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INTRODUCTION --- 1 January 2011

The last agriculture census of Belize was conducted in 1984/1985. You are participating in the Belize Agricultural Census (BAC) of 2011. **Y o u** should obtain **complete** and **accurate** data according to the instructions provided in this manual. **NOTE** that some figures and text are based on those from the Fiji Agricultural Census 2009 training manual,

This manual is called the **FIELD MANUAL**. It is designed to answer almost all questions that may arise while you are conducting the BAC in the field. It explains all phases of the data collection from the beginning to the end. When you face a problem, you can find an answer in it. For this reason it is very important to read this manual very carefully and to be familiar with it. **CARRY IT WITH YOU AT ALL TIMES WHEN YOU ARE WORKING ON THE BAC.**

The Statistics Act provides for the total confidentiality of the information collected in the census. The information can only be used for the purpose of compiling the statistics and no individual information can be disclosed to anyone outside the census organization.

1. GENERAL INSTRUCTIONS

1. Objectives of the Belize Agricultural Census (BAC) of 2011

The objectives of the BAC are:

- i. To provide reliable and objective baseline data on the structure of the agricultural sector of Belize and an inventory of agricultural resources; The BAC 2011 will provide reliable data on the agricultural sector that will enable the users at the Ministry of Agriculture and Fisheries and other public, private and international institutions to make better decisions.
- ii. To use the results of the BAC to establish an agricultural statistics system to measure the development of this sector on a regular and continuing basis.

2. Team Job Descriptions

Supervisor is responsible for:

- i. The adequate availability of survey materials such as questionnaires, other forms, fuel supply and accommodation facilities.
- ii. The administrative procedures of the whole team.
- iii. The technical aspects of the enumeration. He must check each questionnaire before the team leaves the enumeration district and afterwards, before the questionnaires are sent to the district office.
- iv. Participation in actual enumeration and conduct of some of the interviews.

Enumerator:

- i. He conducts the interview or the enumeration. A team may include four or five enumerators.

Driver:

- i. He is responsible for checking and keeping the car in good condition and must work according to the direction and supervision of the supervisor. Daily preparation before each day's work should be done early in the morning so that no time is lost waiting for the vehicle to be checked out and fueled.
- ii. **He must drive the car to locations indicated by the supervisor and /or the enumerator.**

2. CARTOGRAPHY

It is very important that enumerators, supervisors, coordinators, and all personnel involved in the BAC 2011 field activities know cartography well. Maps are a basic tool in field data collection. The field staff **MUST** be familiar with these materials.

1. Cartography

It is the whole science of map making, and thus includes geodesy, photo-grammetry, compilation and map reproduction for all maps.

2. Maps

It is a reduced (for example, 100 times), simplified projection onto a horizontal reference plane of parts of the earth's surface. A map should give an accurate description of the terrain and, within limitations of scale, should aim to give as faithful a representation of the terrain as possible. In cartography, generally speaking, two types of maps are distinguished: topographic maps and thematic maps.

2.1. Topographic Map

It shows "NATURAL AND ARTIFICIAL FEATURES" of the terrain, such as hills, rivers, creeks, forests, swamps, etc. and towns, villages, roads, path roads, bridges, canals, power lines, etc. Each topographic map has a "LEGEND" of symbols representing features of the terrain. One important symbol is called the "CONTOUR LINES" representing the elevations or inequalities (relief) of the land surface.

2.2. Thematic Map

It shows one or more "THEME (S) OR SUBJECT(S)" such as the distribution of the population over the country or the concentration of energy sources in an area, or the composition of the soil of a region, or the actual use of a province. Topographic maps are used frequently as a base for thematic mapping.

3. Aerial Photogrammetry

It is art of obtaining reliable measurements of the terrain by means of aerial photography. The primary aim of photogrammetry is to serve an aid in terrain mapping. Aerial photography is commonly classified as either vertical or oblique.

3. FIELD ENUMERATION PROCEDURES

1. Assignment Review by the Supervisor

After receiving all materials and supplies, each supervisor must be responsible to:

- a. Make sure everything that is needed is in enumerator's hands before leaving for the field. For each enumeration district assigned make sure the enumerator has the manual, appropriate maps, questionnaires, copybook, calculator, plastic bag, pencil, eraser, green permanent marker, identification card.
- b. Make sure adequate extra supplies are secured.
- c. In a team meeting, lay out the assignment and plan a course of travel. Start to visit the enumerators in the field, check the coverage and review the questionnaires. After the enumeration is completed and the questionnaires checked and accepted, transfer the enumerator to the next enumeration district.

2. Household Enumeration –STEP by STEP Guide for the Enumerator

- a. Go to the enumeration district as identified on the map with the help of the supervisor.
- b. Find a well informed person (the chairperson of the village or community, for example), who can help identify the farmers and the location of their households. For each agricultural household, interview the head of the household, if possible.

- c. If possible, also draw **on the back of the questionnaire** the physical boundaries of the parcel or parcels that compose the farms.
- d. Conduct the interview using the farm questionnaire according to instructions in this field manual.
- e. Before starting the interview, qualify the RESPONDENT. Normally it is the farmer. But in some cases it could be a person who knows very well about the information being collected, like the manager or administrator, a competent worker, or a relative.
- f. Check if total land of the farm parcel by parcel is equal to the total farm area reported.
- g. Thank the respondent for the interview.
- h. Continue interviewing farmers until all farm households inside the enumeration district are accounted for.
- i. Complete the enumeration. Make sure all questions on all questionnaires are answered before leaving the household. Remember that it may be difficult to go back to the household for an incomplete questionnaire.

4. INTERVIEWING TECHNIQUES

The way in which you approach respondents determines the success or failure of the interview. Proper interviewing techniques are reviewed below.

1. Introduction

You must properly introduce yourself to the respondents and explain the purpose of the visit. Immediate identification helps avoid being mistaken for being at the village and /or farm for another purpose. Explain the subject and purpose of the BAC 2011. Here it may be necessary to convince the respondent of the usefulness of the BAC 2011. It will be much easier if the respondent is convinced of the importance of the census and believes that their cooperation is needed. Here is where self – confidence on your part is essential.

EXPLAIN THAT CONFIDENTIALITY OF DATA IS ABSOLUTE

2. Voluntary Cooperation

Explain that cooperation on this BAC 2011 is voluntary. Information given by respondents in a friendly atmosphere is the best.

3. Appearance

As a representative of the government you should be clean and neat.

4. Place for the Interview

Sometimes the location cannot be controlled, but, if possible, select a place out of the weather with no distractions, noise, etc.

5. Call Backs

Do everything possible to obtain all the information in the first visit. Since some villages and / or farms are in hard to reach areas, returns for successive interviews will be limited.

6. Attendance during Interviews

Do not conduct interviews in the presence of other people unless the respondent gives permission. Sometimes the answers given by the respondent are influenced by the person listening.

7. Probing

Never suggest an answer. If the respondent persists with “I don’t know “tell him that you need his best estimate. If some replies seem out of the ordinary, probe and write notes on the questionnaire for the answers that seem unusual. A good probe to use is “What do you mean by that answer?”

8. Refusals

A few respondents may be hostile or unfriendly. Do not argue with them, do not agree with them .Many will cooperate after “letting off steam”. Sometimes it’s helpful to talk for a while about other things before beginning the interview. Be sincere when giving praise about his farming operation.

9. Desirable attributes of the enumerator.

A successful enumerator must possess certain essential qualifications and characteristics and must undergo training. It is conceded that ability to interview rests not on any single trait, but on a vast complex of them. Habits, skills, techniques and attitudes all are involved. Competence in interviewing is acquired only after careful and diligent study, training and prolonged practice and a good bit of trial and error and plain common sense. There is always a place for individual initiative, for imaginative innovations, and for new combinations of old approaches. The skilful enumerator cannot be bound by a set of rules. Likewise, there is no set of rules which can guarantee to the enumerator that his interviewing will be successful. There are, however, some accepted, general guideposts which may help the beginner to avoid mistakes, learn, how to conserve his efforts, and establish effective working relationships with the respondents, to accomplish, in a short time, what he sets to do.

10. Preparation for the interview

a. The enumerator should plan his daily routine for interviewing. It is important that the enumerator knows clearly what he wishes and feels able to accomplish. It may be desirable, especially for beginners, to write down these objectives, spell out possible problems and possible modification. In other words, he should plan and decide what is to be accomplished.

b. It is desirable to have advance information about the area of interview and the people to be interviewed. If possible, as it usually is, the enumerator should learn as much as possible about the place where the interview will be conducted and persons to be interviewed. What needs to be known will vary with the situation, but the general principle of knowing the respondents holds in all cases. This advantage is available to the local enumerator. if the area involved is one of a cultural group, it is often wise to interview the leaders first to enlist their cooperation and if they see any justification for the interview, to have them recommend the enumerator to others in the group. The principle of interviewing does not only apply to cultural groups. It is also applicable where there exists an organization or an institution. The persons in charge should be approached first and the cooperation secured before interviewing others in the organization or institutions.

c. If possible, appointments should be made in advance. The census purposes and the date the census will begin are made through publications, announcements, etc. The enumerator can also make his own appointment. This means that he/she should have the knowledge of the daily routine of the respondent if a proper time and place are to be chosen. Some experiences in agricultural surveys show that in interviewing the farmer it is advantageous to have the spouse present. She/he usually remembers a lot of details involved in the farm operation, especially those pertaining to financial matters.

d. The enumerator should practice taking the respondent’s point of view. The objective in this practice is to be able to see the problems as another sees them and to feel towards them as he does (this is known as empathy). A substantial amount of emphatic ability is essential for successful interviewing.

e. The enumerator should know himself. Few people realize the extent to which everyone is committed in advance to certain opinions, convictions, attitudes and preconceptions. Everyone has some prejudices whether he realizes this or not; everyone carries with him certain stereotypes, preconceived notions about

individuals and groups. There is probably no such thing as a truly open mind, one totally unencumbered by preconceptions, totally perceptive to new ideas. This does not mean, however, that such preconceptions cannot be reduced in number and effect or that they should not be faced and either eliminated or discounted.

11. Some tips on interviewing

The adequacy of a technique for collecting data is ordinarily judged in terms of criteria of reliability and validity. Reliability requires that repeated measurements yield results which are identical or fall within narrow and predictable limits of validity. The criterion of validity demands that the measurement be meaningfully related to the objectives. Both these criteria apply not only to the data collection instrument but also to the technique and procedure specified for using the instrument. The reliability and validity of census data depend not only on the design of the questionnaire but also on instrument but also to the technique and procedure specified for using the instrument. The reliability and validity of census data depend not only on the design of the questionnaire but also on the manner of administering the instrument, the technique of interviewing. The following are some tips on conducting interviews to aid the information – getter in achieving the two – fold goals of reliability and validity in his data collection. The enumerator should establish a relationship of confidence. The first step is often the most difficult for the enumerator because at the initial contact the respondent needs to be motivated to permit the interview. The ideal atmosphere for such motivation is one of mutual confidence. This confidence must not be just one-sided. It must also rest on genuine and deeply felt respect on the part of each for the other person. It is the enumerator’s responsibility to take the lead in establishing the relationship of mutual confidence.

Ordinarily the enumerator may follow a sequence of procedure as follows:

- i) Identify yourself by showing an authorization card
- ii) Explain the purpose and objectives of the census
- iii) Explain that this household was selected by responses on the population and housing census questionnaire.
- iv) State the anonymous or confidential nature of the interview as provided by Statistics Act.

In many cases these steps are enough to secure cooperation and confidence. Most people are ready to talk about themselves and to air their views. Common politeness, mixed with curiosity, does the rest. Besides, rural folk are simple and known for their hospitality. The enumerator should help the respondent feel at ease and make him ready to talk (motivated). To achieve this end, the interviewer should also be at ease. Show this to the respondent by using an informal and natural (conversation) manner of talking. Begin by a conversation on something of mutual interest or easy to talk about, topics such as the ball game or the weather. Carry on such a conversation to allow the respondent a little time to get accustomed to the situation. However, this warm- up conversation should not be too prolonged for it may suggest to the respondent that the enumerator is reluctant to deal with the real purpose of the interview.

Good interviewing means attaining uniformity in the asking of questions and in the recording of answers. The enumerators are expected to ask all the applicable questions; to ask them in the order given and with no more elucidation and probing than is explicitly allowed and to make no authorized variations in the wording. The manner of asking the question will differ and affect the way it’s answered. The enumerator should be warned about this and instructed to adhere to the prescribed wording and not to give any lead by explanations.

It is essential that the respondent feels free to talk unhampered by unnecessary interruptions. Once the interview is proceeding, the respondent should be allowed to talk freely with little prodding from the interviewer. The enumerator should not dominate nor make prejudicing remarks. The interview must be in a warm and cordial atmosphere. One of the most important qualities which the enumerator should develop is to listen. Listening is a skill which must be learned and practice. Only through proper listening, the enumerator can discriminate between what should and what should not be recorded.

Enough time should be allocated for the interview. The time to be allocated for the interviewer should be sufficient for the respondent to ponder on the answers. The respondent should not feel that he is being pressed to complete the interview in as short a time as possible.

The enumerator should desist cutting the interview short because he is under pressure to complete the census of an area in a definite period. Otherwise the interview will be a hasty one and the respondent may be forced to withhold information.

The enumerator should keep the interview under control. Quite often respondents will avoid certain questions by trying to wander to other topics in the course of the interview. The enumerator should; learn the technique of rationing and putting up timely questions. Some questions are necessary and often unavoidable in some items in the census questionnaire. The respondent may run dry of answers and need reticulation. On other occasions he may be engaging in irrelevant accounts of how he happened to use a particular rice variety. Raising well – timed questions will put the interview in its proper course. ***Responses should be recorded during the interview.*** Experience has shown that the only accurate way to reproduce the responses is to record them during the time of the interview. A good deal of relevant information is almost certain to be lost if the recording is left until the interview has been completed.

Completion of the interview does not mean the interview is finished. Even after the usual exchanges of departing remarks, the interview is not yet closed. There are still post – census activities to be done and therefore the respondent should already be warned about these at the completion of the interview.

12. Some suggestions on resolving common problems in interviewing.

Available literature does not provide the enumerator with adequate methods for dealing with all the variables at work during the interview. Much of the available literature consists of rules of thumb presented as lists of “do’s and don’ts” for the enumerator. These do’s and don’ts are compiled and based on interviewing experience derived from a variety of situations over a considerable period of time. They represent practices which have achieved a degree of success in a variety of situations. As yet, there is no integrated theory on which to base a complete understanding of the communication process and the interaction between interviewer and respondent. A lot must depend on experience and theory in communication.

5. BASIC TERMS & DEFINITIONS

1. Reporting Unit.

It is the individual unit or element that belongs to the population defined for the BAC 2011 for reporting purposes. The “FARM” is the reporting unit for BAC 2011. One questionnaire ‘MUST’ be filled out for EACH farm. Farms are identified by interviewing agricultural households as determined by the Belize Population and Housing Census 2011. In some cases it will be necessary to use a village listing form to identify first agricultural households and then farms; the head of household is asked the screening questions and when a “yes” answer is obtained, the enumerator must proceed to the questionnaire. The enumerator must also ascertain the number of farms associated with the household and fill out a questionnaire for each.

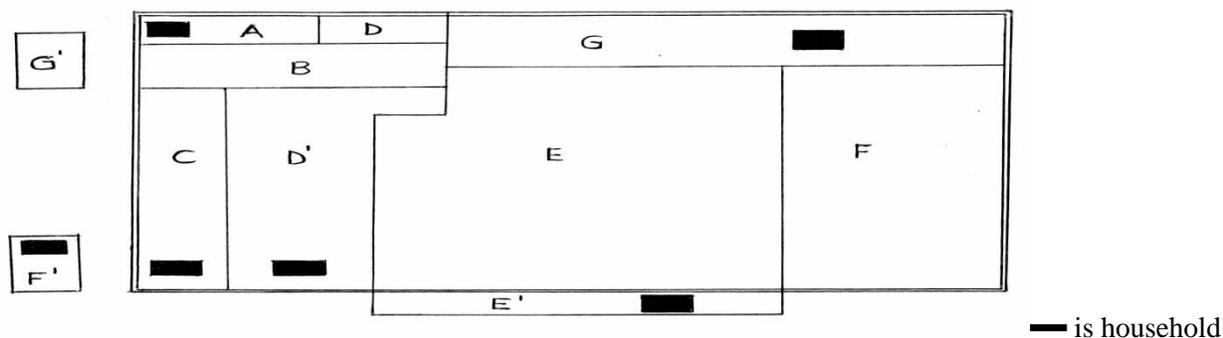
2. Universe or Population of the BAC 2011.

It is composed of all farms (reporting units) existing in Belize on the census day.

3. Parcel

It is a portion or subdivision of a farm under one management. It is either an entire farm, part of a farm or a nonagricultural area of land. That is, the parcel is determined by the definition of a farm and the natural boundaries. The farm boundaries consist of one or more parts; e.g., D and D’. (See figure below).

FIGURE 1: DIVISION OF FARMS INTO PARCELS



4. Farm - holding

It is an “ECONOMIC UNIT” of agricultural production under single management comprising all livestock kept and all land used wholly or partly for agricultural production purposes, without regard to title, legal form, or size. Single management may be exercised by an individual or household, jointly by two or more individuals or households, by a village, or by a juridical person such as a corporation, cooperative or government agency. The farm land may consist of one or more parcels, in one or more separate areas, but inside the same district, providing the parcels, share the same “PRODUCTION MEANS” utilized by the farm, such as labour, farm buildings, and machinery or draught animals.

5. Characteristics for Identifying a Farm

a) Any piece of land to be considered as an agricultural farm MUST have at least 0.5 Acres (approximately 4 tasks or 0.25 manzanas) with at least one of the following land uses on the census day:

- Temporary and permanent crops (pure and mixed stands) and forages;
- Fallow more than one year, but less than three years;
- Improved (planted exotic and native) and unimproved pastures.

b). Any piece of land without any of the conditions mentioned above, but that has any of these livestock on the census day, MUST be considered as part of a farm:

- At least two or more head of cattle, or 5 goats, pigs and/or sheep combined; or
- At least ten or more chickens, ducks or geese combined; or
- Any aquaculture ponds
- At least ten bee colonies.

c) If the household is situated on land or uses land that contains ten or more scattered fruit trees that are bearing fruit, then this area is considered as part of a farm.

d) Any livestock or poultry belonging to managers, administrators, workers, or relatives, that graze or stay in land of farms where persons are working or staying. In this case, managers, administrators, etc. are the farmers and the livestock and poultry, the farms. **This situation is known as FARM WITHOUT LAND. Also in this category is any land of less than 0.5 acres, where the household has livestock or poultry.**

e) Any land assigned to managers, administrators, workers relatives for their own utilization for service payments, MUST be considered as an independent farm from the main one that is assigning the land.

f) If a land is operated independently by a household member for agricultural production, it MUST be considered as a **second** farm different from the farms operated by other household members.

g) Any land operated by persons who do not have any rights for agricultural use of the land on which the crops, trees or pastures are grown, MUST be considered as a farm or part of a farm.

h) Various economic agricultural production units under the same ownership, or under the same general direction, are considered separate farms if they are operated by different persons.

- i) If a member of a cooperative, religious organization, government agency is assigned separate land for agricultural production (including livestock and poultry) that is operated under the member's management, and for which he/she has general technical economic responsibility, this land **MUST** be considered as a farm.
- j) If a cooperative, religious organization, government agency has a specified communal land delimited by fencing, or any other form of boundary demarcation, and if its use for agricultural production and specially for grazing purposes is supervised, then this land **MUST** be considered as a farm.
- k) Many farms are operated by farmers having other occupation(s) in addition to being a farmer.
- l) The farm definition does not consider its land tenure. The land making up the farm could be total or partially owned, leased or rented, or under other forms (see Figure 2). If the land has different forms of tenures then the land associated with each form is considered a different parcel.

FIGURE 2: ONE FARM WITH THREE FORMS OF LAND TENURE

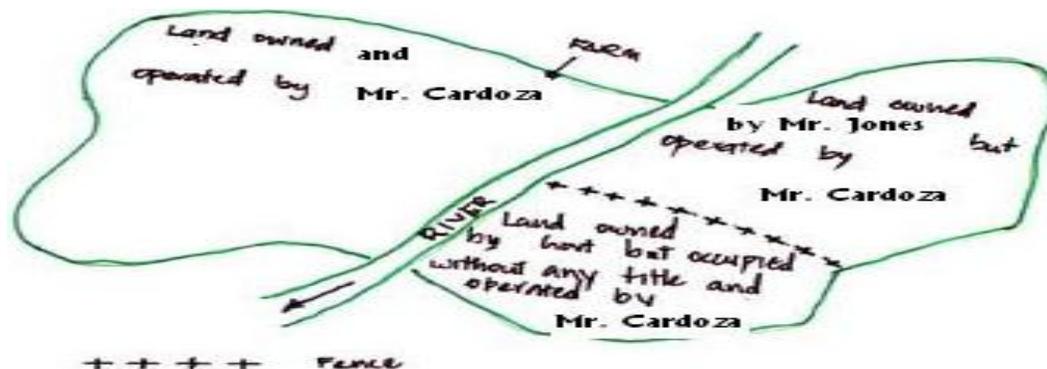
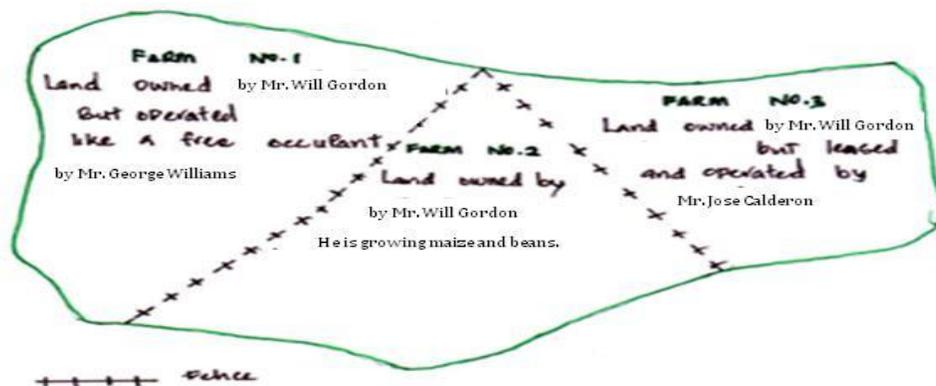


FIGURE 3: THREE FARMS IN A LAND OWNED ONLY BY ONE PERSON



- m). Economic units engaged solely in the following economic activities are not considered agricultural holdings because these economic activities are outside agriculture:
 - Hunting, trapping and game propagation
 - Forestry and logging
 - Fishing
 - Agricultural services.

The land used for these purposes are **NOT** considered as farm parcels, but as non-agricultural land. Other examples of non-agricultural land are: lakes, swamps, mangroves, buildings, schools, etc.

11. Farmer - holder

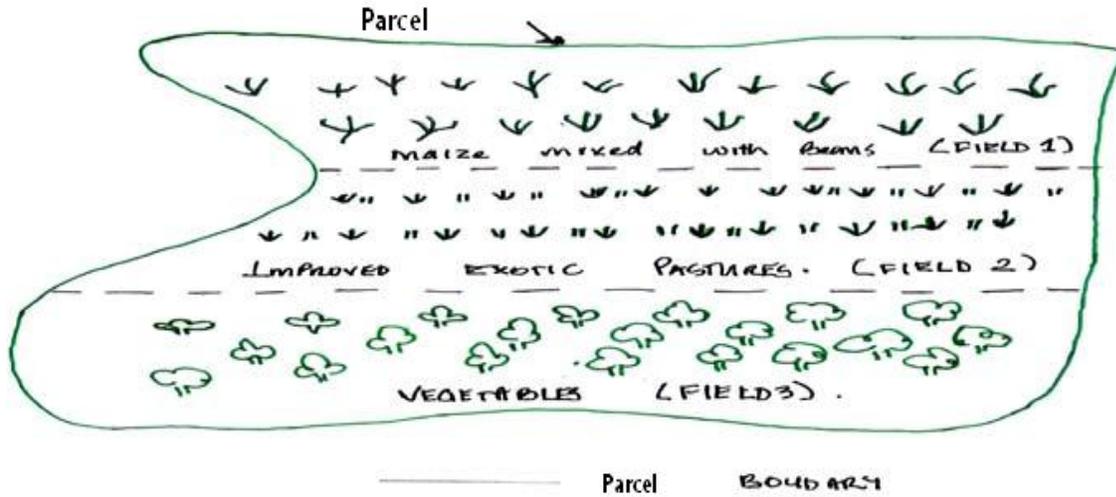
He/ she is a civil or judicial person who exercises management control over the agricultural farm operations and takes major decisions regarding resource use. The farmer has technical and economic responsibility for the farm and may undertake all responsibilities directly, or delegate responsibilities related to day – to – day work management to a hired manager. The work of a farmer can be material, when he conducts directly by himself the physical agricultural activities of the farm, or only intellectual, like in the case of that farmer who lives in the city, and travels periodically to the farm, or not, but takes the major decisions on the farm operation. It is important to take into account the following considerations in the determination of a farmer:

- a. A one to one correspondence exists between a farmer and a farm.
- b. In rural areas, a one to one correspondence between a farm (farmer) and a household is quite common. Thus households serve to identify farms.
- c. In most cases the farmer is a person. In some households more than one farmer is possible, if each person operates different piece(s) of land. Then each piece of land is part of a different farm. However, if the agricultural operations and the production obtained in all those piece(s) of land are communal for all members of the household, there will be only one farmer and only one farm. In this case, the farmer will be the household member who spends the most time; if more than one person spent equal time, the farmer will be chosen accordingly to this priority: father, mother, elder son and so forth. The other household members participating in the work of the farm will be regarded as members of the labor force of the farm.
- d. When two or more persons belonging to **different** households but from the same family operate the same farm, the farm will have legal status **family** and each one will be considered as a **partner**. The information related to the farmer household will be collected separately from each household, but the farm information from only one.
- e. When two or more persons belonging to **different** households and from **different** families operate the same farm, each one will be considered as a **partner**. The information related to the farmer household will be collected separately from each household of the partners, but the farm information from only one.
- f. A farmer can operate land that is owned and /or leased and / or under any other form of land tenure.
- g. A farmer can operate land without any rights to agricultural use of that land.
- h. A **hired manager or administrator will not be considered as the farmer** of the farm he is managing. However, if he has livestock and poultry in the land of the farm, which he operates, then he will be considered as **a farmer of a farm without land**.
- i. When a manager, administrator or any worker of the farm, has received a land for his own use, then he will be considered as a **farmer**.

12. Field -- plot

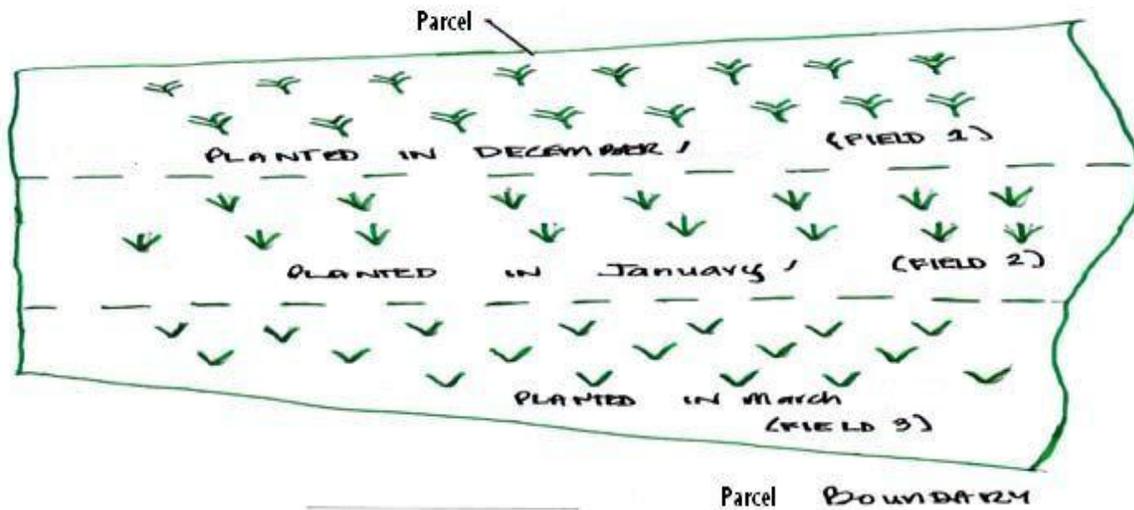
A **Field** is a continuous piece of land inside a parcel devoted to one crop in pure or mixed stand on any other land use. A parcel may consist of one or more fields adjacent to each other. If a parcel has several crops (or mixed crops), the area of each crop is a field. If the crop has been planted on different dates, or on lands with different land tenures, then each of these situations is a field. The most common cases in the identification of fields are the following:

FIGURE 4: ONE PARCEL WITH THREE FIELDS



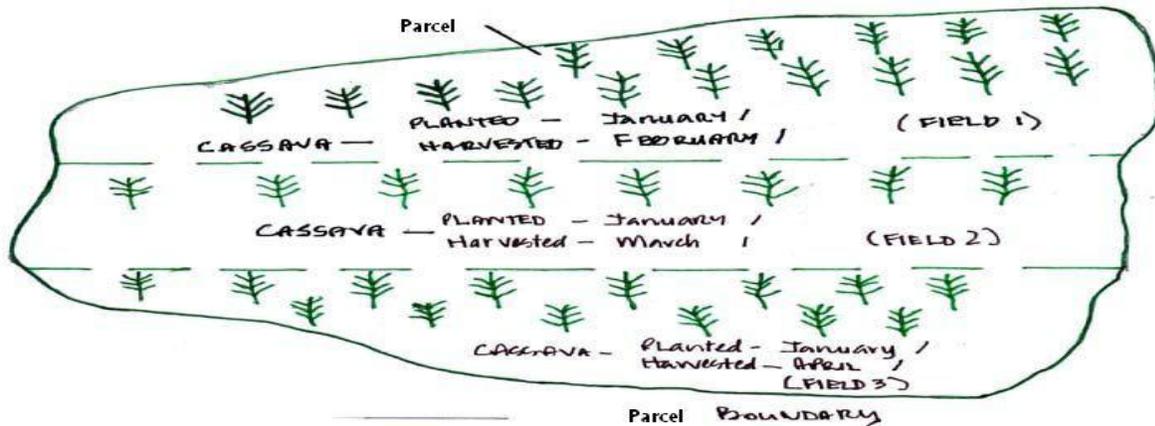
a) In the same parcel, there are several crops in pure stand or mixed stand (maize mixed with beans, improved exotic pasture, vegetables).

FIGURE 5: ONE PARCEL WITH THREE FIELDS



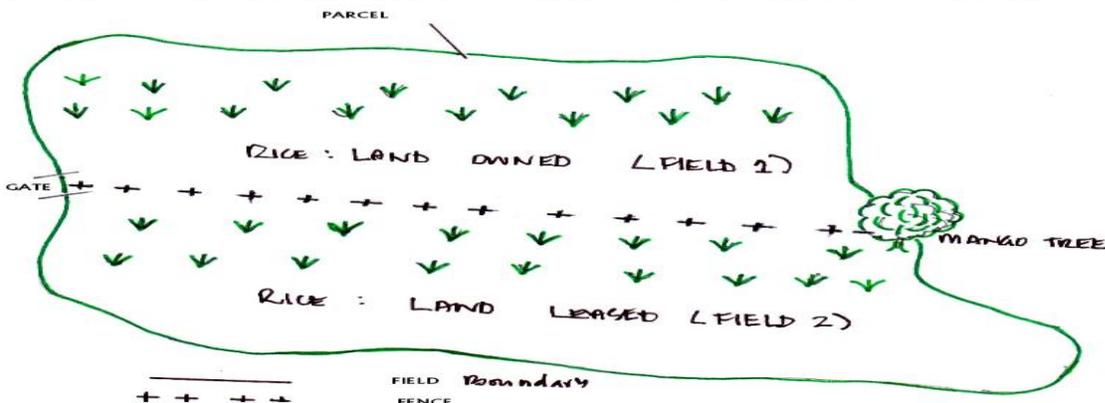
b) In the same parcel, there is one crop in pure or mixed stand planted in different dates (December, January, March.)

FIGURE 6: ONE PARCEL WITH THREE FIELDS



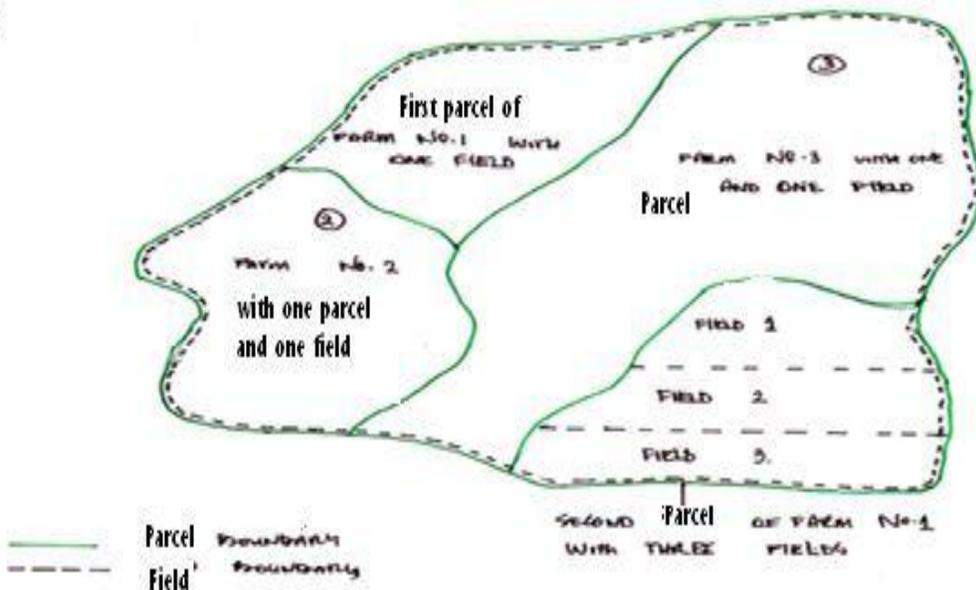
c. In the same parcel, there is one crop in pure or mixed stand (cassava) planted in a unique date (January) but harvested in different dates (February, March, and April); there are three fields.

FIGURE 7: ONE PARCEL WITH TWO FIELDS -> ACTUALLY TWO PARCELS



d. In the above figure, there is one crop in pure stand or mixed stand (rice), but with several forms of land tenure (owned and leased). Thus, there are two parcels because a parcel is associated with only one form of tenure.

FIGURE 8: FARM 1 WITH TWO PARCELS; 2nd PARCEL WITH THREE FIELDS FARMS 2 AND 3 WITH ONE PARCEL AND ONE FIELD



e. A farm consists of one or more parcels; a parcel can have one or more fields.

13. Census Year

It is the year from 1 January 2010 to 31 December 2010.

14. Census Day

It is the day when the census enumerator will effectively conduct the total interview to the farmer.

15. Respondent

The respondent is the person from whom data are collected. Normally he/she is the farmer or the operator of the farm. But sometimes, it could be a qualified person that knows very well about the information being collected, such as the manager, administrator, competent worker or an old farmer's relative.

16. Acre

It is a unit used in measuring land area in Belize. One acre is equal to 43,560 square feet or 208.71feet by 208.71feet.

17. Task or Mecate

The farmer may be more familiar with the farm area in terms of tasks. One task is equal to 0.125 acres.

18. Manzana

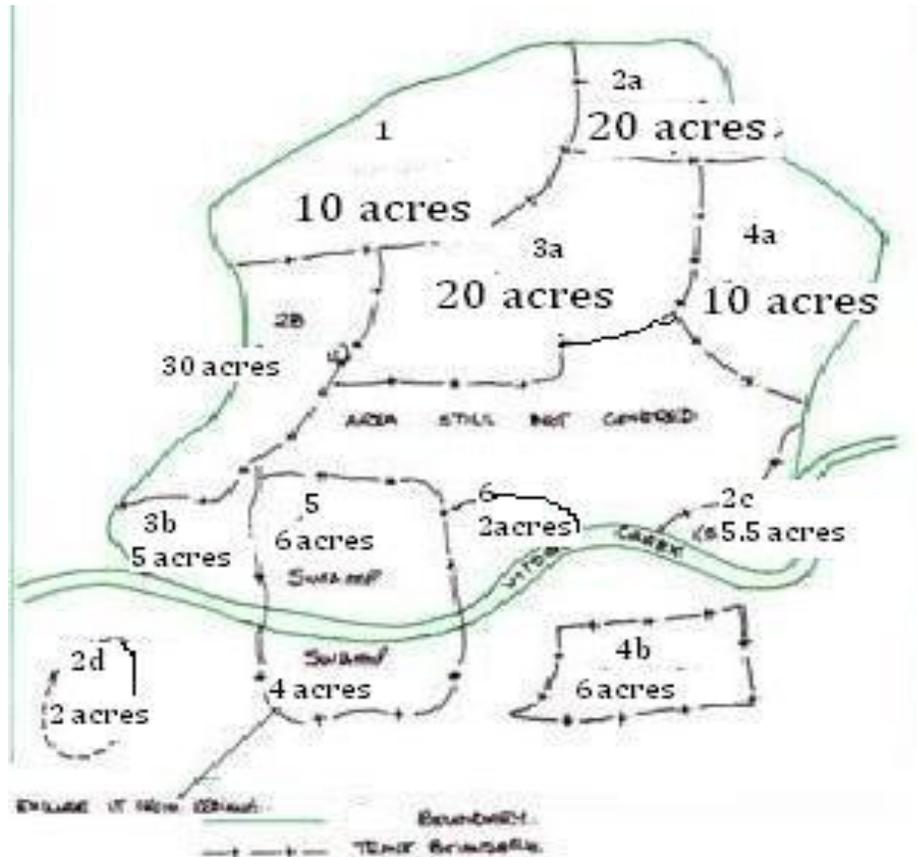
Some farmers also use a traditional Central American area measurement, although the actual size may differ from country to country. A manzana in Belize is considered to be equal to 2 acres.

7. QUESTIONNAIRE BAC – 2011

The enumerator **MUST** obtain information about all parcels **in the same district** which belong to a **farm**. If the farmer operates a farm in two districts, then two questionnaires are needed.

The following example shows how to complete the questionnaire BAC 2011.

FIGURE 9



The first parcel has 10 acres of total land; it is operated by Horace Hall, who does not have more land either inside or outside the district. The land is totally occupied by planted exotic pastures and 30 cattle are grazing on it. The enumerator **MUST**:

- Consider this parcel as parcel No 1 of farm No. 1 (see diagram in FIGURE 9 below).
- Conduct the census interview writing the farmer's answers on the questionnaire.

The next farm is operated by Wendell Smith. The first parcel (20 acres) is planted with maize mixed with beans.

Mr. Wendell Smith informs the enumerator that he also has: - a 30 acre parcel inside the district. There are 40 dairy cattle grazing on it (second parcel). - A third parcel of five and half acres inside the district and dedicated to dairy cattle with 6 cows grazing on it. - Mr. Wendell Smith does not live on the farm. He lives 10 miles from that farm on a piece of land of two acres occupied by the house, garden, and other farm installations.

The enumerator MUST:

- a. Consider the four parcels as part of this farm, even though the farmer does not conduct agricultural activities in parcel four.
- b. Conduct the census interview writing the farmer's (respondent's) answers on the questionnaire.

3. On the next farm the enumerator finds that one parcel is leased by Mr. Jose Sanchez. Its area is 20 acres planted with coconuts; cattle are grazing under coconut trees. Mr. Jose Sanchez owns a different piece of land of five acres in the same district but in a different area than the first parcel. Rice was harvested in this area in April and it is being ploughed on the census day to be planted with vegetables.

The enumerator MUST:

- a. Consider the two independent pieces of land as two parcels of one farm.
- b. Conduct the census interview writing the farmer's answers on the questionnaire.

4. Mr. George Henry operates 10 acres inside the district planted with pine trees three years ago. But Mr. Henry also indicates that he is operating another piece of land inside the district with 6 acres of unimproved native pastures.

The enumerator MUST:

- a. Consider the two independent pieces of land as two parcels. Remember that although agricultural activities are not performed on the first parcel it MUST be considered as part of the farm.
- d. Conduct the census interview writing the farmer's responses on the questionnaire.

5. Enumerator finds a land of 10 acres near the sea covered by swamp and mangroves. The (Vitogo creek) divides that land into pieces; six acres are on one side of the creek and the other four acres on the other side. This land is controlled by the Government.

The enumerator MUST:

- a. Consider the land (ten acres) as a parcel of farm No 5. Since the land is non-agricultural and no other land associated with this Government land is agricultural, as included in census rules and definitions, this land is not part of a farm and does not have to be taken into consideration.

6. Finally, the enumerator finds two acres occupied by 40 houses, school, gardens and other installations of Vitogo village. From the village only the chairperson's daughter has 30 chickens walking around the village land and she does not operate any agricultural land.

The enumerator MUST:

- a. Consider the two acres occupied by the village as the parcel 6 as non-agricultural land. The chairperson's daughter has a WITHOUT LAND (WL) No 7.

Use the questionnaire BAC 2011 for the farm without land (No 7) filling the information in the applicable chapters only.

8. FARM QUESTIONNAIRE BAC 2011 ITEM INSTRUCTIONS

1. GENERAL

A questionnaire is a communication device that structures a conversation between an interviewer and a respondent. The interview is a conversation with a purpose. Our purpose is to gather the information necessary to give the Ministry of Agriculture the best possible indication to report the land use and tenure, crops, livestock and other information collected in the BAC 2011.

Ensure that you are completely familiar with the BAC 2011 questionnaire and that you fully understand these instructions before you start work.

Write carefully, neatly and legibly. Make sure numbers and decimals are carefully written. Complete all the questions you are required to complete. Make all entries clear and easy to read. Use "Black" lead pencil. **DO NOT USE INK.** The questionnaire will be scanned so it is important to fill-in completely the circles that correspond to the appropriate answers. Numbers should be consistent with the examples provided. Letters should be capital block letters.

Each answer must be written entirely within the box or space provided.

After completing a questionnaire quickly look through each column of the questionnaire page by page to see that all the information is complete.

2. ITEMS ON FARM QUESTIONNAIRE BAC 2011

- A. Farm verification and location thru screening questions.
- B. Farm and farmer identification on census day.
- C. Farmer information on census day and during the census year
- D. Total land and actual land use parcel by parcel operated by the farm on the census day.
- E. Land tenure of the farm parcels on census day.
- F. Permanent crops in "pure stand" on census day.
- G. Permanent crops in "mixed, inter planted and associated stand" on census day.
- H. Scattered plants, trees, and vines for crops on the census day.
- I. Temporary crops in "pure stand" and "mixed stand" harvested and/ or to be harvested from 1 January 2010 to 31 December 2010.
- J. Livestock, poultry and aquaculture in the total farm on the census day.
- K. Farm implements and agro-forestry during the census year.
- L. Farmer's household demographics during last week and their participation in agricultural tasks
- M. Farm management (implements and issues) in the total farm during the census year.
- N. Sketch of farm boundaries

3. SPECIFIC INSTRUCTIONS FOR COMPLETING THE FARM QUESTIONNAIRE BAC 2011.

Below is the questionnaire for the BAC 2011. Information about the farmer, farmer household and all parcels that compose a farm with land or without land **within the same district** should be recorded in the questionnaire. If part of the farm is in another district, consider it as a second farm with a second questionnaire.

CONFIDENTIALITY

THE STATISTICS ACT PROVIDES FOR THE CONFIDENTIALITY OF THE INFORMATION COLLECTED IN THE BELIZE AGRICULTURAL CENSUS 2011. THE INFORMATION CAN ONLY BE USED FOR THE PURPOSE OF COMPILING STATISTICS AND NO INDIVIDUAL INFORMATION CAN BE DISCLOSED TO ANYONE OUTSIDE THE CENSUS ORGANIZATION.

CHAPTER I FARM AND FARMER IDENTIFICATION

Introduction

This chapter allows you to know the principle characteristics of the farm, farmer and/or the person responsible for the land. This Chapter contains EIGHT questions, which must be filled following the numeration order. The period of reference for this chapter is on the Census Day.

Instructions

- The questionnaire number should be printed at the top right and begin with the district code.
- Enter the name corresponding to VILLAGE/COMMUNITY.
- The supervisor will enter the CODE for village and or communities.
- verify that one or more farms exist by asking the screening questions.
- Fill in the name of the village/ community and any information about the location of the FARM.

a. Definitions.

- Note farm definitions as included in the screening questions; fill in the circles for all appropriate categories.
SCREENING QUESTIONS: Did you or anyone in your household
 - Grow more than 0.5 acre of crops
 - Own 2 or more head of cattle or 5 or more sheep, goats, pigs
 - Own 10 or more chickens, ducks, turkeys, geese
 - Have any aquaculture ponds for farming fish
 - Have more than 0.5 acre of fallow farmland and/or pasture land
 - Have 10 or more bearing fruit trees
 - Have 10 or more bee colonies

Farmer

He/ she is a civil or judicial person who *exercises management control* over the agricultural farm operations and takes major decisions regarding resource use. The farmer has technical and economic responsibility for the farm and may undertake all responsibilities directly, or delegate responsibilities related to day – to – day work management to a hired manager. The work of a farmer can be material, when he conducts directly by himself the physical agricultural activities of the farm, or only intellectual, like in the case of that farmer who lives in the city, and travels periodically to the farm, or not, but takes major decisions on the farm operation.

Hired Manager or Administrator

He is a civil or juridical person who takes technical and administrative responsibility to manage a farm on a farmer's behalf. Responsibilities are limited to making day – to – day decisions to operate the farm, including managing and supervising hired labour. Payment is generally made in cash and / or kind. Where the hired manager shares economic and financial responsibilities in addition to managing the farm, the hired manager or administrator is usually considered a farmer or a partner.

Agricultural Worker

He or she is a person on farms performing any of a variety of tasks connected with growing crops, breeding and raising livestock, maintaining farm structures and equipment and caring out simple farming tasks.

b. Period of Reference: it is the Census day.

- Get the information from the field for questions 1.1 through 1.8.

c. Specific Instructions

- determine the person/body responsible for managing the farm; where farms are operated by two or more individuals of different households, identify one of the households and one of the partners as the senior farmer. Avoid duplication when collecting data from partners, as some may also operate another farm separately or in partnership with others.
- record the location and contact information for the farmer (or hired manager)

1.1 Farm Location

- These data should be precoded by the supervisor; coordinate with the supervisor if these boxes are not filled in.

1.2. Farmer Contact Information

- **determine if the farm is managed by the farmer or by someone else hired for this purpose.**
- obtain the demographic information about the farmer and the description of the types of farm activities on the farm.
- determine legal status of the farm by classifying farmer answers in one category described below:

1.3. Age

a. Definition

It is the time interval between birth date and census day expressed in complete calendar years. The age should be written in block numbers. Enter 99 if the farmer is older than 99 and 00 if the farmer refuses to answer. If the farmer refuses to answer estimate the age and make it a remark.

b. Period of Reference: it is the census day.

1.4. Sex

- Fill in the circle for the corresponding sex

1.5 Ethnicity

- Determine the ethnicity of the farmer/ farm manager according to classifications used in the population/ housing census. Record the two digit number in block, e.g. 4 (lead zero not required)

1.6. Type of farm activities

Each farm would have crops only, livestock only or both crops and livestock; other types of activities may also take place (aquaculture, fisheries and/or agro-forestry); fill in all appropriate circles.

1.7 LEGAL STATUS OF FARM

Legal status refers to the juridical aspects under which the agricultural holding is operated or managed.

Definitions

PRIVATE FARMER WITH THE FOLLOWING CATEGORIES:

- Individual: where the farm is operated by one person. But there may be more than one farmer in a given household, each operating a separate farm.
- Household: where two or more members of the same household jointly operate the same farm. It is possible that a household member who jointly operates such a farm may also be the farmer of another farm operated by him alone.
- Family: where two or more members of the same family, but different households operate the farm. PRINT NAME OF OTHER FAMILY MEMBER IN SPACE TO RIGHT OF PARTNER.
- Partnership: when two or more individuals of different households jointly operate such a farm. But separate data should be collected for the household of partner. PRINT NAME OF PARTNER IN SPACE TO RIGHT.
- Corporation: when the farm is operated by juridical persons. Joint stock companies constitute typical examples of corporations. No household data are possible.
- Cooperative: includes several kinds of organizations in which the principles of individual, joint ownership, or leasehold, are combined to various degrees.
- Other: They are private farmers not specified in any classes mentioned above. Examples are clans, private schools and religion institutions.

GOVERNMENT FARMER: A farm that is operated by central or local government directly or through a special body.

1.8 Household size (for legal status of individual/household, partner)

Record the total size of the household and the number of males and females in that household. Note that the reference is to the household and not to the dwelling place.

1.8, For Legal Status of **Individual/Household, Family or Partnership** how many persons are in this household?

Total: _____ Males _____ Females _____

If Legal Status is Government, Corporation or Cooperative, enter 0 0 0 in question 1.8 and skip question 7.0 and household questions in section VII.

CHAPTER II Total Land and Land Tenure of Farm by Parcel

The total area of the farm today can be captured in acres, tasks or manzanas. All further area values should be converted to acres.

All measurement used in this questionnaire must be in acres and all information on land area must be the same unit from Chapter 2 to chapter 4. All measurements are to be recorded with two decimal places **xxxx.xx**. Enter the farm area in the proper unit of measurement in question 2.1. FOR ALL future questions convert tasks (1 task =0.125 acres) and manzanas (1 manzana = 2.0 acres) to acres.

The total number of parcels on the farm is entered in the box for question 2.2.

The best description of the farming system is recorded in question 2.3.

- Monocultural -- the farm activities include only one crop or one type of livestock.
- Diversified – there are more than one crop or more than one type of livestock or one or more crops and one or more type of livestock.
- Integrated – the farm different types of farm activities are linked; for example, livestock manure is used for fertilizing crops.

LAND USE PARCEL BY PARCEL OPERATED BY THE FARM ON THE CENSUS DAY.

2.4 Table of parcel land use ---- in acres

No.	Location	Permanent	Temporary	Pasture	Fallow	Forest	Non-agr	Tenure	Total area
01									
02									

TENURE CODES: 1 -> OWNED 2-> RENTED /LEASED 3-> CROWN LAND 4-> RENTED FOR SHARE OF PRODUCE
5-> SQUATTED 6-> COMMUNAL LANDS 7 → OTHER: Specify _____

PARCEL No ON FARM;

- The first column is the “PARCEL No” of each parcel and is printed. This number is the number that the enumerator has to use in chapter III -permanent crops and chapter IV -temporary crops.

- - Use another farm questionnaire BAC 2011 if the farm has more than twelve parcels, entering its number in question 2.2; **the new parcel numbers will be parcels No 13, 14, 15, etc).**

- The additional crop pages may be accounted for by indicating page numbers of the parcel supplements at the top left of the page.

From this chapter onwards, information is requested only for parcels belonging to the farm. In this chapter there are six (6) categories of Land Use.

Data related to **the area has to be recorded with three decimals** in this table there are lines for 12 parcels. For more than two parcels use new temporary and permanent crop pages and follow the instructions as before.

The period of reference for this chapter is on the **Census Day**.

Land Use

On the Census Day, what is the LAND USE for each PARCEL of the farm under the responsibility of the Farmer?

- Record in this question, under the title CATEGORIES OF LAND USE, the area by land use.
- Record the village/community of each parcel under location; if the location remains the same for the second and later parcels, leave that column blank to indicate it is the same as the previous location.
- For mixed crops record only once the area corresponding to the mixture. Record the area under permanent crops, when there is a combination of permanent crops with temporary crops or pastures. Likewise, write the area of the temporary crops, when the combination is of temporary crops with pastures.

AREA OF EACH PARCEL ACCORDING TO THE LAND USE

a. Definitions

PERMANENT CROPS

This includes land cultivated with long-term crops which do not have to be replanted for several years after each harvest (sugar cane, coconut, cocoa, citrus, etc.); land under trees and shrubs producing flowers, such as roses and jasmine; and nurseries (except those for forest trees, which should be classified under “FOREST”) A nursery is a piece of land where young plants are cultivated for transplanting and /or sale. Do not forget to include in this category the asparagus, strawberries, pineapples, vanilla, passion fruit, bananas. Be very careful to include in this category the permanent crops “ASSOCIATED” with temporary crops (for example, coconuts inter plant with cocoa and associated with cassava); sugarcane associated with beans.

TEMPORARY CROPS

This includes all land in the open air used for crops with an under – one year growing cycle, which must be newly sown or planted for further production after harvest .Crops remaining in the field more than one year should also be considered temporary crops if harvesting destroys the plant (for example cassava and yams). Crops grown in rotation and destroyed when the land is ploughed should be considered as temporary crops (for example alfalfa, clover, grasses). The forages are considered temporary crops when the plant is destroyed after harvest. Vegetables, flowers, bulbs, and kitchen and market gardens, should also be included in land under temporary crops. Do not include in this category asparagus, strawberries, pineapples, vanilla, passion fruit, bananas, sugar cane and similar crops, since in this BAC 2011 they MUST be considered as permanent crops.

PASTURES (INCLUDE GRAZING)

This included land used permanently (for one year or more) to grow herbaceous forage crops, through cultivation or naturally for mowing or grazing (wild prairie or grazing land). Permanent pastures on which trees and shrubs are grown should be recorded under this heading only if the growing of forage should be recorded under this heading only if the growing of forage crops is the most important use of that area. Do not include temporary forages if harvesting destroys the plant; include them under temporary crops.

FALLOW

This is land at prolonged rest from more than one year before re-cultivation. It could be used for grazing purposes. Land remaining fallow for more than three years may acquire characteristics requiring it to be reclassified, such as “PASTURES” (if used for grazing) or “FORESTS” (if overgrown with trees that could be used for timber, firewood, etc), or “NON AGRICULTURAL LAND” (if it becomes wasteland). Land

Government land area held under conditions which enable it to be operated as if owned by the farmer without possessing an ownership title. Land is operated under a short-term lease, usually ranging from 1-4 years, with a nominal rent.

RENTED FOR SHARE OF PRODUCE

Land area rented for a produce share (or the equivalent in money). Technical responsibility for farm management may be exclusively the farmer's or shared with the landlord if the latter contributes tools, fertilizers, etc. Economic risks of operation to income are shared by farmer and landlord.

SQUATTED

Area operated on a squatter basis includes land operated by farmer without ownership title and without paying rent. Land occupied by squatters may be freehold (private), public property or native owned occupied without owner's consent, sometimes tolerated, particularly in public domain.

COMMUNAL LANDS

Land area operated by the farmer himself under tribal or village or family basis with certain individual rights held by virtue of membership in the social unit. Ownership title is absent and no rent is paid.

OTHER LEASES

Some examples include:

-Agricultural labourer operates a piece of land received from the landlord, in return for which he must work, unpaid, for a certain number of days.

-farmer is granted land use in partial payment for services to government, religious organization or other.

-land operated under other rental arrangements include areas operated under other rental forms not covered above, such as areas of usufructuary mortgages and land operated rent free.

PURE STAND CROPS

A single crop cultivated in a field. A pure stand crop may be either temporary or permanent.

MIXED CROPS

Mixed crops are two or more different temporary OR permanent crops (but not temporary AND permanent crops) grown simultaneously in the same field. The number, kind and proportions of crops in the mixture will generally vary according to prevailing practices or other factors such as meteorological conditions. It is more difficult to calculate areas and some estimation is needed, including eye estimates of the proportions of area occupied by the component crops. Otherwise the area is evenly divided among the crops present

INTERPLANTED CROPS

A plot or field in which one crop is planted between rows of another crop – for example, sorghum and groundnuts between cotton rows – is referred to as having interplanted crops. Here, the area of the interplanted plot or field is assigned to individual crops in proportion to the area occupied by each crop.

ASSOCIATED CROPS

A temporary crop grown in a compact plantation of permanent crops – a so-called associated crop – should be distinguished from a mixed crop. Normally, the area of the temporary crop is estimated by apportioning the land in a suitable manner

TOTAL LAND OF PARCEL

The total land of each parcel should be equal to total land area under various use classes.

TOTAL FARM AREA

Total farm area is the combined area of all parcels. Land owned by the farmer but rented to others should **not** be included in the total farm area. The farm area includes farmyard and land occupied by farm buildings.

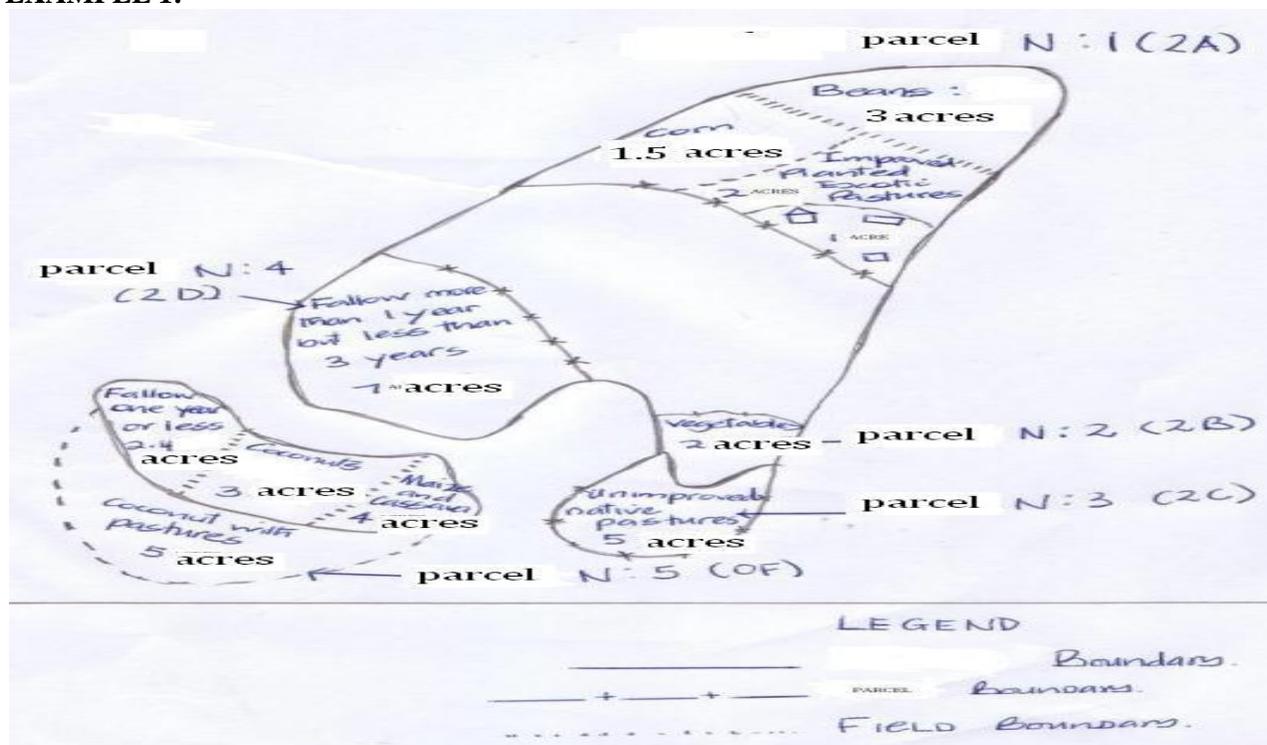
Land area of the farmer's house is also included in total farm area if the house is not located off the farm (for example, in a residential area of a city), and is not used solely for residential purposes. The total area of a farm practicing shifting cultivation (see definition above) should include area under crops during the reference period and area prepared for cultivation but not sown or planted at the time of enumeration; it should exclude land abandoned prior to the reference period. Farmers having access to communal grazing land should not include their estimated share of such land in their total farm area. Total farm area should be equal to total land area under various parcels and land use classes.

b. Period of Reference: it is the census day

c. Specific Instructions

- Remember that this is a key chapter for capturing farm information; you have other tools which will help you to account all the farm land: Sometimes you will need to use your copybook.
- Record the information on the land use of each parcel in acres
- Check that the vertical sum of the last column (TOTAL LAND OF PARCEL) MUST BE EQUAL to the horizontal sum of the last line (TOTAL FARM)

EXAMPLE 1:



The farm is composed of five parcels. The information on the land use on the census day is the following:

Parcel No 1 has a field with three acres of improved planted exotic pastures; one house and two stables occupying one acre. The total land of this parcel No 1 is 7.5 acres with the following land use:

TEMPORARY CROPS AND FORAGES:	4.50 acres
PASTURES (IMPROVED & GRAZING):	2 .00 acres
NON AGRICULTURAL LAND:	1 .00 acre

Parcel No 2 has a field with two acres of vegetables. The total land of this parcel No 2 is two acres and its land use on the census day is:

TEMPORARY CROPS AND FORAGES = 2 .00 acres.

Parcel No 3 has a field with five acres of unimproved native pastures. The total land of this parcel No 3 is five acres and its land use on the census day is:

PASTURES (IMPROVED AND GRAZING).

*Parcel No 4 is a piece of land resting for two years and a half, but before the farmer planted beans. The total land of this parcel No 4 is **seven** acres and its land use is: FALLOW*

Parcel No 5 has a field with 2.4 acres being prepared to be planted with maize (yams were harvested from field in August 2010); a field with three acres of coconuts and yams; a field with four acres of maize mixed with cassava, a field acres of coconuts mixed improved native pastures.

The total land of this parcel No 5 is 14.4 acres and its land use on the census day:

PERMANENT CROPS:	3.00 acres
COCONUTS WITH PASTURES:	5.00 acres
FALLOW:	2.40 acres
TEMPORARY CROPS AND FORAGES:	4.00 acres

CHAPTER III -- PERMANENT CROPS ON THE FARM

Record in this chapter the area, production and farm practices related to permanent crops in pure and mixed stand, which have been cultivated during the Census period.

a. Definitions

PERMANENT CROPS: see definition in chapter II, page 18

PURE STAND: see definition in chapter II, page 20.

PRODUCTIVE AGE OF PERMANENT CROPS

This includes permanent crops already bearing fruit or otherwise productive. Most tree crops and other permanent crops become productive after certain age. Crops at that stage should be enumerated “OF PRODUCTIVE AGE” even if, due to meteorological conditions of other reasons, they have not yielded a harvest during the period of reference. Senile or other trees of productive age but no longer productive, should not be enumerated if it is possible to identify them.

(Perennials) PERMANENT CROPS (COMPACT AND SCATTERED)	AREA or NUMBER OF BEARING TREES / PLANTS	AGE OF TREES/ PLANTS RATTOON years	AREA or NUMBER OF NON-BEARING TREES / PLANTS AREA(in ACRES) number	AGE OF TREES/ PLANTS/ RATTOON years	Number of Scattered Trees / PLANTS XXX	PRODUCTION DURING PERIOD FROM 1 NOV 2009 TO 31 OCT 2010 LBS xx xxx.xx
	AREA(in ACRES) number xx xxx.xxx xx xxx		xx xxx.xxx xx xxx			

COMPACT PLANTATION

Plants, trees and shrubs planted in a regular and systematic manner. Or, plants, trees and shrubs forming an irregular pattern but dense enough to permit data collection of area planted.

SCATTERED PLANTS, TREES AND VINES

This includes plants, trees, vines and shrubs scattered or isolated to prevent adequate determination of the aggregate area occupied.

b. Period of Reference: the census day

c. Specific Instructions

1. Do you have compact permanent crops from 1 January 2010 to the census day?

- i. If the answer is YES, record the information required, according to the instructions given below. Otherwise, if the answer is NO, go to chapter IV.
 - ii. Use one line for recording each crop during the census period which is from 1 November 2009 to the census day of present year.
 - iii. The Permanent crops can be in pure or mixed stand under open land in which they are in pure stand in general.
 - iv. In the case of permanent crops mixed with temporary crops, record in this chapter only the permanent crops, and record the temporary crops in chapter IV
 - v. In the case of permanent crops mixed with pastures, record in chapter III both the permanent crops and pastures. However, for the pastures the production is "0".
 - vi. In the case of permanent crops mixed with forages, record in chapter III only the permanent crops and record the forages in chapter IV, temporary crops.
- In the case of very small areas with mixed crops or several permanent fruits not in a regular plantation, consider it as a FRUIT GARDEN and write this as the crop name; and record the planted area. **When the area with plants, trees, and vines is less than 500ft², consider them as scattered.**

Number of the Parcel

- Record the parcel number in which the permanent crop is located, starting with the first parcel as recorded in chapter IV that contains permanent crops.

Crop Name

- go to the line of the permanent crops as they are reported by the Farmer. **Fill in the entire row.**
- In the case of mixed crops, record only the names of the permanent crops belonging to that mixture.

Crop area and number of bearing trees/plants

- Record the area IN ACRES with bearing trees/plants in COMPACT PLANTATION and the number; in the case of interplanted or mixed crops divide the area equally or according to other information.

Crop Age in Years

- Record the crop age in years in the corresponding boxes.
- Record 0, if the plantation is less than a year. In general, permanent crops do not have production before one year; but there are exceptions, as tobacco and bananas, are first harvested before one year.
- In the case of a plantation having different planting years (replanting), record the planting age according to where most of the planted area is located.

Crop area and number of non-bearing trees/plants

- Record the area IN ACRES with bearing trees/plants in COMPACT PLANTATION and the number; in the case of interplanted or mixed crops divide the area equally or according to other information.

Crop Age in Years

- Record the crop age in years in the corresponding boxes.

Number of scattered trees/plants

- Report the number of trees/plants not in compact plantation whether bearing or not.

Crop Production in pounds (for both compact plantation and scattered trees)

- Report all production during the census period regardless of when it was harvested; for sugarcane the production should be reported in tons (convert if necessary). If units other than pounds, say bunches or nuts, are given, use conversion tables to report the production in pounds.

Crop area, number and crop age of NON-BEARING trees/plants

- Record the area (in acres), number of trees/plants and crop age of non-bearing trees/plants.

MAIN Crop Use				OTHER Crop Use				System of Production					Use Of Inputs			Receive assistance from EXTENSION for this crop?	Receive Credit for this crop?	Use Irrigation
Home	Feed	Sale	Farm	Home	Feed	Sale	Farm	Mechanised	Mixed	Milpa	Organic	1.	2.	3.				
1	2	3	4	1	2	3	4					1	2	3	4	5	Fertiliser	Improved seeds
<input type="checkbox"/>	Yes ● No ○	Yes ● No ○	Yes ● No ○															

MAIN Crop use and OTHER Crop use

- This section reports the use of the crop – fill in circles for all that are appropriate.

System of Production

- Fill in appropriate circles for the system of production used on the specific crop.

Use of Inputs

- Fill in corresponding circles for each of three inputs if the input is used.

Receive assistance from extension, receive credit and use irrigation.

- Fill in the circle yes if the answer is yes; otherwise leave blank

Example 2:

The Farmer indicates that there are permanent crops in the Farm: the first parcel is planted with coffee mixed with cocoa; the planting distance is 12 feet by 12 feet (first mixed crop in the questionnaire). This first mixed crop was planted 10 years ago in an area of 12 acres using common seed for both crops belonging to the mixture, On the other hand, the Farmer reports that the whole area has been harvested, there is no irrigation and no fertilizers are being used.

Talking about production, the Farmer says the following: in March of this year, 250 sacks of coffee green beans weighing 124 lb each sack, and 80 quantities of cocoa dry seeds. The production was sold to a trader: 120 quantities of coffee dry beans and 50 quantities of cocoa dry seeds; the cocoa production was low due to an ant disease. At the end, the Farmer reports that there is a 1 acre plantain plantation planted 20 years ago with a spacing of 16 feet by 16 feet; no cultural activity is done since the plants are common variety. This year production has been 200 clusters weighing 38.1 lb each harvested in half of acre; it was a bad production due to much rain. The production was for home and animal consumption. Also the Farmer reports that for coffee 1 quantity of dry beans is obtained from 2 quantities of green beans.

EXAMPLE 3

The parcel 3 of a farm located in near Orange Walk has three acres cultivated with sugar cane:

- .5 acre has the sixth ratoon (planted seven years ago)
- .5 acre was planted in May 2010 to be harvested next year
- One acre was planted in July 2009 to be harvested during the present year.
- One acre was planted in March 2010 inter planted with maize and peas. The maize and peas are ready to be harvested in November 2010.

CHAPTER IV TEMPORARY CROPS ON THE FARM

(Annuals) TEMPORARY CROP	AREA PLANTED TODAY(on 1 Nov 2010)		AREA HARVESTED FROM 1 JAN 2010 TO 31 DEC 2010	PRODUCTION from 1 Jan 10 to 31 Dec 10
	AREA(in ACRES) XX XXX.XXX	1= Pure stand 2= Interplanted 1 2	TOTAL AREA XX XXX.XXX	LBS XX XXX.XX

1. DID you have compact temporary crops FROM 1 January 2010 to 31 December 2010 or to THE CENSUS DAY?

- If the answer is YES, record the information required, according to the instructions given below. Otherwise, if the answer is NO go to chapter V.
- Record each of the temporary crops reported by the farmer or a qualified respondent during the census period which is from 1 November 2009 to the census day of present year.
- The Temporary crops can be in pure or mixed stand.
- Record the area information of temporary crops in **acres**; if the area measurement units used by the farmer are in tasks or manzanas, convert to acres.
- Copy the parcel No of farm from CHAPTER II when that parcel has information for temporary crops and the farmer reports that he/she has temporary crops.
- For successive crops, treat them like different fields, since they were planted or sown and harvested several times, although in the same physical area. Always remember to ask about successive crops since the tendency of the enumerator and farmer is to get and give information on actual season, forgetting about crops planted and harvested during 1st semester, which are not any more on the ground. **In this case add the areas harvested; and add the production.**
- In the case of temporary crops mixed with permanent crops, record in this chapter the temporary crops, and record the permanent crops in chapter III.
- In the case of temporary crops mixed with forages, record in this chapter IV only the temporary crops and record the forages in chapter III of permanent crops ea (information on production is not recorded).
- In the case of temporary crops mixed with pastures, record in this chapter IV both the temporary crops and pastures.
- In the case of very small areas (less than 25 ft²) with mixed of several temporary fruits which is not a regular plantation, consider it as a FRUIT GARDEN and write this as the crop name in column 3; record code 1 in column 5 (crop condition) corresponding to pure stand, and record the planted area in column 11 .

Number of the Parcel

- Record the parcel number in which the temporary crop is located at the top of the page.

Col 1. Crop Name

- Record the temporary crops as they are reported by the Farmer.
- In the case of mixed or interplanted crops record temporary crops belonging to that mixture and divide the total area by the number of mixed/interplanted crops (equal distribution) unless another split of the area is obvious.

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System of Production	Use of Inputs	MAIN Crop Use:	OTHER Crop Use:	Use of Irrigation	assistance from EXTENSION for this crop?	Receive any Credit for this crop?
1 Mechanized 2 Non-mechanized 3 Mixed 4 Milpa 5 Organics	1. Fertilisers 2. Improved seeds 3. Agro-Chems	1. Home 2. Feed 3. Sale 4. Farm	1. Home 2. Feed 3. Sale 4. Farm	Yes ● No ○	Yes ● No ○	Yes ● No ○
1 2 3 4 5	1 2 3	1 2 3 4	1 2 3 4			
○ ○ ○ ○ ○	○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○	○	○

System of Production

Fill in the circles for the system of production used on the specific crop.

Use of Inputs

- Fill in corresponding circles for each of three inputs if the input is used.

MAIN Crop use and OTHER Crop use

- This section reports the use of the crop – fill in circles for all that are appropriate.

Receive assistance from extension, receive credit and use irrigation.

- Fill in the circle yes if the answer is yes; otherwise leave blank

CHAPTER V LIVESTOCK IN THE TOTAL FARM ON THE CENSUS DAY

QUESTION 5.1

TYPE OF LIVESTOCK/POULTRY	No. of Males	No. of Females	TOTAL	Purpose
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a. Definitions

LIVESTOCK

Livestock refers ONLY to all animals OWNED for agricultural purposes and does not include animals kept or reared in captivity on the farm. The BAC 2011 will include cattle, sheep, goats, pigs, horses and poultry.

LIVESTOCK POPULATION

The livestock population refers to animal numbers on the farm on the period of reference. Livestock population includes livestock temporarily absent or in transit at enumeration day.

DAIRY CATTLE

Dairy cattle refer to animals kept or reared mainly for milking purposes.

BEEF CATTLE

Beef cattle refer to animals kept or reared mainly for meat purposes.

b. Period of Reference: it is the census day

c. Specific Instructions

- Remember that livestock data refer to “TOTAL FARM”.
- Each total by type of livestock and sex MUST BE EQUAL to the sum.
- Sometimes it is possible that the respondent does not know the cattle classification by sex and age. In this case, record the total of cattle in the last column and explain the reasons in remarks. In the case of other livestock, use the cell of TOTAL.
- When there is no information about livestock, cross two lines through table 5.1.

OTHER LIVESTOCK

- Pigs, Sheep, Goats, Horses
- Remember that livestock data refer to “TOTAL FARM”.
- Check that each total by type of livestock and sex IS EQUAL to the sum.

PURPOSE OF LIVESTOCK (animals and poultry)

Record the purpose that the farmer has each type of livestock. There may be more than one purpose. The list includes consumption of the animal/ poultry; consumption of the livestock product (e.g., milk, eggs); sale of the animal / poultry; sale of the livestock product; used for work; or for leisure.

PASTURELAND

5.1.1 Please indicate the area of pastureland that is Improved _____ AND Unimproved _____

Record the area of improved and unimproved pastureland in acres. Note the response in Chapter II.

QUESTION 5.2 APICULTURE

Record the number of apiaries and number of colonies that are part of the apiculture component of the farm. Also indicate the amount of honey harvested during the census year.

QUESTION 5.3 POULTRY

a. Specific Instructions

- Record the total number of chickens, turkeys, ducks and geese by sex;
- Separate the poultry into broilers, layers and backyard chickens.
- Indicate all purposes for the individual types of poultry.

QUESTION 5.4 AQUACULTURE

<i>TYPE OF AQUACULTURE</i>	<i>NO. OF PONDS</i>	<i>AREA OF PONDS (SQ FT)</i>
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Record the number of ponds and the total area (in square feet) for each type of aquaculture.

CHAPTER VI.I FARM IMPLEMENTS AND EQUIPMENT

IMPLEMENT	OWNED	RENT	RENT private	NEED SUPPORT?				
				LOW			HIGH	
1. Farm tractor				<input type="radio"/>				
2. Plow				<input type="radio"/>				

General Definition

This chapter identifies machinery and equipment used by the farm, wholly or partly for agricultural production. All machinery and equipment used exclusively for non agricultural purposes during the reference period are excluded. Only machinery and equipment in usable condition should be reported.

a. Definitions

PART 1 OWNED

It refers to the number of implements and equipment for which the farmer possesses title of ownership ON CENSUS DAY and has the right to determine the nature and extent of its use, primarily for agricultural work on his farm. The machinery and equipment may be owned solely by farmer or owned jointly by farmer and others. Enter “0” if no implements are owned.

PART 2 RENTED (at any time) FROM NOVEMBER 2009 TO PRESENT

- Remember that this question refers to rental or lease of the implements and the ‘owner’ of the equipment; indicate the number rented/ leased from public (government) and from private owners.

- Period of Reference is from November 2009 to census day.

PART 3 NEED FOR SUPPORT FROM THE GOVERNMENT FOR OWNED IMPLEMENTS

-Please fill in the circle that corresponds to the relative need for support from the government to use or maintain specified equipment that is owned; the scale is from left (1) low to right (5) high.

b. Period of Reference: the census day

CHAPTER VI.II AGROFORESTRY

Indicate the area planted in acres and age of trees in compact plantation FOR ALL PARCELS used for agroforestry; also record the number of scattered trees and average age. For each type of input used shade in the corresponding circle.

CHAPTER VII FARM AND FARM HOUSEHOLD ACTIVITIES

7.0 Information on Farm Household Members

One of the key types of information used to clarify the role of gender in agricultural sector activities is the division of labour for agricultural related tasks. Usually information is collected to that allows the researcher to identify the age and gender of those workers who carry out the different kinds of tasks. In many cases it is also beneficial to collect information about the amount of time spent each day on agricultural sector activities.

7.0.1	7.0.2	7.0.3	7.0.4	7.0.5	7.0.6	7.0.7
Line No.	Name	Relation to Head (Enter code)	Sex M F	Age as of last birthday	Highest Educ. (Enter code)	Main Economic Activity (Enter code)

SPECIFIC INSTRUCTIONS:

When the farmer is a PRIVATE INDIVIDUAL PERSON, information must be entered for this chapter. If not, state the reasons in remarks. Some reasons for not having this information in this question may be:

- ❖ The respondent (manager or administrator, worker, etc) is not the farmer, and he does not know the information about the farmer’s household.
- ❖ The farmer or respondent are absent.
- ❖ Refusal to answer this specific question or the whole questionnaire.

When there is not a household at the farm because the farmer lives in a city or out of the country, record the information of the farmer’s household in question 7.0. If it is not possible for any reason, explain this situation in remarks.

When a household member lives in FARM A (for example farmer’s son), but operates a different FARM B, take the following actions:

1. Do NOT record the household member’s (son) demographic information in question 7.0 of farm A questionnaire.
2. Open a new questionnaire BAC 2010 for farm B, record any information for the son in question 7.0.

When a household member lives in FARM A (for example farmer’s son in law), but operates a different FARM B. Take the following actions:

- 1 Record household member’s (son in law) demographic information in question 7.0 of FARM B questionnaire.
2. Use a new questionnaire BAC 2011 for FARM B.

When two or more individuals of different households jointly operate the farm, collect separate data for the household of each member of the PARTNER; and for chapter 7. Record farm information only once.

When the farmer is a legal corporation, cooperative, government or any other similar organization like a clan, private school, religious institution, do not collect any information in question 7.0. Cross two lines along the entire page, and explain this situation in remarks.

If the respondent is the manager or administrator, a worker, etc., and the farmer does not live at the farm, do not record the information of manager’s or administrator’s household. But if they (respondents) operate an independent farm, - record their household information in the other farm questionnaire BAC 2010.

7.0.2. Name of Household member

- ❖ The name will be used to verify the sex of members in the various agricultural sector tasks. Be sure that it is legible.
- ❖ Record the household members living in the household during last week (Monday through Sunday).

7.0.3 Relationship to Head of Household

a. Definition

It is the legal relationship between the head of household and the household member.

7.0.3 Relation to Head					
1 Head	2 Wife/Husband	3 Son/Daughter	4 Stepchild/ Adopted child	5 Daughter-in-law/Son-in-law	6 Mother/Father
7 Brother/Sister	8 Grandchild	9 Grandparent	10 Other relatives	11 Non-relative	

b. Record the corresponding codes in block numbers in column 3.

7.0.4 Sex

a. **Fill in** the corresponding circle in column 4.
(Codes: Male – 1; Female – 2)

7.0.5 Age

a. Definition

It is the time interval between birth date and census day expressed in complete calendar years.

b. Period of Reference: it is the census day.

Record the age corresponding to the number of years, in two-digit block numbers in col. 5.

7.0.6 Education

a. Definition

It refers to the highest level of education attained.

b. Period of Reference: the census day

c. Specific Instructions

key issues for improving production and productivity. Note that for juridical farms some questions are not asked; for **civil** farms all questions are asked.

For the first three questions read the text, but **DO NOT READ CHOICES**; shade up to 3 responses.

ALL FARMS

7.1 What are major problems on the farm? shade up to 3 responses

This question will help to identify issues that farmers face during the operation of the farm. See if the responses can be recorded in one of the available options. If not, include it as “OTHER”.

7.1b What kind of assistance is needed to improve productivity of the farm? shade up to 3 responses

For this question do not imply that the assistance would come from the Ministry or from the Government; it is a general question that tries to identify areas that could be targeted for Ministry programmes or technical assistance.

7.2 What are the major sources of information about farming? shade up to 3 responses

For this question, it is important to find the best ways to provide general information to the farmers; and to ascertain geographical areas where various media are not accessible. If the response refers to a specific individual or group of individuals (say family members), the response would be “other farmers”.

7.3 What kind of agriculture sector information would be most helpful? Shade only one.

In some cases the farmer will misinterpret the word “information”; sometimes, use of the word statistic will also be confusing. This question refers to types of data and not to farming practices. Reading one or two choices may help to obtain a valid response; be careful about generating a response based on your probing.

ONLY CIVIL FARMS

7.4 Has the household had a food shortage during the last twelve months? Fill in appropriate circle.

IF YES—ask the following questions **DO NOT READ CHOICES**; shade up to 3 responses each
what was done to alleviate the shortage?
what was the cause of the food shortage?

IF NO, skip to question 7.5.

ALL FARMS

7.5 Do you have access to the following ...?: READ ALL CHOICES and fill in the appropriate circles. If the farmer does not have access to any of the items on the list, fill in the circle for “none”. The list refers to the use of key communication technologies.

7.6 What is your source of water for farming activities? DO NOT READ CHOICES

7.7 What is your source of credit? DO NOT READ CHOICES

The farmer’s response may not be one of the choices listed, but it should be possible to identify the type of source that is mentioned. If the farmer does not use credit fill in the circle for “none”.

7.8 What potential crops for export would you produce if you had sufficient inputs? DO NOT READ CHOICES

7.9 What inputs would be required for you to produce these crops?

ONLY CIVIL FARMS

7.10 What percent of household income is from the farm? - record percent or “no response” if farmer refuses to answer.

9. SPECIAL ENUMERATION SITUATIONS

1. No Qualified Respondent Available

If a qualified respondent (farmer or non farmer, manager or administrator, component worker, old farmer's relative) is not available, the enumerator **MUST** get some information on when the respondent will be back and / or to find him. Then the enumerator will prepare a schedule for new visits.

The priority for the enumerator is to work as efficiently as possible and to collect information in the scheduled time. Within this constraint, if the qualified respondent would be available the next day, the enumerator should return the next day for an interview if the team will still be working in the area.

If all other work has been completed by the team in the area and only one or two farms are remaining, the priority is to contact some other informed source (a neighbour for example)for an interview and only as a last resort to record information as much as possible on the questionnaire by direct observation. In any case a questionnaire should be assigned with a clear indication in remarks (page 1) about the information sources. Many questions could remain without answers. Inform your supervisor about this particular farm.

2. Crop Land not planted on Census Day (fallow for less than one year)

Ask about the crops planted and/ or harvested from November 2009 to the census day. Many enumerators tend to forget to ask these questions.

3. Field review of the questionnaire

- All the required fields should be filled in: FARM location and general farmer information (CHAPTER I).
- The total number of household members equals the sum of male and female members.
- The number of parcels in Chapter 2 is equal to the number of (parcels) lines in the landuse table.
- The total land of each parcel should be equal to the sum of land under various land use classes.
- Also check that the vertical sum of the column (TOTAL LAND OF PARCEL) equals the response for area of (TOTAL FARM).
- The number of trees in compact plantation should be greater than or equal to 10.
- Production should be reported in tons or in pounds; if other units are listed, then convert to pounds.
- If production is reported for a temporary crop, there should be an area harvested. It is possible for an area harvested, but no area planted – the land is now fallow or planted with another crop.
- Check the totals of all types of the livestock in chapter V. For some livestock the breakout by sex may not be known.

4. VILLAGE

For villages, the land occupied by households, buildings and other installations are considered in the following special cases:

A. If any member of the household keeps poultry or any other livestock (pigs, goats, etc) inside a village parcel, and “operates” farm lands, consider them together (poultry and land) as a normal farm. The farm land may consist of one or more normal parcels. Fill in a farm questionnaire BAC 2010 as usual.

B. If any member of the household keeps poultry or any other livestock (pigs, goats, etc) inside a village parcel, and “does not operate any farm land, consider the livestock and /or poultry on the village parcel as “farm without land”. Collect information for BAC 2011.

C. If any member of the household keeps poultry or any other livestock (pigs, goats, etc) inside a common village parcel, consider the livestock and /or poultry inside the village parcel as “farm without land”. Collect information for BAC 2011.

5. Refusals

Be courteous and friendly. Make a diligent effort to obtain the farmer’s cooperation by explaining the purpose of the BAC 2011. If a refusal does occur, make your best estimate by observation. Do not try or deceptively try to obtain information. Inform your supervisor, who will try to get the data.