

This section will only be completed for households that report to have grown cassava in the 2006/2007-agriculture season (the previous season).

5.1 Find out from the respondent if the household had any cassava fields during the 2006/2007 agricultural season. If the response is Yes, enter '1' in HH03. If the response is No, enter '2' and end interview.

5.2: Find out from the respondent whether the household sold or exchanged any CASSAVA from OWN HARVEST since 1st May, 2007. If the response is Yes, enter '1' in HH05. If the response is No, enter '2' and go to 5.9.

5.3: Find out from the respondent what quantity of **raw cassava** the household had sold or exchanged from OWN HARVEST during the period and record the response in HHO6.

5.4: Enter the unit of measure code in HH06.

5.5,5.6: **Dried cassava chips**. Follow the procedure as detailed for **raw cassava.**

5.7, 5.8: Cassava flour. Follow the procedure as detailed for **raw cassava**.

5.9: Find out from the respondent whether the household has any **dried Cassava chips** in storage NOW. If the response is Yes, enter '1' in HH11. If the response is No, enter '2' in HH12 and go to 5.12.

5.10: If the response in 5.9 is Yes, ask the respondent what quantity of **dried cassava** the household has in storage NOW. Enter the quantity in HH12.

5.11: Record the unit of measure code in HH13.

5.12: Find out from the respondent whether the household had ever run out of mature cassava in the field since 1st May, 2007. If the response is Yes enter '1' in HH14. If the response is No, enter '2' and END INTERVIEW.

5.13: If the response in 5.12 is Yes, find out which month the household run out of mature cassava in the field and enter the month code in HH15.

END OF CFS INTERVIEW

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Chapter 7

CIFIC DATA COLLECTION PROCEDURES

The interviewer should inform the respondent that the information which he/she is going to collect now relates to the 2006/2007 agriculture season.

Identification information
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.

1. 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.

2. 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.

3. 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.

4. 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.

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

6. 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.

7. Standard Enumeration Area (SEA)
This is the area allocated to you for enumeration. Enter the number in the box provided.

8. Village/Locality
Write the name of the village/locality in which the household is located. This is also indicated on the **LIST OF SELECTED HOUSEHOLDS.** If the household has shifted locations within the same SEA and has changed villages, cancel the village name and write the new name.

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

y the household's holding falls, `A', 'B' or 'C'. This the **LIST OF SELECTED HOUSEHOLDS.** Enter code '1' for category A, '2' for category B and '3' for category C.

11. Name of Head of Household
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 name.

12. 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.

13. Household size
Find out from the respondent the total number of the household members and enter the number in the boxes provided. Find out how many are male and female members and enter the numbers in the appropriate boxes provided.

14. Household's Agricultural Activity
Find out from the respondent whether the household was engaged in any of the four listed agricultural activities during the 2006/2007 agricultural season. Enter code '1' in the corresponding box for each agricultural activity the household reports to have been engaged in. For any agricultural activity not reported by the household, enter code '2' in the corresponding code box.

15. 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 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, the household is no longer there).
Tick the response status and enter the appropriate code 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

her than 'completed' should be done only after the s/her follow ups.

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

and use

Enumerator, refer to item 14 on the front cover and confirm whether the household was engaged in crop growing in the 2006/2007 agriculture season including any perennial crop planted outside the agriculture season such as cassava. If yes enter "1" in the box provided. If the response is No, enter "2" and go to section 6.

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. We would like to capture the situation as it was **in 2006/2007**. Please ensure that you are capturing the situation as it was the previous season **NOT** now.

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

You should identify which direction is East or West. The North is always on the top of the page.

Rain-fed production
A. If the household indicates they grew some crops **in 2006/2007**, sketch the fields first. Include planted fields that were rented in or borrowed.
Step 1: Ask which crops the farmer grew **in 2006/2007**. List these crops.
Step 2: Ask in how many fields he/she 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: Assign a number to each field. Cassava fields should be numbered last.

Dry season maize production
B. If the household indicates that they planted dry season maize after the rains in 2007 but before 1st October, 2007, sketch the fields.
Step 1: Ask in how many fields he/she grew each crop.
Step 2: Ask the direction in which each of the fields indicated in Step 2 is in relation to the homestead.
Step 3: Sketch the field in that direction and assign a number to each field.

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Rain-fed and dry season maize production

C. Once all the fields have been identified and numbered establish what the area for each field was. 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 feels concerned about such an enumeration of his/her fields. Write the area of each field against each sketch. In some instances, the respondent may not be able to give the area. Use some alternative ways to get the area.

NOTE:

If a field was in crop mixture, the area of 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 three-quarters 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 $\frac{3}{4}$ **X 4 lima = 3 lima**
The area under groundnuts is $\frac{1}{4}$ **X 4 lima = 1 lima**

Show all calculations for such fields against their sketches. **Maintain the same field number for each crop in the mixture**. For the example above, you may assign, field number 1 to maize and field number 1 to groundnuts. For a mixture of cassava and millet, we do not apportion the area. **Assign the entire area of the field to each crop** e.g. a field of 1lima with cassava and millet in mixture will be 1 lima cassava and 1 lima millet.

1.2: Based on the sketches you have made for rain fed crops record the number of fields in the space provided and transfer the information on the sketch to **FIELD**, **F01**, and **FO2** in 1.2. We would like to know the tillage method used on each field. This will allow understanding of the extent of adoption on conservation farming tillage technologies. We also would like to know how early households plant each crop within the season and how this varies across agro-ecological zones. Finally, we would like to establish how early households are able to complete the first weeding. The timing of

...eeding after emergence is critical for achieving

It is advisable that you ask the following questions (**F04-F07**) for each field (row-wise) first before moving to another field.

F03: Find out what main tillage method was used on each field. Enter the appropriate response code.

F04 Find out if the household applied animal manure in a field. Enter "1" if the response is Yes. If the response is no, enter "2".

F05 Find out if the household applied plant manure in a field. Enter "1" if the response is yes. If the response is no, enter "2".

F06 Find out how many kilograms of lime the household applied in a field. Enter the number of Kgs as reported. Enter "0" if the household did not apply lime in a field.

F07 Find out from the respondent what the household did to most of the residues from the main crop of 2006/2007 agricultural season. Enter the appropriate response code.

Section 1.3: Crop Management – Input Application and Harvest

All the fields that the household planted crops during the 2006/2007 agricultural season were identified in the sketches of parcels/fields. Refer to the sketches and collect the required information about each of the field and the crop grown by the households. Note that questions about cassava will not be asked in this section. We would like to know the extent to which households use improved seed on each crop. For example, households may plant different seed varieties for maize. We would like to capture which seed type was planted in each field. To understand crop productivity and its determinants, it is important to isolate management practices applied at field level. Given that management practices vary at field level, it is expected that the harvests (yields) will also vary at field level. When recording the units of quantities, we expect unshelled volumes only for millet, rice, and groundnuts. If quantity is zero ("0"), enter a dash ("-") for unit, price and month last transacted.

FIELD1 & CROPA Refer to sketches and transfer field details for households that responded **NO** to **F02** in section 1.2 to the first four columns in table 1.3. Do this in such a manner that the FIELD number and Crop Code in Section 1.3 is similar to the FIELD and crop code (F01) in Section 1.2.

It is advisable that you ask the following questions (**CM03A-CM13A**) for each field (row-wise) first before moving to another field.

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...ndent what main seed variety was planted on each field. Enter the appropriate response code. The list of seed varieties is provided in the code sheet.

CM04A: Find out from the respondent where the household got the seed from. Enter the appropriate code.

CM05A: Find out from the respondent the main transaction the household used to acquire seed. Enter the appropriate response code.

CM06A: Ask this question for all other crops **except** **tobacco**, **sweet potato** and **cassava**. Find out from the respondent what quantity of seed was planted on each field. Record the quantity.

CM07A: Record the unit of measure for the quantity of seed planted. Enter the appropriate response code. The codes for the units are provided at the bottom of the table. Note that **only quantities of rice should be reported in unshelled form**.

CM08A: Find out from the respondent the month the household finished planting each field. Enter the response in the space provided.

CM09A: Find out from the respondent the week of month the household finished planting each field. Enter the response in the space provided.

CM10A: Find out from the respondent what quantity of basal fertilizer was applied on the field during the 2006/2007 agricultural season. Record the quantity applied in kg. Enter "0" if no basal fertilizer was applied.

CM10A1: Find out from the respondent the source of most of the basal fertilizer used by the household.

CM11A: Find out from the respondent what quantity of top dressing fertilizer was applied on the field during the 2006/2007 agricultural season. Record the quantity applied in kg. Enter "0" if no top dressing fertilizer was applied.

CM11A1: Find out the source of most of the Top dressing fertilizer used by the household.

CM12A: Find out from the respondent what quantity of crop the household harvested from each field. Record the quantity.

...ure used for the quantity reported in **CM12A**. The ...t the bottom of the table.

Section 1.4:Crop Management – Input Application and Harvest

Refer to the sketches and collect the required information about field(s) in Mixture and the crop grown by the households. Note that questions about cassava will not be asked in this section as well. We would like to know the extent to which households use improved seed on each crop. For example, households may plant different seed varieties for maize. We would like to capture which seed type was planted on which field. To understand crop productivity and its determinants, it is important to isolate management practices applied at field level. Given that management practices vary at field level, it is expected that the harvests (yields) will also vary at field level. When recording the units of quantities, we expect unshelled volumes only for millet, rice, and groundnuts. If zero ("0") is quantity enter a dash ("-") for unit.

FIELD2 & CROPB   Refer to sketches and transfer field details for households that responded **YES** to **FO2** in section 1.2 to the first four columns in table 1.4. Enumerator, ensure that crops grown in mixture with cassava are included in this section and **NOT** cassava.

It is advisable that you ask the following questions (**CM03B-CM13B**) for each field column-wise first before moving to another field.

CM03B: Find out from the respondent what main seed variety was planted on each field. Enter the appropriate response code. The seed varieties are provided in the code sheet.

CM04B: Find out from the respondent where the household got the seed from. Enter the appropriate response code.

CM05B: Find out from the respondent the main transaction the household used to acquire seed. Enter the appropriate response code.

CM06B: Ask this question for all other crops **except** **tobacco**, **sweet potato** and **cassava**. Find out from the respondent what quantity of seed was planted on each field. Record the quantity.

CM07B: Find out from the respondent the unit the household used for quantity of seed planted. Enter the appropriate response code. The codes for the units are

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able. Note that **only quantities of rice should be**

CM08B: Find out from the respondent the month the household finished planting each field. Enter the response in the space provided.

CM09B: Find out from the respondent the week of month the household finished planting each field. Enter the response in the space provided.

CM10B: Find out from the respondent what quantity of basal fertilizer was applied on the field during the 2006/2007 agricultural season. Record the quantity applied in kg. Enter "0" if no basal fertilizer was applied. **Note:** While fertilizer will be beneficial to all crops in a mixture, it is important to note it will only be attached to the main crop. This is in order to avoid counting the quantity applied twice. However, where the respondent is able to apportion the quantity of fertilizer applied record as such.

CM10B1: Find out from the respondent the source of most of the basal fertilizer used by the household.

CM11B: Find out from the respondent what quantity of top dressing fertilizer was applied on the field during the 2006/2007 agricultural season. Record the quantity applied in kg. Enter "0" if no top dressing fertilizer was applied. See note on **CM10B**.

CM11B1: Find out from the respondent the source of most of the Top dressing fertilizer used by the household

CM12B: Find out from the respondent what quantity of crop the household harvested from each field. Record the quantity.

CM13B: Record the unit of measure used for the quantity reported in **CM12B**. The codes for the units are provided at the bottom of the table.

Section 2: Crop sales

We would like to learn how much of each crop the household sold from the 2007 own harvest for cash and or exchanged for goods and services. These sales will not include reselling of crops the household purchased. When recording the units of quantities, **we expect unshelled volumes only for millet, rice, and groundnuts**. If you enter a zero ("0") on quantity, enter a dash ("-") on unit, price/value and month, if applicable.

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for all crops the household harvested in the

CROPCODE: Enter the code for each of the crops the household harvested in the 2006/2007 agricultural season. The codes for the crops are provided at the bottom of the table.

S01: Find out what quantity of this crop was sold and or exchanged for cash by the household. Add all the individual quantities the household sold and or exchanged in return for cash from harvest time to date. You should make some quantity conversions when there is more than one cash sale with different units of measure. Enter the quantity.

S02: Record the unit of measure for the quantity recorded in **S01**. The codes for the units of measure are provided at the bottom of the data table.

S03: Find out the total value of sales, in Kwacha. For barter sales, convert into cash equivalent and record this value in **S03**.

SMONTH: Find out in which month the household sold most of the crop. Enter the code for the month.

BTYPE: Find out from the respondent the type of buyer and enter the response code.

KMSSALE: Find out from the respondent the distance in kilometers from the household to the point of sale. Record distance in the space provided

Section 3. Dry Season Maize Production

We would like to know the household involvement in dry season maize production for grain and/or green maize.

3.1   Look at the sketches to see if the household had field(s) planted to dry season maize for grain and/or for production as green maize after the rains in 2007 but before 30th September 2007. If the household had, enter "1" in HH02. If the household did not have, enter "2" in HH02 and go to section 5. Transfer the information on the sketch to FIELD, Dsmp01 and Dsmp02.

Dsmp03: Find out the intention of the household for growing this maize. Enter "1" if the response is "produce as green maize". If the response is "produce as grain" enter "2".

f maize grain the household harvested. Enter ... provided.

Dsmp05: Enter the unit code in the spaces provided.

Dsmp06: Ask the respondent if the household sold or plan to sell part of the maize grain produced. Enter the response in the space provided.

Dsmp07: Ask the respondent only if the response in Dsmp06 is yes. Find out what quantity was sold or is to be sold. Enter the response in the space provided.

Dsmp08: Find out the unit of measure used. Enter the response in the spaces provided.

Dsmp09: Find out the main method of irrigation the household used or is using. Enter the appropriate response code.

Section 4:   Cassava Production

4.1. **Enumerator**: Look at the sketches to see if the household had any cassava fields in the 2006/2007 agricultural season. If the household had some cassava fields enter the response in HH03, Enter "1" if yes. If No enter "2" and go to section 7. Transfer the information from the sketch to field, CS01 and CS02.

CS03: Find out from the respondent what main variety of cassava is/was in the field. Enter the appropriate code in the space provided.

CS04: Find out the year when most of this cassava field was planted. Enter the appropriate code for the year. E.g. if the field was planted in 2004, enter 4.

CS05: Find out which month of the year when most of this cassava field was planted. Enter the appropriate code for the month.

CS06: Find out what quantity of raw cassava the household harvested between 1st October, 2006 and 30th September, 2007. Record the reported quantity harvested.

CSO7: Find out from the respondent the unit of measure the RAW CASSAVA was harvested in and record in the space provided.

ting

Look at **table 5.1** on page 8 and check if the household harvested any cassava in the 2006/2007 agricultural season. If the household harvested some cassava enter 1 in **HH04** and ask the questions that follow. If the household did not harvest any cassava enter 2 in **HH04** and go to section 6.

5.1   Find out from the respondent if the household sold or bartered any cassava between 1st October 2006 and 30th September 2007. Enter "1" in **HH05** if the response is "Yes". If the response is "No", enter 2 and go to question 5.8 of this section.

5.2   Find out what quantity of raw cassava the household sold or bartered. Record the quantity in **HH06**.

5.3   Find out from the respondent in what unit the household sold or bartered raw cassava. Record the unit in **HH07**.

5.4   Find out from the respondent what quantity of dried cassava chips the household sold or bartered. Record the quantity in **HH08**.

5.5   Find out from the respondent in what unit the household sold or bartered dried cassava chips. Record the unit of measure in **HH09**.

5.6   Find out from the respondent what quantity of cassava flour the household sold or bartered. Record the quantity in **HH10**.

5.7   Find out from the respondent in what unit the household sold or bartered cassava flour. Record the unit of measure in **HH11**.

5.8   Find out if the household has ever run out of mature cassava in the field between 1st October 2006 and 30th September 2007. Enter "1" in **HH12** if the response is "yes". If the response is "No", enter "2" in **HH12** and go to section 6.

5.9   Find out which month the household first ran out of mature cassava in the field. Enter the appropriate code for the month in **HH13**

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Poultry Production

We would like to find out the type of livestock that the household raised at the homestead. We need to understand who owns these livestock and how the stock levels have changed over the past year. In addition we would like to understand the contribution of livestock income to the household.

Table 6.1 Ask the household what livestock they raised during the period 1st October 2006 to 30th September 2007.

R01: Ask the respondent whether any member of the household raised any of the kinds of livestock during the 2006/2007 agricultural season. If the response is "Yes", enter code "1". If the response is "No", enter code "2" and go to the next livestock.

R02: Find out how many livestock of each kind were raised on the holding by members of the household on 1st October 2006. Record the number. Enter "0" if none.

R03: Find out how many livestock of each kind were raised on the holding by members of the household by 30thSeptember 2007. Record the number. Include livestock temporarily away to grazing grounds and those purchased or given to the household and are on their way to the holding. Exclude livestock in transit to elsewhere. Enter "0" if none and go to **R06**.

R04: Find out how many of the livestock reported in **RO3** belong to household members. Record the number. Some of the livestock raised by the household may not belong to the household. Enter "0" if none.

R05: Find out how many of the livestock reported as owned by the household in **R04** belong to female members of the household. Record the number. Enter "0" if none.

R06: Find out how many livestock of each kind were purchased or bartered between October 2006 and September 2007 by members of the household. Enter "0" if none.

R07: Find out how many livestock of each kind were received as gifts since between 1st October 2006 and 30th September 2007. Enter "0" if none were received.

...ock of each kind were slaughtered between 1st ...ber 2007. Enter "0" if none were slaughtered or bartered for sale.

R09: Find out how many livestock of each kind were bartered/exchanged live between 1st October 2006 and 30th September 2007. Enter "0" if none.

R10: Find out how many livestock of each kind were given away as gifts between 1st October 2006 and 30th September 2007. Enter the number in the space provided. Enter "0" if none.

R11: Find out how many livestock of each kind were lost due to sickness, other causes of death or theft between 1st October 2006 and 30th September 2007. Enter the number in the space provided. Enter "0" if none.

R12 Find out how many livestock of each kind were sold for cash during the season. Enter the number in the space provided. Enter "0" if none.

R13: Find out from the respondent for each kind of livestock listed, the value of sales in Kwacha during the season. Enter the number in the space provided. Enter "0" if none.

R14: Find out from the respondent how many skins/hides were sold. Enter the number in the space provided. Enter "0" if none and go to the next livestock.

R15: Find out from the respondent how much money was realized from the sale of these hides in 2006/07? Enter the value of sales in Zambian Kwacha in the space provided. Enter "0" if none.

Income for renting out draught animal

6.2 We would like to find out how much income was realized from renting out draught animals for work. This includes payment in the form of cash, barter and labor received by the household.

6.2.1 Enumerator: Check if the household raised any cattle and/or donkeys between 1st October 2006 and 30th September 2007. Enter "1" in **HH14** if the response is Yes. If the response is No, enter "2" and go to question 6.3.

6.2.2 If Yes to 6.2.1, find out if any of the cattle and/or donkeys were trained/draught animals. Enter the response in **HH16.**

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...ught animals the household raised were rented out between 1st October 2006 and 30th September 2007. Record the response in **HH16.** Enter "1" if the response is Yes. Enter "2" if the response is No and go to question 6.3.

6.2.4 Find out how much in total (Zambian Kwacha) was realized by the household from renting out trained/draught animals between 1st October 2006 and 30th September 2007. Enter the total amount in **HH17.**

Income from selling milk

6.3   We would like to find out the income that was realized from the sales of milk between 1st October 2006 and 30th September 2007. This includes payment in the form of cash, barter and labor received by the household.

6.3.1 Enumerator: Refer to section 10 and check the response in **RAISE** 02 and **RO1.** Enter the appropriate response code in **HH18.** Enter "1" if the household raised cows or "2" if the household did not and go to question 6.4

6.3.2 Find out if the household produced any milk between 1st October 2006 and 30th September 2007. Record the response in **HH19**. Enter "1" if the response is Yes. Enter "2" if the response is No and go to question 6.4.

6.3.3 Find out the number of months out of the year, the cows were milked? Record the number in **HH20.**

6.3.4 Find out how much milk in litres was produced per day? Record the number in **HH21.**

6.3.5 Find out how many days in a week do they milk their cows? Record the number in **HH22.**

6.3.6 Find out the average total amount per month that was realized from the sale of fresh and sour milk. Record the average amount in Kwacha in **HH23.**

Income from selling manure

6.4   We would like to find out the income the household realized from the sale of manure from livestock and poultry for the period 1st October 2006 to 30th September 2007.

6.4.1 Enumerator: Refer to section 10 and check that the household raised livestock or poultry or both. Enter the appropriate response code in **HH24**. Enter

. Enter "2" if the household did not raise and go to

6.4.2 Find out from the respondent if the household sold any manure produced from own animals and enter in **HH25** . Enter "1" if the response is "Yes" or "2" if the response is "No" and go to question 6.5

6.4.3 Find out the total amount in kwacha realized from the sale of manure. Record the total value in **HH26.**

<u>**Cattle disease management**</u>
6.5   We would like to find out how the household manages cattle diseases.

6.5.1 Enumerator: Refer to table 10.1 and check if the household raised cattle. Enter the appropriate response code in **HH27**. Enter "1" if the household raised cattle. Enter "2" if the household did not raise and go to section 11.

6.5.2 Find out if the cattle raised by the household were vaccinated against diseases during the 2006/07 agricultural season. Record the response in **HH28**. Enter "1" if the response is Yes or "2" if the response is "No".

6.5.3 Find out if the household practiced tick control during the 2006/07 agricultural season. Record the response in **HH29**. Enter "1" if the response is Yes and go to question 6.5.5. Enter "2" if the response is No.

6.5.4 Find out why the household did not practice tick control measure. Record the appropriate response code in **HH30**.

6.5.5 Find out the type of tick control that the household used most during the 2006/07 agricultural season. Record the appropriate response code in **HH31**.

6.5.6 Find out if any of the household cattle were sick during 2006/07 agricultural season. Record the response in **HH32**. Enter "1" if the response is "Yes". Enter "2" if the response is "No" and go to question 6.6.1.

6.5.7 Find out if any of the cattle that were infected with disease were treated with modern medicine. Record the number in **HH33**.

6.5.8 Find out the main source of the medicine that was used to treat the sick cattle. Record the appropriate response in **HH34**.

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Fruit Production and Sales

We would like to know the fruits and vegetables the household produced and the value of what was sold for cash or bartered **from 1ˢᵗ October, 2006 to 30ᵗʰ September, 2007**. Vegetables will also include green maize, fresh groundnuts, fresh beans, pumpkin leaves, cassava leaves, sweet potato leaves, and cowpea leaves. In the case of fruits, include only those grown by the household but exclude those that are gathered.

VF00: Ask the respondent if any member of the household grew any of the fruits/vegetables listed during the 2006/2007 agricultural season. If "yes" enter "1" and go to VF01. If "No" enter "2" and go to the next fruit or vegetable. Find out if the household grew cowpeas, green beans, cassava, pumpkins and sweet potatoes.

VF01: Find out if the household sold any of the fruit or vegetable the household produced referred to in **VF00**. Enter "1" if yes and enter "2" if "No" and go to the next vegetable/fruit.

VF02: Ask only if **VF01=1.** Find out how many months between October 2006 and September 2007, the household sold this vegetable or fruit. Record the response to the nearest month.

VF03: Find out what the average value of sales per month was. Record the value in Kwacha.

END INTERVIEW AND THANK THE RESPONDENT (S) FOR TIME AND EFFORT.

APPENDIX 1
CONVERSION TABLE TO Kgs

Maize (1)

	Kgs
90kg bag	103
50kg bag	57
25kg bag	29
10 kg Pocket	10
20 lt. tin	17.4

Rice (3)

Unit	Kgs
90Kg bag	180
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	Kgs
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)

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

Mixed Beans (12)

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

Groundnuts (6)

Unit	Kgs
90kg bag	95
50kg bag	53
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

Cow Peas (14)

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

Soya Beans (7)

Unit	Kgs
90kg bag	90
50kg bag	50
25kg bag	25
10kg bag	10
20lt. tin	15

Sweet Potatoes (17)

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

APPENDIX 3
CONVERSION TABLE

ACRES	HECTARES
$\frac{1}{4}$	.10
$\frac{1}{3}$	.13
$\frac{1}{2}$	.20
$\frac{2}{3}$	.27
$\frac{3}{4}$	.30
1	.40
2	.81
3	1.22
4	1.62
5	2.02
6	2.43
7	2.84
8	3.24
9	3.64
10	4.05
15	6.08
20	8.10

Lima To Hectares

LIMA	HECTARES
$\frac{1}{4}$	.06
$\frac{1}{3}$	.08
$\frac{1}{2}$	.12
$\frac{2}{3}$	.17
$\frac{3}{4}$	.19
1	.25
2	.50
3	.75
4	1.00
5	1.25
6	1.50
7	1.75
8	2.00
9	2.25
10	2.50
11	2.75
12	3.00

...ED-CO

... = SC 709
... = SC 713

1 = Pool 16
2 = MMV 400
3 = GV 412
4 = MM 441
5 = GV 470
6 = GV 408
7 = MM 501
8 = MM 502
9 = MM 601
10 = MM 603
11 = MM 604
12 = GV 512
13 = GV 607
14 = GV 702
15 = GV 703
16 = GV 722
17 = MM 752
18 = GV 704
19 = GV 61 Yellow

PANNAR
20 = PAN 6363 - Chipolopolo
21 = PAN 6549 - Mr. Reliable
22 = PAN 67 - African Queen
23 = PAN 6243 - in a class of its own
24 = PAN 64
25 = PAN 6479
26 = PAN 87
27 = PAN 6573
28 = PAN 6777
29 = PAN 61
30 = PAN 6823
31 = PAN 14 - Yellow maize

34 = SC 715
35 = SC 711
36 = SC 701
37 = SC 707
38 = SC 627
39 = SC 625
40 = SC 601
41 = SC 621
42 = SC 501
43 = SC 515
44 = SC 513
45 = SC 517
46 = SC 521
47 = SC 401
48 = SC 403
49 = SC 405
50 = SC 407
51 = SC 704 - Yellow
52 = SC 706 - Yellow
53 = SC 602 - Yellow
54 = SC 604 - Yellow
55 = SC 506 - Yellow
56 = SC 206 - Yellow

MRI
57 = MRI 724
58 = MRI 744
59 = MRI 734
60 = MRI 651
61 = MRI 634
62 = MRI 624
63 = MRI 611
64 = MRI 614
65 = MRI 594
66 = MRI 514
67 = MRI 455
68 = Local maize

69 = Hybrid maize
70 = Recycled hybrid maize
71 = OPV maize

Sorghum
ZAMSEED
75 = KUYUMA
76 = SIMA
77 = ZSV 15
78 = WP 13

SEED-CO
79 = MACIA (OPV - white)
80 = NS5511 (Hybrid - brown)

81 = Local sorghum
82 = Hybrid sorghum
83 = Recycled hybrid sorghum
84 = OPV sorghum

Sunflower
ZAMSEED
85 = MILIKA
86 = RECORD

PANNAR
87 = PAN 7369
88 = PAN 7353
89 = PAN 7351

90 = Local sunflower
91 = Hybrid sunflower
92 = Recycled hybrid sunflower
93 = OPV sunflower

Groundnuts
ZAMSEED
94 = CHIPEGO
95 = MGV-4
96 = CHALIMBANA

SEED-CO
97 = FLAMINGO
98 = NYANDA

99 = Local groundnuts
100 = Hybrid groundnuts
101 = Recycled hybrid groundnuts
102 = OPV groundnuts

Soyabeans
ZAMSEED
103 = KELEYA
104 = MAGOYE

SEED-CO
105 = STORM
106 = SOLITAIRE
107 = SOPRANO
108 = SAFARI

109 = Local soyabeans
110 = Hybrid soyabeans
111 = Recycled hybrid soyabeans
112 = OPV soyabeans

Cowpeas
ZAMSEED
113 = LUTEMBWE
114 = BUBEBE

115 = Local cowpeas
116 = Hybrid cowpeas
117 = Recycled hybrid cowpeas
118 = OPV cowpeas

Tobacco
BARLEY
119=Bunckett
120=BO 1
121=BO 2
122=BO 3
123=A 1
124=A 2
125=A3

VIRGINIA
126=HG
127=T26
128=RK326
129=T29

Cotton
130= F135
131= Chureza
132= Ngwezi
133= CDT 1

All other crops
134= Local
135=Improved

SEED COMPANIES
136=ZAMSEED
137=PANNAR
138=SEED-CO
139=MRI

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