

## Chapter 1

### INTRODUCTION

#### 1.1 Background

Agriculture census taking in Myanmar is not new. The first Census of Agriculture was conducted in 1953 covering 252 townships in 2143 village tracts. However, the first comprehensive census was done in 1993 covering 272 townships out of a total of 319 in the 7 states and 7 divisions of Myanmar with the active participation of the Food and Agriculture Organization of the United Nations as the executing agency for the United Nations Development Programme under Project MYA/85/004 entitled "Agriculture Census and Strengthening of the System of Agricultural Statistics." The implementing agency of the Government is the Settlement and Land Records Department (SLRD) of the Ministry of Agriculture at that time, now Ministry of Agriculture and Irrigation (MOAI).

Beginning October 1, 2003 up to November 15, 2003 another Census of Agriculture will be undertaken. This time, the Food and Agriculture Organization (FAO) has provided technical assistance in the preparatory phase of the census. All plans for undertaking the Myanmar Census of Agriculture 2003 was prepared under TCP/MYA/2801 Assistance to the Census of Agriculture 2003. Preparatory to the conduct of the main census, a Pilot Census was undertaken to test the field operational procedure of conducting the census, test the efficiency by which the questionnaires can obtain the information necessary for planning and monitoring the agriculture sector and to establish standard output per day of the enumerators so that the number of enumerators to be fielded during the census can finish the data collection in accordance with the plan.

The Pilot Census was conducted on December 26-31, 2002 that covered four areas that were selected to represent the four ecological zones of the country. To represent the delta region, the township of Ma-U-Bin in Ayeyarwady Division was selected; to represent the central plain area, Pyay township was identified located in Bago West Division; Kalaw township in Taunggyi District of Shan State South has been chosen to represent the mountainous areas while Myeik township of Thanintharyi Division was the representative of the coastal areas. Due to time constraint, only 3 village tracts were covered in each township. It is, however, believed that the 12 village tracts were adequate to realize the objectives of the pilot census.

#### 1.2 Objective of the Myanmar Census of Agriculture 2003

The main objective of the Census of Agriculture is to take an inventory of all agricultural holdings in the country so that structural data, like size of holdings, land use, intensity of land use, cropping patterns and parcels, may be collected for small administrative divisions like the village tracts or wards and villages or communities, needed for planning and formulation of policies that will directly benefit these villages. A complete coverage of all agricultural holdings will also provide a sampling frame in the conduct of agricultural sample surveys as a follow up activity after the census.

#### 1.3 Scope and Coverage

The items to be covered in Myanmar Census of Agriculture 2003 (MCA 2003) are in accordance with the recommended items to be covered under FAO's Programme for the World Census of Agriculture 2000 considering that the Myanmar census is part of the World Programme. There are four questionnaires and a listing form designed to collect most of the data requirements of government. These are as follows:

- FORM 2003MAC-1 - LISTING OF HOUSEHOLDS- the actual listing operation will be implemented starting March, 2003 to May, 2003 to provide a list frame of holdings and fishing households and aquaculture for the main census. Aside from the name of the household head, the total area of cropland being tilled by households will be listed including the number of large and small livestock, chicken and other poultry and fishing activities of the members of the household. A question was asked whether the livestock and poultry are mainly for sale. This question will enable the identification of households who were engaged in commercial livestock and poultry farming during the reference year, which is the 2002-2003 Agricultural Year from April 1, 2002 to March 31, 2003.
- FORM 2003MAC-2 - AGRICULTURE HOLDING QUESTIONNAIRE will obtain all structural information about the holding including employment and farm practices.
- FORM 2003MAC-3 - COMMERCIAL LIVESTOCK AND POULTRY QUESTIONNAIRE – The instrument will gather information on the activities of commercial livestock and poultry raising and the disposal of stocks. .
- FORM 2003MAC-4- HOUSEHOLD FISHING QUESTIONNAIRE – This questionnaire will gather information on the participation of household members on fishing activities whether or not fishing is done within the agricultural holding or done outside the premises of the holding, like in lakes or rivers that are not part of the holding.
- FORM 2003MAC-5 - AQUACULTURE HOLDING QUESTIONNAIRE – This questionnaire will gather information about aquaculture farming including machinery and equipment used in fish culture.

In terms of geographic coverage, the MCA 2003 will cover the entire country. In 1993, there were only 7 States and 7 Divisions existing. At present, there are 9 States and 8 Divisions with a total of 324 townships. In 1993, there were 52 townships excluded due to security reasons, inaccessibility and highly urbanized areas.

The MCA 2003 will attempt to cover 316 townships, which include the highly urbanized areas of Yangon and Mandalay. However, the coverage will be limited to the list of commercial livestock and poultry holdings provided by the Department of Livestock and Veterinary and the list of fishing establishments or aquaculture operating within these highly urbanized areas. For Mandalay, the list of agricultural holding may be obtained from the Village Tract Chairman, if listing the village tract is not necessary. However, if there is significant number of agricultural holding in any of the highly urbanized areas, a listing will be undertaken to serve as a list frame for the conduct of the main census.

#### 1.4 Organizational Set Up

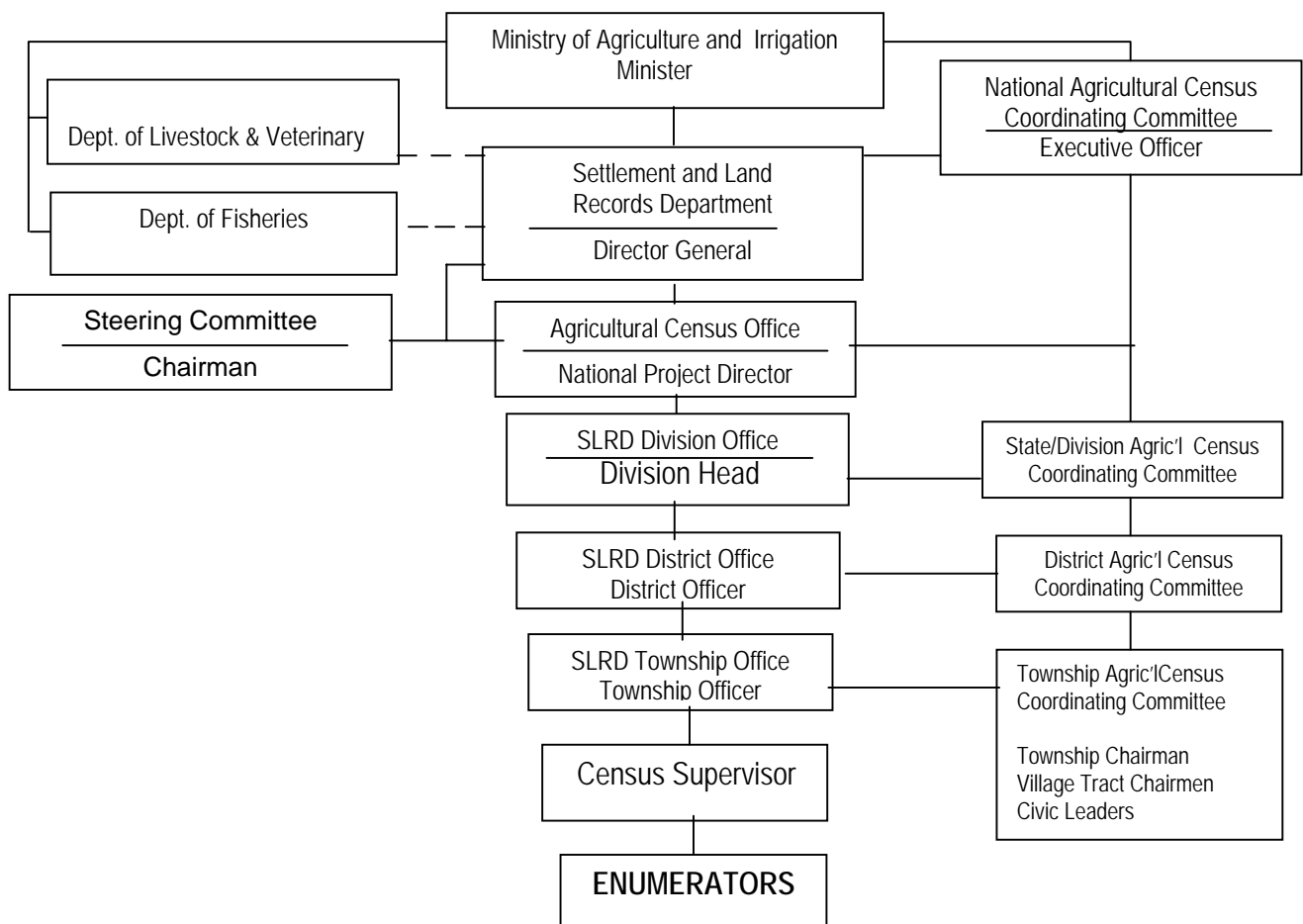
Under the TCP/MYA/2801 Assistance to the Census of Agriculture 2003, a national Steering Committee was formed to oversee the preparatory phase of the census, which involves the designing of questionnaires, preparation of enumerator's and supervisor's manuals, field operations manual and detailed work plan as guide in the overall implementation of the census field operation. This Steering Committee is chaired by Director General U Win Kyi of the Settlement and Land Records with the National Project Director in the person of SLRD Director for Planning U Win Htoon Nee as the Secretary of the Committee. Members of this committee were drawn from the roster of government officials coming from agencies who are stakeholders in the conduct of the agriculture census and SLRD, namely: Deputy Director General, SLRD; FAO Representative in Myanmar; Director, Department of Agricultural Planning (DAP); General Manager, Myanmar Agriculture Service (MAS); Deputy Director, Department of Livestock and Veterinary; Deputy Director General, Department of

Fisheries; Director (Statistics), SLRD; Director (Survey and Mapping), SLRD; Director (Central Training), SLRD; Deputy Director (Statistics Division), MAC Project Officer; Deputy Director (Computer Division), MAC Project Officer.

To implement the Census Work Plan, the Agriculture Census Office (ACO) was reconstituted similar to the 1993 organization. It has 5 branch offices, namely: Administrative and Account Branch, Geography Branch, Computer Operation Branch, Survey and Statistical Methods Branch and Field Operations Branch. To provide policy guidelines and coordination among government agencies in undertaking the Agricultural Census, a National Agricultural Census Coordinating Committee (NACCC) shall be formed to be chaired by the Minister of Agriculture and Irrigation with membership coming from the ranking officers of the different ministries and corporations. Similar coordinating committees shall be established at sub-national governments, i.e. at the State/Division level, district level and township level so that the census can be carried out with the full support of the entire government machinery. The following chart will show the linkages of the different offices in the implementation of the work plan for the MCA 2003.

CHART 1

MYANMAR CENSUS OF AGRICULTURE 2003 ORGANIZATIONAL CHART

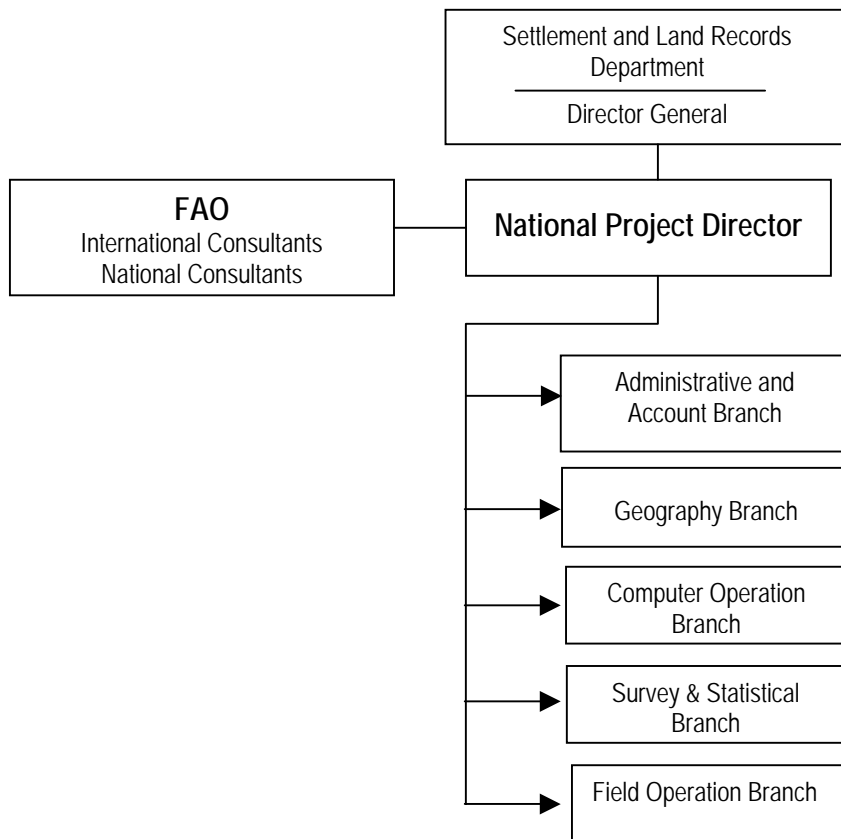


Take note that the point person in the implementation of the Myanmar Census of Agriculture 2003 is the Director General of the Settlement and Land Records Department, who acts as the Executive Officer of the National Agricultural Census Coordinating Committee. As such, he implements the policy decision at the highest level of authority in connection with the conduct of the census down to the township level of governance. The regular offices of the SLRD in the different

States and Divisions down to the district level and further down to the township level are the implementing arms for data collection. They are responsible in the coordination of census activities with local governments through the coordinating committees.

To backstop the technical activities of the Steering Committee, that is also chaired by the DG of SLRD is the Agriculture Census Office (ACO) which is the workforce of the census from planning, to data collection, to data processing, data analysis, dissemination and publication of census results. The ACO is also responsible in all the administrative and financial work to be done in connection with the MCA 2003. Chart 2 below will show the internal organization of the Agriculture Census Office purposely created to implement the work plan of the Myanmar Census of Agriculture 2003. International and national consultants provided by the Food and Agriculture Organization (FAO) provided technical assistance to the Technical Committee and ACO in the planning for the MCA 2003.

Chart 2  
ACO Organization Chart



Under the general direction of the Director General, the National Project Director (NPD), who is concurrently the Director of Planning of SLRD, provides overall supervision of the census operation. All SLRD field officers from division/state heads down to district offices and township offices report to the NPD regarding the implementation of the different phases of census work from recruitment of enumerators to training, then to actual data collection.

## Chapter 2

### ROLE OF THE ENUMERATOR

#### 2.1 Responsibilities of an Enumerator

The enumerators are the backbone of the census organization. Without them, good data cannot be possibly collected. In other words, the quality and accuracy of the data gathered would depend upon the enumerators' diligence in asking the questions, understanding the concepts so that they can easily understand the responses of the holder or respondent for this census. It is important, therefore, that the enumerator understands his important role in this very important undertaking.

The responsibilities of the census enumerator are the following:

1. To attend the training of Enumerators on time. Not to be absent in the five-day training of enumerators and supervisors.
2. To study the concepts used and the definition of terms to avoid confusion in recording the responses of the farmer-operator or holder.
3. To follow the written instructions prescribed in the performance of his duties as an enumerator.
4. The enumerator is expected to complete his assigned area within the time frame given. This time frame is related to the workload in the village where the enumerator is assigned to enumerate.
5. To review the accomplished questionnaires for completeness of entry. Verify if all information or data that require codes have the correct codes.
6. The enumerator should be sure that each questionnaire has the correct geographic identification and corresponding code. He should bear in mind that in machine processing, only codes are keyed in and these are what the machine can read. If the code is wrong, the holding will be classified or counted in another area.
7. The enumerator should always bring adequate number of blank questionnaires to avoid delay in his work.
8. He is expected to accomplish the daily standard output prescribed by his supervisor.
9. He should write legibly and avoid too many erasures. Blue ball pen should be used to accomplish the forms.
10. He submits the accomplished questionnaire arranged according to the procedure prescribed by his supervisor.
11. Before starting his work, the enumerator should pay a courtesy call to the village tract/ward head and the village head and explain the objectives of this agriculture census.

12. The enumerator should be courteous and polite at all times to the household respondents. He should never argue with them nor discuss controversial topics. He will just concentrate in the realization of the objectives of the agriculture census.

## 2.2 Role of the Supervisor

The team supervisor is there to assist the EN with his work. The Team Supervisor is responsible for the quality of the EN's output as well as his safety in the conduct of house-to-house enumeration. Whenever the enumerator has problems in contacting respondents or some problems on concepts, the team supervisor will be there to help him. Specifically, the team supervisor will do the following:

1. Review the questionnaires that the EN had accomplished, if properly filled out in accordance with the instructions and guidelines.
2. Provide the necessary logistics in connection with the field operation, like adequate number of questionnaires, pencils, ball pen, flat pad, etc.
3. Get in touch with the village tract/ward head or town officials to introduce the enumerator just in case he is not known to the village tract/ward head or other township officials.
4. Conduct re-interview of the households that the enumerator visited and enumerated to find out whether EN was able to record accurately the total persons that compose the household and other important characteristics of the holding. In other words, the supervisor will verify the entries on the questionnaire done by the EN whether they were accurately done. This is done at random to gauge the overall quality of the EN's work. If the quality is not acceptable based on random checks, the supervisor should verify all the accomplished questionnaires to ensure the quality of data.
5. Field edit all questionnaires for consistency of entry after which he appends his signature and date when the questionnaires were reviewed.
6. To collect accomplished questionnaires from all enumerators under him, arrange them by kind of questionnaire prior to submission to higher authorities, including a control sheet that goes with the forms submitted.
7. Performs other duties in the course of his field visits relative to the census operation.

## 2.3 Forms and Materials to be Used in the Census

As discussed previously, there are several questionnaires to be administered. These forms are administered as soon as the appropriate respondent is found. Each enumerator has an Enumerator's Kit that contains the following:

1. Map of the village where the relative location of the houses on the ground is plotted on the map.
2. Listing of Households showing the agricultural and fishing households to be enumerated.
3. Blue ball pen to accomplish questionnaires

4. Folder with clip to put questionnaire. The following are the different questionnaires to be used:

FORM 2003MAC-2 - AGRICULTURE HOLDING QUESTIONNAIRE (ANNEX 2)  
FORM 2003MAC-3-COMMERCIAL LIVESTOCK AND POULTRY QUESTIONNAIRE (ANNEX 3)  
FORM 2003MAC-4- HOUSEHOLD FISHING QUESTIONNAIRE (ANNEX 4)  
FORM 2003MAC-5 - AQUACULTURE QUESTIONNAIRE (ANNEX 5)

5. Flat pad with string to be used when interviewing especially when there is no table to write on and in binding accomplished questionnaires for submission.
6. Other supplies.

The Coding Sheet is found at the back page of the first sheet of FORM 2003 MAC-2 Agricultural Holding Questionnaire, see ANNEX 6. The coding sheet may be needed to code crops found in the commercial livestock and poultry holding, fishing households and aquaculture holding.

To understand how these forms are to be used, the following procedure of enumeration should generally be followed:

1. The main census operation involves the enumeration of the holdings identified in the Listing of Households form. In the listing sheet, Column 16 shows the HCN for households engaged in fishing; column 18 is the HCN for Aquaculture Holding, Column 19 is the HCN for agricultural holding with less than 50 acres in size; Column 20 is the HCN of agricultural holding with 50 or more in size and Column 22 is the HCN for commercial livestock and poultry holding. HCN is an acronym for Holding Control Number. Households with an HCN under any of the columns mentioned are to be enumerated using the appropriate questionnaire. See ANNEX 1 for the listing form and the corresponding instruction in the accomplishment of the form as ANNEX 1A to be able to understand how the form was accomplished.
2. Using the map that updated in March-May this year and the Listing of Households, locate or find the first household head listed under any of the HCN columns. If found, administer the appropriate questionnaire.
3. In this map, the names of the household heads may be written on the right hand portion. This listing is as of May 2003 but there may be changes in the composition of the household since then. So DO NOT ASSUME THAT THE NAME OF THE HOUSEHOLD HEAD IN COLUMN 2 OF THE LISTING OF HOUSEHOLDS IS STILL THE SAME. To find out, fill up first the identification portion of the questionnaire. In case a household listed as operating a holding is no longer in the village, the enumerator has still to provide a questionnaire including the HCN and other identification information and then write a notation on the top-most right side portion of the questionnaire that "Household cannot be located". This is a non-response holding so the questionnaire has to be included in the batch of questionnaires for the village for submission.
4. Be sure to visit all houses in the village where holders reside.
5. Be sure to update the map if there are physical changes. Plot on the map man-made structures that are landmarks that can guide your supervisor or officials in the course of their visit to the village to observe the field operation.

6. Be sure also to enumerate all the holdings that were identified during the listing last March-May, 2003. Take note that the HCN for each type of holding starts at 1 and chronologically numbered up to the last holding listed in the village or village tract or township as the case may be.

## **2.4 Allocation of Forms and Standard Output Requirement**

The team supervisor will inform the enumerator on how the forms are allocated. Normally, the average standard time for accomplishing the different forms is shown below:

Form 2003MAC-2, Agricultural Holding Questionnaire = 30-35 minutes  
Form 2003MAC-3, Commercial Livestock/Poultry Questionnaire = 15 minutes  
Form 2003MAC-4, Household Fishing Questionnaire = 10-15 minutes  
Form 2003MAC-5, Aquaculture Holding Questionnaire = 15 minutes

On the average, an enumerator can enumerate from 10 to 14 households a day, depending on the type of activities of the household. It is important for the enumerator not to dilly-dally in one particular household to be able to complete the daily standard output required.

## **2.5 Submission of Accomplished Questionnaires**

The team supervisor will inform the EN when to submit the accomplished questionnaires. It is encouraged, however, that submission be done as soon as a village is completed so that the team supervisor will have adequate time to go over the accomplished questionnaires. All accomplished questionnaires by type of holding shall be arranged chronologically using the HCN (Holding Control Number) as reference. Stack the arranged questionnaires one after the other according to the sequential number of the questionnaire, i.e. the Form 2003 MAC-2 at the top, MAC-3, follows, MAC-4, then MAC-5. Put on top of the stack FORM 2003MAC-1 to serve as the control in checking the completeness of submitted questionnaires. Put these arranged questionnaires in a Flat Pad and tie them securely. Before submitting these questionnaires, review them for completeness of entries, consistency and reasonability of entries and accuracy of geographic identification.

## Chapter 3

### CONCEPTS AND DEFINITION OF TERMS

This chapter discusses concepts, terms, classifications and their corresponding definitions that would be used and adopted in the collection of information for the Myanmar Census of Agriculture 2003. Further explanations regarding agricultural holding are found in Chapter 4, HOW TO ACCOMPLISH FORM 2003 MAC-2 AGRICULTURAL HOLDING QUESTIONNAIRE. Other concepts and definition of terms for commercial livestock and/or poultry, fishing and aquaculture may be found in Chapter 5, ACCOMPLISHMENT OF OTHER QUESTIONNAIRES.

#### 3.1 Concept of Household

The household is the basic unit of listing to identify the different types of holdings to be covered by the Census of Agriculture (CA). The household concept is based on the arrangements made by persons, individually or in groups, for providing themselves with food and other essentials for living under one roof.

A household may either be:

- a one-person household who makes provision for his/her own food or other essentials for living without combining with other person to form part of a multi-person household, or
- a multi-person household composed of a group of two or more persons living together who make common provision for food or other essentials for living.

There are various types of households, as follows:

- a) One-person household- a single person living by himself/herself.
- b) Nuclear household is defined as a household consisting entirely of a single family nucleus. A family nucleus consists of one of the following types:
  - (1) a married couple without children;
  - (2) a married couple with one or more never-married children;
  - (3) a parent (either father or mother) with one or more never married children.
- c) Extended household is defined as a household consisting of either:
  - (1) a single family nucleus and other persons related to the nucleus  
Example: Parents and unmarried children as the nucleus and sisters/brothers of either of the parents.
  - (2) two or more family nuclei related to each other  
Example: Parents and unmarried children as the nucleus and married children together with their family.
  - (3) two or more family nuclei related to each other plus other persons related to at least one of the nuclei; or  
Example: The example in (2) above plus a sibling of parents or in-law
  - (4) two or more persons related to each other but none of whom comprises a family nucleus.

Example: Brothers and sisters living together without parents.

- d) Composite household, defined as a household consisting either:
- (1) a single family nucleus plus other persons, some of whom are related to the nucleus and some of whom are not;  
Example: Extended household plus unrelated persons like boarders staying with the household.
  - (2) a single family nucleus plus other persons, none of whom is related to the nucleus;  
Example: A nuclear family as defined in (a) above plus boarders who are not relatives or helpers.
  - (3) two or more family nuclei related to each other plus other persons, some of whom are related to at least one of the nuclei;
  - (4) two or more family nuclei related to each other plus other persons, none of whom is related to any of the nuclei;
  - (5) two or more family nuclei not related to each other; with or without any other persons;
  - (6) two or more persons related to each other but none of whom comprises a family nucleus, plus other unrelated persons; or
  - (7) non-related persons only.

In the house-to-house visit, be sure to inquire about the "household" and not the "family." In many instances, there are several generations in one household where married children are still living with the parents including their families. As long as they have common arrangement in the preparation of food and living under one roof, the married children and their families would be considered as members of one household.

### 3.2 Concept of Work

The approach in the collection of employment data in this Census of Agriculture is a departure from the approach used in the conduct of Labour Force Surveys. The terms used, however, are the same and the meaning is also the same as in labour force surveys. However, the reference period used in the census is longer, which is one year compared with past week reference period for the labour force survey. Since the reference period is long, unemployment may not be measured accurately but gainful employment at any time during the reference year would be obtained.

Work as used in this census means employment on a job or business whether for pay or for profit or unpaid employment in family-operated business or enterprise either for home consumption or for sale.

The descriptions of individuals who are with a job and therefore considered as working or employed during the reference period from April 1, 2002 to March 31, 2003 are as follows:

1. Worked on own agricultural holding - These are Individuals who worked on the holding operated by the household, possibly the holder himself/herself or members of the household.
2. Worked in other agricultural holding – These are Individuals who worked in another agricultural holding as paid employees e.g. laborer and exchanged labor.

3. Engaged in fishing/fish culture (aquaculture) – These are individuals who were engaged in fishing or fish culture, either on their account or employed by others so long as it is in the fishing industry.
4. Worked in non-agricultural industry – these are members of the households who are employed either as own account worker, employer or unpaid family worker in own-operated household business or enterprise which is non-agricultural or non-fishing or in other non-agricultural establishments not owned by the household.

To provide a broader basis in determining whether an activity is classified as economic or not, the following listing of productive activities in the informal sector and value-addition activities defined by the process of production and products produced are enumerated below.

The activities would be considered as unpaid family work if undertaken by a family or household member without compensation:

*Process of production and products produced for sale - usually done around the house:-* can be classified under Code 4 – Worked in non-agricultural industry

- making fish paste or shrimp chips (manufacturing industry)
- processing fish products/drying fish (Manufacturing)
- weaving (manufacturing)
- weaving palm leaves for house roofs (manufacturing)
- gathering firewood (services)
- fetching water (services)

Under Code 1 – Worked on own agricultural holding so long as they meet the definition of a holding. If not meeting the definition but the household operates an agricultural holding, these are still considered as work in own holding even such activities are performed within the home lot. Conceptually, the home lot is a part of the agricultural holding, regardless of its location.

- backyard raising of animals
- backyard chicken, duck or quail raising
- vegetable gardening

Activities with economic value usually done by women and children within premises of the home:

- making baskets for packaging vegetables (manufacturing)
- preparing manure (can be considered manufacturing activity if the process involves physical or chemical change)
- making/repairing fishnets (manufacturing)
- mending and cleaning livestock shelter (services)
- weeding vegetable garden (agriculture)
- gathering fuel (services)
- gathering fodder for animal feed (agriculture)
- pounding rice (husking paddy) (manufacturing because there is process of changing the product physically, from grain to rice)

- selling produce or bringing produce to the market (may be ancillary activity of the holding therefore it will be classified as under agriculture)
- fishing (fishery)
- fetching water outside the home (services)
- cooking and bringing food to hired workers on the holding (may be ancillary activity of the holding therefore it will be classified as under agriculture)
- activities in connection with the work on the holding, like land preparation, planting, harvesting, weeding, picking of fruits, drying, threshing, marketing of produce, etc. (Agriculture)

Housekeeping or homemaking activities as defined in this census involve only the following care-giving activities: cooking, washing, ironing, darning clothes for the family, cleaning the house and rearing of children and care of household members. These are not considered as economic activity.

#### How to deal with boundary problems:

Since the time frame is long, we cannot possibly accept all the different economic activities that an individual had engaged in during the reference year. The following rules should be followed in reporting as to which of the four categories to classify a person with multi-activities because only one category is allowed:

#### 1) An economic activity prevails over non-economic activity.

Examples:

- Suppose, a housewife most of the time does household chores but was engaged in an economic activity for at least one hour a week in say backyard gardening, then gardening activity prevails. This housewife should be classified under Code 1.
- A son or daughter goes to school but during weekend, he/she helps in the agricultural holding in weeding of plants, taking care of animals, etc. the activity should be classified under Code 1
- A housewife tends a small store within the premises of the house, she should be classified under Code 4.

#### 2) When two or more economic activities were engaged in by an individual, classify him or her in that activity where he/she he worked the longest during the reference year.

Examples:

- Suppose an agricultural holder drives a taxicab during weekends or whenever he is not busy with his farm, he should still be classified under Code 1. A farmer once classified as such should always be classified as a farmer even if he pursues other occupation in-between-farming activities.
- Suppose a teacher went on a maternity leave and helped in the holding for some minor activities like cooking for the workers hired in the field. She should still be reported as a teacher under Code 4. The same holds true for a teacher, once classified as such, will always be classified as teacher, unless the person resigned from the teaching profession and has not rendered at least 6 months of service. However, if the engagement is at least 6 months, then Code 4 will prevail.

- 3) When two or more activities have been engaged in by an individual with equal duration, then inquire from the respondent to which activity he/she should be reported. However, since this is an agriculture census, and the most recent activity has been engaged in the holding, priority of reporting should be Code 1 to capture the contribution of the different household members in the raising of crops and livestock on the holding.

### 3.3 Concept of Agricultural Holding and Agricultural Holder

#### 3.3.1 Holding

An agricultural holding 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 clan or tribe, or by a juridical person such as corporations, cooperative or government agency.

Additional points in the identification of a holding:

- holdings may have no significant land area, e.g. poultry hatcheries or holdings keeping livestock for which land is not a necessary input for production.
- .holdings may be operated by persons who do not have any rights to agricultural use of the land except for the products of the trees grown on it (tree holding).
- various economic agricultural production units under the same ownership, or under the same general management, may be considered separate holdings if they are operated by different persons.
- there may be more than one holding in a household.
- if a member of a cooperative, religious organization, government agency, clan or tribe, is assigned a separate unit for agricultural production that is operated under the member's management, and over which the member has general, technical and economic responsibility, then this unit represents a holding.

Excluded are economic units engaged solely in the following activities:

- hunting, trapping and game propagation
- forestry and logging
- fishing but in the case of Myanmar's Census of Agriculture, we have defined earlier what are to be included and fishing data are collected separately from the agricultural holding.
- agricultural services, an example of this is the service in spraying pesticides or insecticides or renting out the services of a boar for breeding purposes.

#### 3.3.2 Holder

An agricultural holder is a civil or juridical person who makes major decisions regarding resource use and exercises management control over the agricultural holding operation. The holder has technical and economic responsibility for the holding and may undertake all responsibilities or delegate responsibilities related to day-to-day work management to a hired manager.

### 3.4 Type of Holdings

There are two general types of holdings that are of interest in this census, namely: the Agricultural household holding and the Non-household holding or Special Holding that are in operation during the reference year, agricultural year 2002 to 2003 from April 1 2002 to March 31, 2003.

1. Agricultural holding operated by the households may be classified into the following:
  - a) Crop and livestock and poultry holding - a household engage in agricultural activities that meet the definition of an agricultural holding that involves the raising of crops and livestock and poultry mainly for home consumption.
  - b) Crops holding - a household engaged in the cultivation of annual and/or permanent crops in at least one-tenth of an acre of land equivalent to about 4,356 square meters.
  - c) Livestock/poultry holding – a household engaged in raising livestock and/or poultry that meets the definition of an agricultural holding whose production is **mainly for home consumption**. Land may not be an essential factor of production.
2. Non-household holding/special holding – there are three special holdings, namely:
  - a) Commercial livestock and poultry holding – a holding operated by either a household or establishment whose livestock and poultry products are **mainly for sale**.
  - b) Household Fishing holding – a household where some or all of its members were engaged in fishing during the reference period. It is possible that this same household operates an agricultural holding and commercial livestock and poultry holding.
  - c) Aquaculture holding – a household engaged in the culture of fish like breeding, stocking and feeding in own fishpond or any kind of production facility owned by the household during the reference year.

#### 3.4.1 Agricultural Holding defined for Myanmar Census of Agriculture 2003

Agricultural holding is defined as the raising of crops in at least 1/10 (0.10) acre of land or 4,356 sq. ft, or raising of at least 4 heads of small livestock or 2 heads of large livestock or at least 30 heads of chicken or ducks, regardless of the area of the land. A combination of large and small livestock together with poultry may still be considered as a holding using the minimum number as benchmark. The following combinations of animals and birds can form a holding:

- 1 large livestock + 2 small livestock : Ex. 1 cattle + 2 pigs ; 1 buffalo + 2 sheep or goat
- 1 large livestock + 15 heads of poultry: Ex. 1 cattle +15 ducks; 1 buffalo + 15 chicken
- 2 small livestock + 15 heads poultry: Ex. 2 pigs + 15 chicken
- 1 large livestock + 1 small animal + 15 heads of poultry: Ex. 1 cattle, 1 pig and 1 hen and 14 chicks

The household-based livestock and poultry holding mainly for home consumption will use FORM 2003MAC-2 while livestock and/or poultry holding mainly for sale will use FORM 2003MAC-3. Furthermore, a holding engaged in crop production and at the same time has a commercial livestock and/or poultry, will accomplish two forms: FORM 2003MAC-2 for the crops and FORM 2003MAC-3 for the commercial livestock and/or poultry. Also for a household engaged in crop production and at the

same time has some members engaged in fishing and aquaculture, three questionnaires will be accomplished, FORM 2003 MAC-2 for the crops; FORM 2003MAC-4 for household fishing; and FORM 2003MAC-5 for aquaculture. In short, a household may be engaged in all of the holdings as defined earlier. Therefore, the corresponding questionnaires have to be accomplished.

In summary, in the administration of the Agricultural Holding Questionnaire, only livestock and poultry raising that are mainly for home use/consumption will be included in this questionnaire. Commercial livestock and poultry raising engaged in by either households or corporations/cooperatives will use the Commercial Livestock and Poultry Questionnaire. Commercial means "mainly for sale."

### 3.4.2 Fishing holding and Aquaculture holding defined

Conceptually, aquaculture is not part of the Census of Agriculture Programme 2000 of FAO. However, fishing activities within the holding are supposed to be included for collection for the first time in the history of census taking in agriculture. Because of the importance of fish in food security for Myanmar, and considering the urgent need of the Department of Fisheries for some information about fishing and aquaculture, the Myanmar Census of Agriculture 2003 has expanded its coverage to include fishing off the holding and aquaculture activities of the population.

Fishing activities of household members on or off the holding. - Fishing households are usually without significant activities in crop and livestock raising but spend a considerable part of their time in fishing or derive a significant part of their income from fishing. To give special attention to the fishing activities of the household, whether these are pursued within the holding or outside the premises of the holding for those with agricultural holding, or purely fishing, FORM 2003MAC-4- Household Fishing Questionnaire has been designed to capture the households' fishing activities.

**Fishing** as distinguished from aquaculture, is direct catching of fish from rivers, waterways, paddy fields, etc. either by hand or with fishing gear and gathering of aquatic animals and plants either for sale or for home consumption. FORM 2003 MAC-4, Household Fishing Questionnaire is accomplished for fishing activities whether fishing is part of an agricultural holding or not.

**Aquaculture**, on the other hand, involves breeding, stocking and feeding of fish in a facility which is usually owned by the holder. FORM 2003MAC-5 – Aquaculture Holding Questionnaire is accomplished whether the production is mainly for sale or for home consumption.

To recapitulate on what questionnaire to be used by type of holding, we have the following coverage:

FORM 2003 MAC-2 AGRICULTURE HOLDING QUESTIONNAIRE – to be accomplished by households engaged in **raising crops and raising of livestock and poultry mainly for home use/consumption**. An agricultural holding may be engaged only in crop production; or may engage in crop production in combination with livestock and poultry production; or crop production in combination with fishing but the information on fishing would use another questionnaire because it is not included in the Agricultural Holding Questionnaire even if the fishing activity is done in the holding.

FORM 2003 MAC-3 COMMERCIAL LIVESTOCK AND POULTRY QUESTIONNAIRE – to be used when a household or establishment like cooperatives and corporations is engaged in **livestock and poultry raising mainly for sale**.

FORM 2003 MAC-4 HOUSEHOLD FISHING QUESTIONNAIRE – to be used for households that have members who were engaged in fishing whether within the holding or outside the holding.

FORM 2003 MAC-5 AQUACULTURE QUESTIONNAIRE - All activities involving fish culture whether mainly for sale or for home consumption.

### **3.5 Land Use Classification and Parcel**

#### **3.5.1 Land Utilization**

Land use provides a classification of the different parcels that comprise the holding at any time during the agricultural reference year. There may be some difficulty in providing for the classification of a land when there is a mixture on the use of the land. However, for consistency of application in this census, when a permanent crop is associated or inter-planted with temporary or annual crop, the permanent crop is given priority in the classification. In Myanmar, there are only few land use classifications as follows:

1. Land under annual/temporary crops – is a parcel or parcels of land comprising the holding devoted to the growing of temporary crops whose life cycle does not exceed one year. The physical area in acres is reported.
2. Land under permanent crops – is a parcel or parcels of land planted with permanent crops such as fruit and nut trees, e.g. orange, pomelo, coconut, avocado, mango, and so on, permanent flowering plants like roses and jasmine and industrial crops like tea, coffee, cotton, rubber, and others.
3. Land under fallow- this land is left idle for a while to restore the fertility of the soil before re-cultivation. It should not remain idle for a long period of time, otherwise, it will be reclassified as permanent meadows and pasture. The land to be considered under fallow should be idle for at least one agricultural year but not more than 3 years. Under the broad classification, land under fallow is an arable land.
4. Other land – the home lot of the holder regardless of its location is included in this classification as part of the holding. Other land also includes the area cultivated without permission of government. These lands are not classified as agricultural land but holders may have encroached on them and planted to agricultural crops. Vacant land along the highways are often used without permission from the government. Also some industrial land or institutional land (school campuses) may have been cultivated and planted with crops. These are to be reported under this category.

#### **3.5.2. Type of Land**

In addition to the international land use classification is the type of land as classified by the Settlement and Land Records Department (SLRD) for assessment of land for revenue purposes. These are as follows: Paddy, Ya, Kaing, Garden, Dani, Rubber, Taungya, Squatter, and village. The

type of land describes the classification of the land in accordance with the record of the parcel kept at SLRD as described below:

- 1) Paddy - classified as rice land
- 2) Ya – classified as dry land
- 3) Kaing \_ classified as alluvial land
- 4) Garden – classified as garden land to be planted with permanent trees
- 5) Dhani- land along mouth of the river within reach of salt water that limits the planting of crops except Dhani trees and other palm trees, the only plants adaptable to the soil.
- 6) Rubber -land where rubber trees grow
- 7) Taungya- land with at least a slope of 45 degrees.
- 8) Squatter land– this land belongs to the government but occupied without permission to use land.
- 9) Village – land designated for residential area purposes.

### 3.5.3. Intensity of Land Use

Intensity of land use refers to the number of times the parcel has been harvested to crops during one agricultural year. The area referred to here is not physical area but referred to as the effective area, where the physical area of the parcel is counted as many times as it is used. When double cropping or triple cropping is practiced, we normally ask what crops were planted during the cropping season to account for the effective area.

### 3.5.4 Parcel defined

Parcel is defined as any piece of land entirely surrounded by other land, water, road, forest, etc. not forming part of the holding. A parcel may consist of one or more fields adjacent to each other.

A field is a piece of land in a parcel separated from the rest of the parcel by easily recognizable demarcation lines like paths, cadastral boundaries and/or hedges. A field may consist of one or more plots while a plot is a part or whole of a field which a specific crop or crop mixture is cultivated. For this census, the *ubaing* is considered the parcel.

## Chapter 4

### HOW TO ACCOMPLISH FORM 2003 MAC-2 : AGRICULTURAL HOLDING QUESTIONNAIRE

#### 4.1 General Features of the Questionnaire

This questionnaire is composed of 5 sheets with 8 major sections, namely:

- Section A.1 – IDENTIFICATION OF THE HOLDING
- Section A.2 – GENERAL CHARACTERISTICS OF THE HOLDER'S HOUSEHOLD
- Section A.3 – LAND UTILIZATION AND LOCATION OF PARCEL
- Section A.4 – PERMANENT CROPS
- Section A.5 - ANNUAL/TEMPORARY CROPS
- Section A.6 - LIVESTOCK AND POULTRY
- Section A.7 – AGRICULTURAL BUILDINGS, TOOLS, MACHINERY AND EQUIPMENT
- Section A.8 – EMPLOYMENT, FARM PRACTICES AND OTHER INFORMATION ON THE HOLDING

The back page of sheet 1 is the coding sheet for the codes of permanent crops and annual/temporary crops. Use the codes in filling up Sections A.4 and A.5. ANNEX 6 shows the codes to be used.

#### 4.2 Specific Sections and Instructions

**Section A.1. IDENTIFICATION OF THE HOLDING** – There are 12 items to be filled up under this section. Items 1-5 involve the geographic identification of the household; Items 6-7, identification of the holding; and, Items 8-12 identify the holder, the household head, the respondent and the name and address of the manager in case of juridical holding.

Item 1. State/Division - write in the space provided the name of the State or Division where the village is located. There is no need to write the code.

Item 2. District - enter the name of the district in the space provided. There is no need for the district code.

Item 3. Township – write the name of the township and enter in the 3-digit box the 3-digit unique code. Refer to ANNEX 7 for the complete list of townships and their corresponding codes.

Item 4. Village Tract/War – Enter the name of the village tract or ward, as the case may be. Then enter the 3-digit code in the code box. Obtain this code from your supervisor.

Item 5. Village/Block - write the name of the village. Obtain the 3-digit code from your supervisor. For villages, the third digit is 2 to signify that it is rural and for block, the third digit is 1 to mean that it is an urban area. Your supervisor will give the codes of villages/blocks. In the case of "Scatter" villages, so that there is some way of tracing incase there is miss-punching of codes, the Scatter village should have a prefix name, the name of the village tract. For example, the name of the village tract is Sagaing, the name of the scatter should be Sagaing-Scatter. This way, it is easy to trace where this scatter belongs. The list of villages should reflect this scheme in re-naming Scatter villages.

Items 6-7 – Household Serial Number and Holding Control Number –

Item 6- Household Serial Number (HSN) – this number came from the Listing of Households in the order the household was listed by the enumerator during the listing operation. The number is not consecutive for the agricultural holdings because other households were also listed whether they are engaged in agricultural activities or not and assigned an HCN. Refer to the list frame of the village/block.

Item 7- Holding Control Number – the HCN is consecutively numbered for all the agricultural holdings in a village or block.

Item 8 - Name of Holder - Inquire who among the members of the household is the holder of the agricultural holding. The holder is the person who makes major decisions regarding the use of resources and exercises management control over the agricultural holding operation. He has technical and economic responsibility for the holding and undertake all responsibilities or may delegate the day-to-day work management to a hired manager.

Item 9 - Name of the Household Head - Refer to the Listing of Households for the name of the household head. Just to verify whether the name is still the same, inquire from the respondent who is the household head. The household head is the person of authority in the household and regarded as such by the members.

Item 10. Name of Respondent – Enter the name of the respondent who provided the information in the questionnaire. If the respondent is the holder and the household head at the same time, then Item 8,9 and 10 will have the same entries.

Item 11. Relationship to the holder – write the relationship of the respondent to the holder. If the respondent is the holder, then write “holder.” Otherwise, specify the relationship like spouse, son/daughter, etc.

Item 12. Name of Manager and his/her address in the case of juridical holder.

## Section A.2. GENERAL CHARACTERISTICS OF THE HOLDER’S HOUSEHOLD

1. List all the members of the household starting with the household head, spouse, unmarried children from oldest to youngest, married children and their family, relatives of head, relative of spouse, other relatives and other unrelated persons who are members of the household. **Enter or encircle** the codes in the appropriate columns.

Inquire first on the total number of the members of the household and enter on the box provided. Then inquire how many males and how many females and enter the figures in the appropriate boxes provided. If the respondent cannot tell you outright the number, then list them down according to the order of enumeration as printed in the questionnaire, after which the summary statistics can be prepared. However, if the given data do not match with the number of members after enumeration, rectify the entry in the boxes. During the listing, the total membership of the households was also enumerated but it should be the most recent one that should be entered in the spaces provided.

Total: \_\_\_\_\_ Male: \_\_\_\_\_ Female: \_\_\_\_\_

## Order of Enumeration of Household Membership

Before writing anything under the column for membership, be sure to find out first about the composition of the household as of the time of visit before listing the members and their relationship to the household head. It is possible that there may be several families living together under one roof but if there is no common arrangement in the preparation of food, then they are treated as a separate household. The key to the identification of the membership of the household is that they have common arrangement in the preparation of food (eating together or sharing the food from one pot) and that they live under one roof.

Always start listing the membership with the household head, followed by the spouse, the unmarried children from eldest to youngest, then married children and their corresponding families from eldest to youngest also, parents, parent-in-laws, other relatives and other unrelated members of the household like boarders or household helpers. It is important to enumerate the nuclear family first so that it is easy to account for everybody.

Based on the pilot census results, children aged 0-4 were usually missed. It is very important to obtain an accurate count of the household membership because when important indicators are computed, usually the population is needed. **DO NOT FORGET TO INCLUDE THE CHILDREN ESPECIALLY BABIES AND CHILDREN AGED 1 TO 4 YEARS OLD.**

Use scratch paper to account for every member of the household before you enter them in column 2 of Section A.2.

## Usual Residence or De Jure Concept of Enumeration

Since the result of this enumeration will generate a population count for the township, it is very important for all enumerators to record every member of the household, where ever they are at the time of the enumerator's visit. The "usual residence" concept or the *de jure* concept of enumeration shall be adopted in accounting for the membership of the household. Therefore, the inquiry on the membership of the household is

"Who **usually reside** in this house with the household as of the time of visit?"

Household members who are residents of Myanmar but temporarily away from their usual place of residence during the enumeration, like visiting some relatives in other townships or districts or state/division or transacting some business elsewhere and so on, so long as they intend to return within 6 months, then they should be included as member of the household. Also included are household members who are abroad but are expected to return within one year. The members to be included whose usual residence is the house where the household lives are the following:

1. Those who are present at the time of enumeration who are members of the household for at least six months.
2. Children who are studying elsewhere but go home at least once in 6 months;
3. Other members who are temporarily away but within Myanmar and expected to return within 6 months;
4. Other members who are abroad but expected to be back within one year, so long as they are not considered as permanent resident in other countries.

5. Additional members of the household who have not been there for at least six months but would stay permanently with the household due to birth or marriage.
6. Other persons who have not been living with the household for at least six months but cannot be enumerated elsewhere in a household.
7. Newly born babies.

The following are to be excluded as members of the household:

1. Temporary local visitors of the household who is intending to go back to their household within six months.
2. Foreign visitors of the household who is intending to return to their country of origin within one year.
3. New member of the household who have stayed with the household in less than 6 months who came from another household. The usual residence concept puts a boundary of at least 6 months residence therefore this person will still be enumerated in the household where he/she came from, except those who transferred to another household because of marriage.
4. Military personnel who live in the camp and do not visit their families at least 6 months.
5. All Diplomats and their families.

The purpose of the time boundaries in including or excluding a person as a member of the household is to avoid double counting.

**Columns (1) to (6) shall be accomplished for all members of the household**

**Col (1) Line No.** – This is pre-numbered up to 12 members. In case there are more than 12 members of the household, use another questionnaire but be sure to continue the sequential numbering of members by renumbering the Line Number of the second questionnaire starting with 13, 14, and so on. Before the Sheet number identification, write Q1 of 2 Qs to indicate that this is the first questionnaire and Q2 of Q2s for the second questionnaire. Do the same procedure in case there are more than 30 members of the household that require a third questionnaire. Be reminded to copy the necessary geographic identification in the additional questionnaires. This is rare but it is possible to find one. After the interview, staple together the two questionnaires or three as the case may be, used for one household.

**Col. (2) Name of Household Members** – List them according to the prescribed order of enumeration so that you do not miss any members of the nuclear family/ ies especially if there are several families living under one household.

**Col. (3)- (4) Relationship to Head of Household** – write in the space provided the relationship to the head of each member of the household, then enter the code in column 4. It is important that the relationship to head should be written before the code is written for manual editing purposes. The classifications are the following:

Codes for Col. (3) Relationship to Head of Household to be entered in Col (4).

- |   |                           |
|---|---------------------------|
| 1 | Head                      |
| 2 | Spouse                    |
| 3 | Son/Son-in-law            |
| 4 | Daughter /Daughter-in-law |

- 5 Grandchildren
- 6 Parents/parents-in-law
- 7 Other relatives
- 8 Others

Col. (5) Sex – Encircle code, 1 for Male and 2 for Female.

Col. (6) Age – enter the age as of last birthday of the household member. Be careful not to heap the age to multiple of 5s. For example, if the age is 4.5 years old report 4 instead of 5; 44.6, report 44 not 45. For babies less than a year, the age to be reported should be 00 (zero). This is to avoid the heaping of ages in multiples of 5. The heaping of ages can only be detected when single year age tabulation is done.

In the enumeration process after listing the name of the members and their relationship to head, sex, and age, it is easier to ask the highest grade completed for each member, starting from the head down to the last member rather than asking each member all the information individually from column 7 to column 15. This will make the enumeration easier. For write-in entries, enter the appropriate response then enter the code. For coded responses, encircle the appropriate code. Refer to the codes at the bottom of the page.

**Column (7) shall be asked of members who are at least 5 years old**

Col. (7)-(8) Highest Grade Completed – Report the highest grade completed and not the grade presently enrolled in. If the member is attending Grade 1 at the time of visit the highest education should be 1 meaning completed Kindergarten but not yet finished in Grade 1.

The codes for the highest grade completed is found at the bottom of the questionnaire.

Codes for Col. (7) Highest Grade Completed to be entered in Col. (8):

- 1 Never attended school
- 2 Kindergarten/Religious
- 3 Grade 1-4 (Primary level)
- 4 Grade 5-8 (Middle level)
- 5 Grade 9-10 (High School)
- 6 Grade 10 graduate
- 7 College undergraduate
- 8 College graduate/diploma

**Column (9)-(15) shall be asked of all members who are at least 10 years old**

Col. (9)-(10) Marital Status – write the marital status of the members who are at least 10 years old listed in column 2, then enter the code in column (10). Refer to the codes at the bottom of the questionnaire.

Codes for Col. (7) Marital Status

- 1 Never married/single
- 2 Married
- 3 Widowed
- 4 Divorced/Separated
- 5 Others, specify.....

Col. (11) Did \_\_\_ work at anytime from April 1, 2002 to March 31, 2003? Col. 11 requires a Yes or a No reply. If response is Yes, encircle Code 1, otherwise encircle Code 2.

Work means the pursuit of economic activity related to the production of economic goods and services whether for home consumption or for sale.

Col. (12) If the reply is Yes (Code 1) in column (11), what is the member's activity status. There should only be 1 activity status to be reported in col. (12). In case a member worked in several occupation of different activity status, report the activity where the member worked longest. Encircle the appropriate code.

#### Activity status codes:

- Code 1 – Worked on own agricultural holding
- Code 2 – Worked in other agricultural holding
- Code 3 – Engaged in fishing/fish culture (aquaculture)
- Code 4 – Worked in non-agricultural industry

To refresh the memory of the trainees, they should review the definitions of the different categories of activity status, reproduced below:

The description of individuals who are with a job and therefore considered as working or employed during the reference period from April 1, 2002 to March 31, 2003 are as follows:

*Worked on own agricultural holding* - These are Individuals who worked on the holding operated by the household, possibly the holder himself/herself or members of the household. Included are all activities that are agricultural in nature done in the home lot.

Examples:

- backyard raising of animals
- backyard chicken, duck or quail raising
- vegetable gardening
- mending and cleaning livestock shelter
- weeding vegetable garden
- gathering fodder for animal feed
- cooking and bringing food to hired workers on the holding
- activities in connection with the work on the holding, like land preparation, planting, harvesting, weeding, picking of fruits, drying, threshing, selling produce or bringing produce to the market, etc.

*Worked in other agricultural holding* – These are Individuals who worked in another agricultural holding as paid employees and exchanged labor.

*Engaged in fishing/fish culture (aquaculture)* – These are individuals who were engaged in fishing or fish culture, either on their account or employed by others so long as it is in the fishing industry.

*Worked in non-agricultural industry* – these are members of the households who are employed either as own account worker or employer or unpaid family worker in own-

operated household business or enterprise which is non-agricultural or non-fishing or in other non-agricultural establishments not owned by the household.

Examples of value-addition activities defined by the process of production and products produced:

- making fish paste or shrimp chips
- processing fish products/drying fish
- weaving
- weaving palm leaves for house roofs
- gathering firewood
- fetching water
- making baskets for packaging vegetables
- preparing manure
- making/repairing fishnets
- pounding rice (husking paddy)

Review the examples cited in Chapter 3.

### Section A.3 LAND UTILIZATION AND LOCATION OF PARCEL

List all parcels that comprise this holding and indicate the location, area in acres and the land use classification of the parcel. Report area in two decimal places (dp.).

Enter in the space provided the number of parcels comprising the holding. Enter the total area of the holding in acres in two decimal places. The information can be derived after filling out columns 7 to 11 under this section.

Total number of parcels \_\_\_\_\_ Total area of the holding \_\_\_\_\_

**Col. (1)** – Parcel No. – pre-numbered up to 6 parcels. If there are more than 6 parcels, use another questionnaire to record the characteristics of the additional parcel.

**Col. (2)** – Indicate Kwin Number – Inquire from the respondent if he/she knows the Kwin Number. If he does not know, inquire about the certificate of the land he is tilling.

**Col. (3 – 5)** Enter Geographic Code on the location of the parcel, for township, Village Tract/Ward and village. Code for township is obtained in Annex 7 while for village tract/ward and village codes, ask from your supervisor.

**Col (6)** Land Type - This classification is required by the SLRD in connection with its database on the land classification of parcels that are defined as follows:

#### Code

- 1 Paddy - classified as rice land
- 2 Ya – classified as dry land
- 3 Kaing \_classified as alluvial land
- 4 Garden – classified as garden land to be planted with permanent trees
- 5 Dhani-land along mouth of the river within reach of salt water that limits the planting of crops except Dhani trees and other palm trees, the only plants adaptable to the soil.

- 6 Rubber -land where rubber trees grow
- 7 Taungya- land with at least a slope of 45 degrees.
- 8 Squatter – these land belong to the government but occupied without permission to use land.
- 9 Village – land designated for residential area purposes.

Col. (7-11) Land area of parcels in acres (2 decimal places).

Col. (7) Total area of holding is the cumulative area of all parcels that comprise the holding, from col. 8 to 11.

Col. (8) Land under annual crops – Report the arable land used for raising annual/temporary crops whose growing cycle is one year or less.

Col. (9) Land under permanent crops – Report land devoted to the raising of fruit and nut trees and industrial permanent crops.

Col. (10) Land under fallow – report the area under fallow. The land must be idle for at least one agricultural year before it is considered as land under fallow but not beyond 3 years. Otherwise, the land becomes temporary meadows and pasture.

Col. (11) Other land. Report squatter land and home lot, only if at least 0.10 of an acre.

Illustration: Column (7) to Column (11)

Suppose a holding reported the following parcels with the corresponding land use during the reference agricultural year:

- First parcel – planted to coconut with an area of 5.25 acres
- Second Parcel- planted with paddy with an area of 25.10 acres
- Third parcel – is a 10-acre corn land but has been under fallow for 2 years already
- Fourth parcel- is a land with forest growth consisting of 2.75 acres
- Fifth parcel – is the home lot measuring 0.20 acres.

TOTAL NUMBER OF PARCELS 5 TOTAL AREA OF THE HOLDING 43.30

Parcel No.		Report Land Area of Parcels in Acres (2 decimal places)				
		Total Area	Land under Annual crops	Land under Permanent crops	Land under Fallow	Other land (incl. home lot)
(1)	(2-6)	(7)	(8)	(9)	(10)	(11)
1		0.20	-	-	-	0.20
2		5.25	-	5.25	-	-
3		25.10	25.10	-	-	-
4		10.00	-	-	10.00	-
5		2.75	-	-	-	2.75
6						
Total		43.30	25.10	5.25	10.00	2.95

The summary above for the total number of parcels and the total area were filled up only after accomplishing the above table.

## Section A.4 PERMANENT CROPS

Specify the permanent trees found in the holding and indicate whether compact plantation like an orchard or scattered in the different parcels comprising the holding. In the last two columns, enter the productive trees only. Non-productive trees are excluded (too young or too old to bear fruits).

**Col. (1)** Name of Permanent Crop - Enter the name of the permanent crops that are found on the holding starting with the compact plantation first. Then list the scattered permanent crops. Most scattered trees are found in the home lot of the holder. Always ask each household if they have fruit trees around their houses. Include them in the enumeration.

**Col. (2)** Crop code – Some of the crop codes are pre-printed on the right side of the table but for other codes, refer to the Coding Sheet at the back of Sheet 1 of the questionnaire. For reference purposes, refer to ANNEX 6 CODING SHEET for complete list of crops and their corresponding codes.

**Col. (3)** Parcel No. - Enter the parcel number where the permanent crops are located. The parcel number should be in relation to the number of the parcel in Section A.3 column 1.

**Col. (4)** Area (Acres) Compact Plantation – Enter the physical area of the compact plantation in acres in this column.

**Col. (5) – (6)** No. of productive Trees - these two columns are intended to enter the number of trees under compact plantation in Col. (5) and the number of scattered trees under col. (6).

**Col (7)** Usage – enter in col. (7) if the trees are raised for home consumption only and in col. (8) if the permanent crops are raised for sale. The key word is “mainly” if both means of disposals are employed, i.e. if the produce are mainly for home consumption, encircle code 1. Otherwise, encircle code 2.

### Illustration:

Name of Permanent Crop	Crop Code	Parcel No.	Area (Acres)	No. of Productive Trees		Usage	
			Compact Plantation	Compact	Scattered	1 Home Use	2 For Sale
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Coconut	<b>1101</b>	<b>2</b>	<b>5.25</b>	<b>240</b>	-	1	②
Pomelo	<b>1012</b>	<b>1</b>			<b>1</b>	①	2
Mango	<b>1064</b>	<b>1</b>			<b>2</b>	①	2

**Include the ff. crop categories:**

1011 Orange  
1012 Pomelo  
1013 Other citrus fruits  
1021 Apple  
1022 Pear  
1023 Other pome fruit  
1031 Plum, peaches  
1032 Plums  
1033 Marian  
1034 Tamarind  
1035 Cheese tree  
1036 Other stone fruit, e.g.apricot,  
1040 Grapes  
1050 Strawberry  
1061 Plantain  
1062 Custard apple  
1063 Guava  
1064 Mango

Refer to Coding Sheet for codes of other crops

## Section A.5 ANNUAL/TEMPORARY CROPS

For each parcel, indicate all annual/temporary crops planted for each cropping season to show the intensity of land use.

**Area planted** should be reported under this section. Three cropping seasons are involved. It is possible to use the land as many times as there are temporary crops planted. It is important to inquire by cropping season so as not to miss the same kind of crops planted and harvested as many times during a particular season, especially on vegetables where it may be possible to plant and harvest 4 to 6 times in the same piece of land during the entire reference agricultural year. The number of times a crop is planted and harvested in the same parcel will show the intensity of land use. If the planting happens in the same season, several lines should be used to enter the crop per planting.

There are 11 columns to be filled out, grouped according to the cropping season.

**Col. (1)** Parcel Number – enter the parcel number where temporary crops are planted.

**Col. (2)** Physical Area in acres – Report in 2 decimal places. The area of the parcel used to control entries in columns 5, 8 and 11. Entries in any one of these columns should not exceed the physical area for crops that were planted only once in each season like paddy. However, for vegetables like cauliflower, cabbage, okra (lady finger), snake gourd, it is possible to plant 2 times per season, therefore, it is possible that the area per season may be 2 times more than the physical area.

**Col. (3-5)** 1st Cropping Season (April 1 – July 31, 2002)

**Col. (6-8)** 2nd Cropping Season (August 1 –November 30, 2002)

**Col. (9-11)** 3rd Cropping Season (December 1, 2002-March 31, 2003)

Take note that the three groups have similar disaggregating, namely:

First column (Cols. 3, 6 and 9) is reserved for writing the name of the crops planted during the season.

Second column (Cols. 4, 7 and 10) is for the crop code

Third column (Cols. 5, 8, and 11) is to enter the area planted during the reference season.

### Illustration:

Parcel 1 – Area is 5 acres planted to the following vegetables:

First cropping season: April – July 2002

The growing cycle for these crops is about 45 days, thus each cropping season the land had been planted two times.

Carrots - 1.25 acres - cabbage - 1.25 same land

Cauliflower - 1.00 acre - cauliflower - 1.00 same land

Lady finger - 1.50 acres - snake gourd- 1.50 same land

Sweet pepper- 1.25 acres - Sweet peas - 1.25 same land

Second Cropping Season: August – November, 2002

Carrots - 1.25 acres

Cauliflower - 1.00 acre

Lady finger - 1.50 acres  
 Sweet pepper- 1.25 acres  
 Third Cropping Season: December 2002 – March 31, 2003  
 Cabbage - 1.25 acres      Lettuce - 1.25 same land  
 Cauliflower - 1.00 acres      Broccoli -1.00 same land  
 Snake gourd- 1.50 acres      Lady finger -1.50 same land  
 Sweet peas - 1.25 acres      Sweet pepper- 1.25 same land

Parcel 2 - area is 25 acres planted to paddy during the following period:

First cropping season:  
 Emahta variety - 25 acres

Second cropping season  
 Ngasein variety – 10 acres

Third cropping season  
 Emahta variety – 15 acres

Parcel No.	Physical Area (Acres)	1 <sup>st</sup> Cropping Season (April – July 2002)			2 <sup>nd</sup> Cropping Season (August-November 2002)			3 <sup>rd</sup> Cropping Season (December 2002 – March 2003)		
		Name of Crop	Code	Area (Acre)	Name of Crop	Code	Area (Acre)	Name of Crop	Code	Area (Acre)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	5.00	Carrots	2110	1.25	Carrots	2110	1.25	Lettuce	2090	1.25
		Cauliflower	2090	2.00	Cauliflower	2090	1.00	Cauliflower	2090	1.00
		Lady finger	2100	1.50	Lady finger	2100	1.50	Lady finger	2100	1.50
		Sweet Pepper	2100	1.25	Sweet pepper	2100	1.25	Sweet pepper	2100	1.25
		Snake gourd	2100	1.50				Snake gourd	2100	1.50
		Cabbage	2090	1.25				Cabbage	2090	1.25
		Sweet peas	2100	1.25				Sweet peas	2100	1.25
								Broccoli	2090	1.00
2	25.00	Emahta Var.	2011	25.00	Ngasein Var.	2013	10.00	Emahta	2011	15.00

It is possible that in one cropping season, several crops may be planted to one parcel, usually mixed cropping. Enter as many crops planted during a particular season and estimate the area occupied by each type of crop, see illustration above. The area planted for a particular season should not exceed the physical area of the parcel. For crops like rice grown three times only in the same land should not exceed 3 times the physical area. In the case of growing vegetables where the growth cycle is shorter, it is possible to grow 5-6 times within a period of one year. This involves intensive cultivation. In this case, the intensity of use of the land should not go beyond 6 times the physical area.

The above illustration showed that it is possible to plant an effective area of 25 acres in a physical area of 5 acres (Parcel 1) through intensive cultivation. In Parcel 2, the effective area is 50 hectares of the physical area of 25 acres. It is still possible to have an effective area of 75 acres if the land had been planted with rice 3 times, especially with early maturing varieties of rice.

Effective area is defined as the physical area counted as many times as it is planted during the cropping seasons aggregated for the entire agricultural year.

## Section A.6 LIVESTOCK AND POULTRY

### A.6.1 Current Stock and Disposals in the last 12 months

This section consists of 10 columns that would record the inventory of livestock and poultry of a household agricultural holding at the time of visit of the enumerator if the purpose of raising livestock and poultry is mainly for own use or consumption with the following question:

“Which of the following animals and fowls are kept in the holding at the time of visit? Indicate the number under each category. If livestock and poultry raising is mainly for SALE, accomplish Form 2003 MAC-3 Commercial Livestock and Poultry Questionnaire.”

In Subsection A.6.1, the current stock (at the time of visit) is being collected and the disposals refer to the last 12 months.

**Col. (1) – (2)** – Kind of Livestock/Poultry and Presence – this column shows the pre-printed kind of livestock for Large Livestock (Items 1-8), Small Livestock (Item 9-11), and Poultry (Item 12-15) and col. 2 determines whether the holding has a particular livestock or poultry by encircling 1 if present or 2 if not present in the holding.

**Col. (3 – 10)** – Number of Animals

**Col. (3)** - Total – this column asks for the total number by kind of livestock and poultry. Sometimes the respondent-holder can give outright the number but when the ages are asked, it may take a little longer. Take note that in the case of poultry, there is no need to indicate the ages. Just enter the total number of birds and enter under this column.

**Col. (4-9)** - Number of animals classified by sex and by age group.

**Col. (4) – (5)** - < 1 year old: Inquire how many of the animal stock with ages less than 1 year old are males then enter in column 4. For females, enter in column 5. Sometimes, it is easier for the respondent to start with the older animals. So fill these two columns as a residual after inquiring for the 3 years old and over and 1 to less than 3 years old. These age groups are to be used in classifying large livestock. For small livestock, the youngest age group refers to less than 2 months old, 2 months to less than 6 months and 6 months and over. In the case of Poultry, the annual disposal has to be asked. Report only those that were consumed by the household and those sold for consumption. Exclude fowls that were sold to other households for breeding purposes to avoid double counting.

**Col. (6) -(7)** – 1 to <3 years – Enter the number of large livestock (animals) classified by sex that are at least one year old to less than three years old. For small livestock, enter by sex the number that are at least 2 months but less than 6 months.

**Col. (8) – (9)** – 3 yrs. and over- Enter the large livestock that are at least 3 years old classified by male or female. For the small livestock, the age is at least 6 months to be entered under these two columns.

**Col. (10)** – Annual Disposals – this information will provide total production of large and small livestock. It is important therefore to inquire on the total disposal for the reference agricultural year from April 1, 2002 to March 31, 2003.

## A.6.2 Sale of Livestock, Dairy and Poultry products:

Is this holding engaged in the sale of the following animals/poultry products? (*Encircle appropriate response*)

**Col. (1)** – Name of Product – The first column shows a pre-printed name of the products on the sale of livestock, dairy and poultry products.

**Col. (2)** – Sell? This question screens whether the holding sold any of the pre-printed products. If the answer is Yes, encircle Code 1. Otherwise encircle Code 2. If the response is Yes, then ask the next question in column 3.

**Col. (3)** – If Yes, how often? There are four possible answers under this column. Select only one and encircle the code.

Code 1 – Daily , means the frequency of selling the product is every day

Code 2 – Weekly, means any day of the week but only one time during the week.

Code 3 – Monthly, means any day of the month but only one time for the entire month.

Code 4 - Seldom, means once in a while only.

**Col. (4)-(5)** - Volume/quantity and Unit of Measure - If the response is Yes in col. (2) there should be entry in Col. (3). Whatever is the frequency in selling the products, inquire on the volume or quantity. If the product is milk, the unit of measure should be Viss. For eggs of chicken, duck and quail, report in pieces. For "Others" specify the product in the space provided. It is possible that the holding sold live animals and birds. It is also possible that dressed fowls were sold, like turkey or chicken or live chicken or pig. All these can be reported in pieces in column (5).

**Col. (6)** – Remarks -Use the Remarks space to write any unusual observations about the livestock and poultry raising.

## Section A.7 AGRICULTURAL BUILDING, TOOLS, MACHINERY AND EQUIPMENT

There are two subsections, namely: Agricultural Buildings and Tools, Farm Machinery and Equipment. Both subsections provide information on the capital formation in agriculture that may be useful in the estimation of national accounts in agriculture. It also provides information on the ownership and usage of machinery and equipment for crop and livestock production. What is being asked is the number classified whether owned or not owned but used during the reference year.

### A.7.1 Agricultural Buildings

"Indicate below if there are agricultural buildings in the holding and estimate the area in sq. ft. Inquire if occupied at the time of visit. Occupancy of the buildings may include the activity in the holding."

**Col. (1)** -Type of Building (Non-residential) – The most common type of agricultural buildings are pre-printed, namely: Livestock (Animals) shed, Storage shed, Poultry house and Other, specify.

**Col. (2)** – Presence - This is a screening question to find out whether there is presence of any of the pre-listed agricultural buildings. Encircle Code 1 for Yes of any of the type of buildings in this column. Otherwise, Encircled Code 2. It is important that an entry should be present in this column for manual and machine editing purposes. If the answer is Yes, Code 1, then it is expected that there is an entry in column (3).

**Col. (3)** – Area in Sq. ft. - If there is a Yes (Code 1) response in Col. (2), then enter the area in square feet under this column.

**Col. (4)** – Occupied? - If there is a building in the holding, inquire whether it is occupied or not during the reference year. Even if at the time of visit, it is no longer occupied but the building had been occupied at any time during the reference period, encircle Code 1 for Yes. Otherwise, encircle Code 2 for No.

It is possible that there may be several buildings of the same type in the holding. Report the total area of all the buildings of the same type. For example, if there are 5 poultry houses, add all the total area of the 5 poultry houses and enter in col. (4). Record also whether these are occupied or not.

#### **A.7.2 Tools, Farm Machinery and Equipment**

“Which of the following farm machinery and equipment were used on the holding during the reference year? Specify the number and ownership of the farm machinery, tools/equipment and transport.”

**Col. (1)** –Tools/Equipment/Powered Machinery - In Col. (1) Items 1 to 10 are tools and equipment that are commonly found in any holding. Items 11 to 20 include powered machinery that are possessed and/or used mostly by bigger holdings. These are pre-printed for easy reference.

**Col. (2)** – Used in Holding? This is a screening question to find out what are the tools, equipment and powered machinery that were used in the holding regardless of ownership. If there is such a tool or equipment or machinery encircle Code 1 for Yes. Otherwise, encircle Code 2. This column must have an entry to be accepted as valid in machine processing. If the response is Yes, ask the next two columns, Cols. (3) and (4).

**Col. (3) – (4)** - Quantity/Number – Specify the number of tools/equipment or powered machinery. Include water pump, motorboat and motor cycle only if these are directly used in the holding's operation. However, if they are used for other purpose, they should not be included as part of capital formation.

**Col. (3)** – Owned – Enter the number owned or jointly owned with other households in this column.

**Col. (4)** - Not Owned – Enter the number of tools that are not owned but used in the operation of the holding. These tools or equipment or powered machinery or transport may either be borrowed from friends and neighbors or rented from equipment depots renting out machinery like tractors and power tillers.

**Section A.8 EMPLOYMENT, FARMING PRACTICES AND OTHER INFORMATION** – There are five subsections under this topic.

**A.8.1 For household members 10 years old and over who worked in the Holding (April 1, 2002-March 31, 2003.**

“Write the Line No. (LN) and the name of the household member who responded “Yes” (Code 1) in Col. 11 with a response of “Code 1” in Col 12, Sheet 1 into Lines 1 and 2 in the column headings below (Col. 3-9) as there are members. Then ask the activities what they did on the holding during the reference period.

**1. Activity**

Col. (1) – (2) Activity on the Holding and Time Spent on the holding – There are two categories under column (1), namely: 1. Activity; and, 2. Time Spent Working on the Holding. The different activities have been pre-printed from 1.1 to 1.11. Column 2 is the corresponding code for the activity for purposes of data capture. If any member of the households report any of the activities listed in Col. (1), encircle the code. See illustration below.

Col. (3) –(8) - Enter Line No. (LN) and first name of household member on the 1st and 2nd line. Under each member, encircle code 1 for Yes if engaged in the activity on the holding. Otherwise encircle 2 for No. Do not leave any line without any response.

Col. (3) – LN\_\_\_\_, Holder – This column is reserved for the holder of the agricultural holding. The holder may not necessarily be the household head. The holder can be any member of the household. However, if the holder is the head, the LN is 01 therefore write 01 in the space provided for LN.

Col. (4) – LN\_\_\_\_, \_\_\_\_\_. This column is intended for the first member who worked on the holding at any time during the reference year, in addition to the holder. To be more systematic in filling up this subsection, the order of entry should be in accordance with the age of the members and in the order they have been listed in Section A.2 in Sheet 1 of the questionnaire.

Col. (5) –(8) –LN \_\_\_\_\_, \_\_\_\_\_These 4 columns are to be used for other members of the households up to 4 additional members. As mentioned earlier, the entry in these columns should follow the order in which the members were listed in Section A.2 in Sheet 1.

**2. Time Spent Working on the Holding**

If there is a response in any of the activities above, it is expected that there should be an entry in any of the different categories in col. (3) to (8) if there are members who worked on the holding. There are four categories to choose from as follows:

- 2.1 Full time – those who worked everyday for at least half day
- 2.2 Part Time – those who worked everyday but few hours only.
- 2.3 Seasonal – Worked only on certain operations
- 2.4 Occasional – worked only when needed.

Illustration: All members of the household helped in the agricultural holding

Head is holder, spouse helps, 2 sons help and 2 daughters help. The entries are as follows:

Activity on the Holding and Time Spent on the Holding	C o d e	Enter Line No. (LN) and first name of household member on 1st and 2nd line. Under each member encircle code 1 for Yes if engaged in the activity on the holding. Otherwise encircle 2 for No.											
		LN 01		LN 02		LN 03		LN 04		LN 05		LN 06	
		Holder		Spouse		Son		Daughter		Daughter		Son	
(1)	(2)	(3)		(4)		(5)		(6)		(7)		(8)	
1. Activity		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
1.1 Land Preparation	01	1	2	1	2	1	2	1	2	1	2	1	2
1.2 Planting/transplanting	02	1	2	1	2	1	2	1	2	1	2	1	2
1.3 Care of Crops (water, prune, fertilize, etc)	03	1	2	1	2	1	2	1	2	1	2	1	2
1.4 Harvesting/picking/drying	04	1	2	1	2	1	2	1	2	1	2	1	2
1.5 Care of animals/poultry	05	1	2	1	2	1	2	1	2	1	2	1	2
1.6 Processing/Packaging	06	1	2	1	2	1	2	1	2	1	2	1	2
1.7 Threshing	07	1	2	1	2	1	2	1	2	1	2	1	2
1.8 Selling produce	08	1	2	1	2	1	2	1	2	1	2	1	2
1.9 Prepare & serve meals to non-household workers	09	1	2	1	2	1	2	1	2	1	2	1	2
1.10 Fishing on the holding	10	1	2	1	2	1	2	1	2	1	2	1	2
1.11 Other, Specify.....	11	1	2	1	2	1	2	1	2	1	2	1	2
2. Time Spent Working on the Holding: (Encircle appropriate code)		LN 01		LN 02		LN 03		LN 04		LN 05		LN 06	
2.1 Full time —Worked every day at least half day		1		1		1		1		1		1	
2.2 Part Time- Worked every day but few hours only		2		2		2		2		2		2	
2.3 Seasonal — Worked only on certain operations		3		3		3		3		3		3	
2.4 Occasional-Worked only when needed		4		4		4		4		4		4	

Take note that in the illustration above, the code 2's were not encircled to emphasize the entries for Code 1. However, when filling up the questionnaire, do not forget to encircle 2 if the activity has not been performed by the household member. This is needed in the data entry of responses.

**A.8.2. Hired labor (Includes exchanged labor)-** Read the question as worded in this subsection.

Be sure to include exchanged labor since this is quite popular in Myanmar. Obtain data on the type of employment by sex.

- Did this holding hire outside labor in the operation of the holding at anytime during the reference year?
  - Yes, Go to Item 2
  - No.
- If yes, indicate the total number of hired employees/laborer by sex and type of employment.

Be sure to fill up the table classifying the male and female hired workers by type of employment. The definition of the terms for full time, part time, seasonal and occasional workers is the same as discussed in subsection A.8.1.

**A.8.3 Legal Status of Holder** - there are basically 2 broad categories of legal status, private and government. Under private are classified into the following:

Private individual – is usually the person who is the holder of the holding

Private household – when two or more members of the household operate a holding then the legal status is a private household holder.

Private two or more individuals of different households –when two persons coming from two different households operate a holding.

Private corporations are private firms whose name has a suffix of “Inc.” to mean Incorporated or Ltd. to mean Limited. This is a juridical person and not a real person.

Private co-operatives – the same as private corporations, this is also a juridical person although the membership is composed of real persons.

**A.8.4 Main source of the Income of the Household** – read out to the respondent the different sources of income. Main source of income is when at least 50% of income comes from a particular source. In cases where three sources are equal in importance, select the source that is regular. Encircle only one code.

#### **A.8.5 Purpose of Production**

Encircle below the main purpose of production. Mainly means more than half of production of the holding.

- 1 Mainly for home consumption
- 2 Mainly for sale

**A.8.6 Improved Farm Practices** (Encircle which farming practices were normally carried out on the holding during the reference agricultural year) Read out to the holder the different improved farm practices and encircle those that were carried out on the holding.

**A.8.7 Environmental Problems Encountered during Agricultural Year, April 2002-March 2003.**- Read out to the holder or respondent the list of problems printed on the questionnaire and encircle appropriate response. Do not forget to obtain the area affected in acres and the crops involved. Enter the Code of the crop in the last column. Refer to coding sheet printed at the back page of Sheet 1. Inquire when the problem occurred. Encircle the cropping season when the problem or problems were encountered.

## Chapter 5

### ACCOMPLISHMENT OF OTHER QUESTIONNAIRES: FORM 2003 MAC-3, FORM 2003 MAC-4, AND FORM 2003 MAC-5

#### 5.1 FORM 2003 MAC-3: COMMERCIAL LIVESTOCK/POULTRY QUESTIONNAIRE

##### 5.1.1 General Features of the Questionnaire

This is a two-page questionnaire to be used in recording the responses of **livestock and poultry activities** that are **mainly for sale**. This QUESTIONNAIRE covers both households, government corporations and private corporations and cooperatives categorized as Special Holding. There is a list of these special holdings that came from the Department of Livestock and Veterinary. In addition, there is also a list of commercial livestock/poultry from the Listing of Households, Form 2003 MAC-1. Your supervisor would give you these lists for interview using this questionnaire or a special enumerator may be assigned to do the enumeration.

There are three major Sections of the questionnaire. These are:

##### B.1 IDENTIFICATION OF THE HOLDING

B.2. LIVESTOCK AND POULTRY- Under this section are 3 subsections as follows:

1. Livestock (large and small);
2. Poultry, and
3. Disposal of Dairy and Poultry Products.

##### B.3. AGRICULTURAL CROPS AROUND THE COMMERCIAL AND LIVESTOCK/POULTRY HOLDING

In addition to the major sections, there is additional information in the front page of the questionnaire on enumeration particulars, as follows:

**Enumeration Particulars:** - the particulars involve the name of the enumerator, date when the holding was enumerated, the name of supervisor and signature of the supervisor to indicate that he has reviewed the accomplished questionnaire. It is important for the enumerator to fill this up for every holding interviewed. In case there are problems of consistency of entries, the person responsible can be traced and contacted to make the necessary corrections during the manual processing.

**INSTRUCTION:** This questionnaire shall be accomplished if in FORM 2003MAC-1 LIST OF HOUSEHOLDS an operator of a commercial livestock/poultry holding was listed or a household agricultural holding whose livestock and poultry production is mainly for sale.

##### 5.1.2 Specific Instructions on How to Fill Up FORM 203MAC-3

**Section B.1 IDENTIFICATION OF THE HOLDING** - Like in the FORM 2003 MAC-2, the identification of the holding has to be accomplished. Copy the identification codes from the Listing of Households form, the HSN, name of Holder. If juridical holder, ask the name of the manager. Interview the manager for this form. Indicate the address of the holder/manager. Take note that there are 12 items under this Section exactly the same as in FORM 2003 MAC-2. Refer to Chapter 4 for



Col. ( 4- 11) – Number of Animals

Col. (4) - Total – this column asks for the total number by kind of livestock and poultry. Sometimes the respondent-holder can give outright the total number but when the ages are asked, it may take a little longer. Take note that in the case of poultry, there is no need to indicate the ages. Just enter the total number of birds under this column.

Col. (5-10) - Number of animals classified by sex and by age group.

Col. (5) – (6) - < 1 year old: Inquire how many of the animal stock with ages less than 1 year old are males then enter in column 5. For females, enter in column 6. For small livestock, what should be entered here are those less than 2 months old identified by sex.

Col. (7) -(8) – 1 to <3 years – Enter the number of large livestock (animals) classified by sex that are at least one year old to less than three years old. For small livestock, enter by sex the number that are at least 2 months but less than 6 months.

Col. (9) – (10) – 3 yrs. and over- Enter the large livestock that are at least 3 years old classified by male or female. For the small livestock, the age is at least 6 months to be entered under these two columns.

Col. (11) – Annual Disposals – this information will provide total production of large and small livestock. It is important to inquire the total disposal for the reference agricultural year from April 1, 2002 to March 31, 2003. Disposal here is the actual number of animals or birds that were disposed in the following manner: sale of products , given free to others or consumed by the holder's family.

## B.2.2 Poultry

(Instruction: The layers, broilers and semi-broiler have different ages for the same stage of growth. Be sure to refer to the number of weeks by type of chicken, specifically **L** for layers, **B** for broilers and **S** for semi-broiler for the different columns)

Col. (1) Kind of Poultry (Report the ages of ducks and quails according to the age of the layers (L))

This column has pre-printed kind of poultry as follows:

1. Chicken – has 3 classifications:
  - a. Layers identified as (**L**) grown from age 0 up to 65 weeks, which is more than 1 year or approximately 15 months old before they are replaced or disposed. Take note that when the layers are 18 to 24 weeks old, they are called "Pullets" when they are almost ready to lay eggs or starting to lay eggs.
  - b. Broilers identified as (**B**) raised from age 0 up to 7 weeks old before they are marketed or disposed.
  - c. Semi-broiler identified as (**S**) raised from age 0 up to 12 weeks which is about 3 months.
2. Ducks
3. Quails
4. Pigeon

5. Other poultry – this includes turkey, peacock, rabbit.

Col. (2) – Presence, Yes-No. This is a screening question to find out if there is the presence of any of the listed kind of poultry. If there is presence of a particular fowl, code 1 is encircled. Otherwise code 2 is encircled.

Col (3) – (7) Number of fowl/bird

Col (3) – Total – enter the total number of poultry by kind under this column.

Col (4) – (7) Enter the number according to the age in weeks of the poultry/birds. Refer to the following table for the age by type of poultry.

Kind of Poultry	Age in Weeks			
	Starter	Grower	Finisher/ Pullets	Layers
1. Chicken, Layer	0 - 6	7 - 18	18 - 24	24 - 65
2. Chicken, Broiler	0 - 2	2 - 5	5 - 7	
3. Chicken, Semi-broiler	0 - 4	4 - 8	8 - 12	
4. Ducks	0 - 6	7 - 18	18 - 24	24 - 65

For quails, pigeon and other poultry like turkey, geese, rabbit, etc. enter the total only.

### B.2.3 Disposal of Dairy and Poultry Products

“Is this holding engaged in the sale of the following dairy/poultry products? (*Encircle appropriate response*)

Col. (1) – Name of Product – The first column shows a pre-printed name of the products on the sale of dairy and poultry products.

Col. (2) – Sell? This question screens whether the holding sold any of the pre-printed products. If the answer is Yes, encircle Code 1. Otherwise encircle Code 2. If the response is Yes, then ask the next question in column 3.

Col. (3) – If Yes, how often? There are four possible answers under this column. Select only one and encircle the code.

Code 1 – Daily , means the frequency of selling the product is every day

Code 2 – Weekly, means any day of the week but only one time during the week.

Code 3 – Monthly, means any day of the month but only one time for the entire month.

Code 4 - Seldom, means once in a while only.

Col. (4)-(5) - Volume/quantity and Unit of Measure - If the response is Yes in col. (2) there should be entry in Col. (3). Whatever is the frequency in selling the products, inquire on the volume or quantity. If the product is milk, the unit of measure should be Viss. For eggs of chicken, duck and quail, report in pieces. For “Others” specify the product in the space provided. It is possible that the holding sold live animals and birds. It is also possible that dressed fowls were sold, like turkey or chicken or live chicken or pig. All these can be reported in pieces in column (5) under Item 7-Other

### Section B.3 AGRICULTURAL CROPS AROUND THE COMMERCIAL LIVESTOCK/POULTRY HOLDING

1. Are there some crops planted within the Livestock and Poultry Holding?
  - 1 Yes. Go to Item 2 below.
  - 2 No → End of interview
2. List down below the crops found on the holding. List first all annual crops then permanent crops. (Refer to coding sheet for the codes of annual and permanent crops.)

Col. (1) Name of Crop - Write first permanent crops, e.g. fruit trees like coconut, mango, tamarind, etc.

Col. (2) Crop Code - Refer to the coding sheet for the crop codes, see ANNEX 2.

Col. (3) Area Planted – For scattered trees, there is no need to enter the area occupied by the tree/s. However, for temporary or annual crops, report the area actually occupied.

Col. (4) Number of Productive Trees. - Report the number of trees in the holding that are bearing fruits.

### 5.2 FORM 2003 MAC-4 HOUSEHOLD FISHING QUESTIONNAIRE

**Geographic Identification:** There are six geographic identification items to be filled up as follows:

1. District - write the name of the district in the space provided.
2. Township – write the name of the township, then enter the code.
3. Village tract/Ward - write the name of the village tract or ward then enter the 3-digit code in the box provided.
4. Village/Block – write the name of the village or block then enter the code in the code boxes provided. If you recall, the third digit is the code that indicates whether the area is rural or urban.
5. Household Serial Number (HSN) – this number can be obtained from the Listing of Households in FORM 2003MAC-1.
6. Holding Control Number (HCN)- this is also found in the Listing of Households form.

All the above geographic identification items can be accomplished before going to the field to interview the household.

**INSTRUCTION:** Accomplish this questionnaire only if there is a member of the household who fished or collected fish, aquatic plants/animals, as listed in FORM 2003 MAC-1 LISTING OF HOUSEHOLDS engaged in fishing on-farm or off-farm. It is possible that C.1 and C.2 may be answered positively by two or more members of the household. Consolidate their responses in the table in C.4. If a member of the household operates a fishpond or engages in fish culture, Form 2003 MAC-5 should be accomplished.

Section C.1 Did any member of the household engage in fishing on the agricultural holding? 1 Yes  
2 No

This is a screening question to ensure that what was listed in the Listing of Households under "Fishing" is correct. Whether the reply is Yes or No in this section, go to Section C.2 and ask the question.

**Section C.2** Did any member of the household with agricultural holding engage in fishing off-farm?

- 1 Yes, Go to C.4
- 2 No, Go to C.3.

The purpose of this question is to capture the fishing activities of household members that are done outside the agricultural holding. If the response is Yes, C.4 should be accomplished. Just in case there is a Yes reply in Section C.1, the activities of the household members should be consolidated in the table under Section C.4.

**Section C.3** Did any member of the household without agricultural holding engage in fishing off-farm?

- 1 Yes, Go to C.4
- 2 No → Go to C.5

**Section C.4** If Yes in any of the above questions, accomplish the table below.

#### C.4.1 Fishing Information

**Col. (1)** Fishing Location - There are 6 pre-printed possible fishing locations. Most of these refer to fishing off-farm. For fishing within the agricultural holding the choice may be limited to paddy fields and canal/stream when the irrigation canal is adjacent to the holding. In practice, within the paddy field, a small pond is prepared to store the fish within the holding. Usually the catfish and mudfish are the common fishes found in paddy fields. Sometimes Carp and Tilapia are also found in rice fields but these fishes are not fed or taken care of therefore they are fishing activities.

Fishing off-farm include fishing in rivers, streams, mangrove creek or in the sea that can be pursued by some members of agricultural holding.

**Col. (2)** Code – This column shows the pre-coded responses for the fishing location. Encircle the code of the response on Fishing Location.

**Col. (3)-(6)** Who among household members fish/collect fish or aquatic plants/animals?

**Col. (3)-(4)** – Member 15 years old and over: Male (col. (3)) and Female (Col. (4)) - Enter in the appropriate column the number of members at least 15 years old who fished or collected fish, aquatic plants/animals during the agricultural year, April 1, 2002 to March 31, 2003, enter in col. (3) the males and col. (4) the females.

**Col. (5) – (6)** - Member under 15 years old: Male (col. (5)) and Female (col. (6)) - Enter in the appropriate column the number of members children less than 15 years old who were engaged in fishing during the agricultural year, April 1, 2002 to March 31, 2003, by sex.

**Col. (7)** - Enter the code of the fishing gears used. If there are several persons who were engaged in fishing and may have used different fishing gears, enter the codes of the fishing gears but limit only to 5 kinds of gears. The entry would be a 5-digit code. An example of the entry with 5 gears would be 2 3 4 6 8 or 1 2 3 4 5 in col. (7\_

Col. (8) - Main Purpose of production: 1 for Sale; 2 for Home consumption. - Encircle appropriate code. If fishing is for home consumption, encircle 2. If production is mainly for sale, encircle 1.

C.4.2 Is a boat used for fishing? 1 Yes →How many? Number: powered\_\_ Not Powered\_\_  
2 No

Enter the number of boats with power (engine), if any or boat not provided with power.

### Section C.5 Agricultural Crops Around the Residential lot (Only households who do not have any agricultural holding shall accomplish this section; "Yes" response in Section C.3 above.)

List down below any agricultural crops found within the residential lot. If backyard garden is present, specify the area planted during the reference agricultural year from April 1, 2002 to March 31, 2003. For scattered fruit trees, enter the number in col. (4) but no need to enter area planted in col. (3).

To fill up the table, refer to instructions on how to fill up the different columns in Section B.3 under FORM 2003 MAC-3 Commercial Livestock and Poultry Questionnaire.

## 5.3 FORM 2003MAC-5 AQUACULTURE QUESTIONNAIRE

### INSTRUCTION:

This questionnaire shall be accomplished only if there is an operator of an aquaculture holding as listed in FORM 2003MAC-1 LISTING OF HOUSEHOLDS.

### 5.3.1 General Instructions

This aquaculture questionnaire will be used for any kind of aquaculture activities on or off the holding whether it is for home consumption or for sale. As previously explained, the Census of Agriculture for Myanmar has expanded its scope to include all fishing activities of household including the culture of fish or aquaculture farming.

When fish is caught from paddy or irrigation canal or from any body of water without feeding the fishes or breeding them or caring for them, then this is classified as the traditional type of fishing. However, when the fish is taken cared of by feeding, breeding and stocking, with a production facility like a fish pond, pen, and so on, this is aquaculture. Use FORM 2003MAC-5 to enter the information about this activity. This is a one-page questionnaire with only two subsections, namely: I. Identification of the Holding and II. Aquaculture activities. BE REMINDED THAT ONLY THOSE ENGAGED MAINLY FOR SALE WILL ACCOMPLISH THIS AQUACULTURE FORM.

### 5.3.2 Specific Instructions in Filling Up the Form

**IDENTIFICATION OF THE HOLDING** – Like in the other forms, accomplish the geographic identification block. Do not forget to enter the codes in the code boxes provided.

**AQUACULTURE ACTIVITIES** - The table has 9 columns. the first column has only 2 pre-printed entries on the production facility.

Col. (1) Production Facility Type- Inquire from the holder which production facility type does he operate his aquaculture farm. The following are brief descriptions of the different production facilities.

Hatchery/nursery - Generally refers to installation for housing facilities for breeding, nursing and rearing of fish, invertebrates or aquatic plants to fry, fingerlings or juvenile stages. This facility may include jars, often conical in shape, made of glass, fabric, special tanks for collecting egg spawns, syringes, plastic tubes or bags for algae cultures. In some countries the seed stock for seaweed culture is also propagated artificially. These nurseries are propagated under captive condition or artificially bred.

Paddy field - This facility refers to a portion of a rice field where fish is stocked with seed and rearing them to any marketable size as long as there is standing water. (Rice-cum-fish culture)

Pond - is a facility for breeding or rearing of fish in natural or artificial fresh, brackish and sea water enclosures in which at least one, but usually all, surfaces are constructed from soil. Pond culture is usually carried out in stagnant waters with periodic water exchange or water flushing is done through inlets and outlets.

Pens, cages – these facilities involve the rearing of aquatic animals or plants within fixed pens or floating cages net enclosures. The pens and cages may be set in lakes, rivers, reservoirs, canal systems, mining pools, bays, coves, estuaries, or in open sea. The enclosures are usually supported by frameworks made of metal, plastic, bamboo or wood

Cement tanks – are structures made of cement of varying sizes that are generally built above ground level. Tanks can be round, oval (D ended tanks) or four-sided and vary in size from 1 to 25 meters. These tanks are usually stocked at high density with fish and usually have an inlet pipe for clean oxygenated water and a waste outflow pipe and, depending on size, may also have paddle wheels or other types of aerators to supplement oxygenation.

Others – include facilities like rafts, ropes or stakes usually used to culture shellfish, notably mussels, and sea weeds usually conducted in open waters using rafts, long lines or stakes.

Col (2) Units-this is the unit of measure in reporting the entry in column (3).

Col (3) Total water area of production unit – Make an estimate of the area of the facility, if it is within your sight, otherwise just ask from the respondent the actual physical area of the facility.

Col (4) Type of water used – Enter the code of the type of water whether fresh, brackish, or seawater. Brackish water is usually found in the mouth of the river(where the seawater and fresh water mix).

Col (5) Principal species cultured – Read out to the holder/respondent the different species written at the bottom of the table and enter the corresponding code in this column.

Col (6) Stocked with fingerlings? – This is answerable by Yes or a No. Encircle appropriate response. Fingerlings are small fishes, the size of one's finger, which are used to seed the production facility.

Col (7) Fed? – Answerable by Yes or a No. Feeding the fishes means providing food for the fish in capture.

Col (8) Is any sold? – Answerable by Yes or a No.

Col (9) Location of production facility: Write the township and village where the production facility is located.