

I. RATIONALE

Basic and current data on agriculture are usually generated through national censuses and surveys. However, data from these sources are too aggregated. Thus, the available data series are deemed inadequate to meet the needs of planners and policy makers of local government units, particularly the cities/municipalities and barangays. What they require are more disaggregated information in analyzing the agricultural situation in their localities.

In response to the felt need for comprehensive, timely and reliable data at the municipal and barangay levels of disaggregation, the Bureau of Agricultural Statistics (BAS) has conceptualized an activity entitled **“Barangay Agricultural Profiling Survey (BAPS)”**. The BAPS is an improved version of the Barangay Screening Survey (BSS), which was undertaken by the Bureau from 1997 to 1999. The BAPS has been designed to collect information on the basic structure of agriculture and fishery at the barangay level. The output of this activity would be effective inputs to the government in the identification, design and implementation of appropriate development programs and in identification of target beneficiaries. In particular, a very important application of the output of this inquiry would be in the identification of areas suitable for the production and marketing of priority commodities in a province in support to Goals 1 and 2¹ of the Department of Agriculture (DA).

II. OBJECTIVES

The general objective of the BAPS is to provide the policymakers and other data users with comprehensive agriculture profiles at the sub-national levels. Its specific objectives are:

- to establish the database on the basic characteristics of agriculture;
- to assist in the identification of areas suitable for the production and marketing of priority commodities in the province;
- to provide a common set of updated basic data for use in agricultural development planning at the municipal and barangay levels in support to government programs, particularly those of the Department of Agriculture; and
- to provide the basis for the updating/construction of new sampling frames for agricultural and fishery surveys.

¹ Refer to the DA's twin goals set forth in the Medium –Term Philippine Development Plan (MTPDP 2004-2010). Goal 1 centers on the development of at least two million hectares of agribusiness lands and aquamarine areas in order to contribute additional two million jobs by 2010. Meanwhile, Goal 2 aims at making food plentiful at affordable prices by reducing the cost of wage goods such as rice, corn, sugar, meat, fish and vegetables, among other basic food items.

III. SCOPE AND COVERAGE

This study will cover barangays with areas devoted to agricultural activities such as crop farming, raising of animals and fishing. Barangays without any farming or fishing activities but with agro-fishery facilities/ establishments will likewise be enumerated.

Data to be collected encompass all the major commodity components of agriculture and fishery sectors, which include the following:

- Basic barangay characteristics
 - General geographic terrain
 - Land area
 - Land use
 - Population
 - Vulnerability of the barangay to natural calamities;
 - Number of farming, non-farming and fishing households;
- Cropping calendar, area and yield
- Irrigation
 - Sources of irrigation water
 - Potential, service and actual area of irrigation facilities
 - Terms of payment of irrigation fee
- Inventory of livestock and poultry at backyard and commercial farms;
- List of plantations
- List of commercial livestock farms
- Number of motorized and non-motorized fishing boats
- List of commercial fishing boat operators
- Major fishing gears used
- List of landing centers
- List of aquafarm operators by type of environment, type of farm and farm area
- Modern agricultural practices;
- Availability of market/trading area for agricultural/fishery commodities, major commodities traded and their sources and destinations;
- Inventory of farm machineries;
- Access to post harvest and other facilities
- Access to basic community services;
- Other information
 - Associations providing support to farmers
 - Projects implemented in the barangay
 - Major and other sources of livelihood
 - Women's participation in agriculture/fishery related activities.

IV. METHODOLOGY

Training

Three levels of training will be conducted for this activity. The first level will be done at the BAS Central Office in Quezon City. The training will consist of three parts, namely:

Part 1 – Discussion of the objectives, scope, methods and concepts used in the survey

Part 2 – Discussion of manual editing and coding procedures

Part 3 - Training and hands-on exercises on electronic data processing (data entry, data cleaning and table generation).

Part 1 will be participated in by the members of the project team and all those who will be involved in the field operations. Inputs to Part 2 and 3 include accomplished questionnaires used in the pre-test and accomplished questionnaires containing hypothetical data. The conduct of these training components allows the project team as well as the processing team to test the procedures (both manual and electronic) and contribute to the improvement of the system. Thus, it is important that the participants in these trainings be given proper orientation on the concepts used in the survey.

The second level training will be conducted in the Provincial Operations Center (POC) with the first level training participants serving as resource persons in the discussion of objectives, scope, methods and concepts used in the survey. For this level, participants will include the Provincial Agricultural Statistics Officer (PASO) and BAS POC staff.

PASO and POC staff will conduct the third level training in their respective municipalities of assignment serving as provincial trainers and supervisors to discuss the objectives, scope, methods and concepts used in the survey. Participants will involve all the Contractual Data Collectors (CDCs) for the survey.

Field Data Collection and Supervision

The domain of the study is the barangay. The reference period is calendar year 2005, except for some items, e.g. on calamity, which require a different reference period depending on the type of information to be collected. Data gathering will be undertaken by contractual data collectors through personal interview of qualified respondents or key-informants (KIs) in the barangay and through a focus group discussion (FGD). The latter will also serve as a validating mechanism for the data collected.

A KI is a person who may be a resident of the barangay or municipality and who has a considerable degree of knowledge about the barangay and can provide reliable information on at least one area of concerns. Among the KIs who may be interviewed for this activity are the following:

- Barangay Chairman
- Barangay Official (preferably the one in charge of agriculture)
- Municipal Agriculture Officer (MAO)
- Agricultural Technician (AT)
- Municipal Planning and Development Officer (MPDO)
- Cooperative Officer
- Market Administrator
- Farmer Leader
- Trader
- Municipal Veterinarian
- Municipal/Barangay Health Worker/Officer
- Fisherman
- Fish Broker
- Landing Center Manager
- Irrigators' Association Officer
- Rural Women's Club Officer

Only one questionnaire will be accomplished for each barangay. There is no fixed number of respondents to be interviewed and their number will depend on the quality and completeness of information they will provide. However, in as much that a potential KI may not be very knowledgeable in all the data items to be collected, the data collector should see to it that the right persons are interviewed for each major group of items in the questionnaire. For example, he should not interview a fish broker or a market administrator for items on crops, livestock and irrigation since there is a big probability that they are not well versed on these concerns. Similarly, a farmer leader is less likely to provide quality information on fishery or aquaculture, unless he is also into fishing or aquaculture business.

This approach is properly handled in the design of the BAPS questionnaire. At the beginning of each block is a space for three respondents from which the desired data for that block are obtained. This type of information will be a good input during field supervision, and data validation later on since the source of information can be easily traced. Information source can be a gauge on the reliability of the information gathered for a particular item or block.

The KI approach relies heavily on the respondent's best knowledge of a particular barangay characteristic. As much as possible, the data collector should interview a KI who is an expert in a particular information or set of information being gathered. Administrative records can serve as reference of the KI in answering some items in the questionnaire. In most cases, however, a single response to an item is not enough to put high confidence in the quality of information. Thus, the data collector should interview more than one KI so he/she

can capture the information that will best approximate the situation in the barangay. He/She will write the answers of these respondents at the back of the questionnaire and summarize them later on by taking either the average or the mode, depending on which of the two will yield a more realistic data.

Focus group discussion will immediately follow after the completion of the questionnaire. In this approach, meetings with the target KIs will be set by the data collector and field supervisor with the assistance of the Barangay Chairman or other officials. The objective of the discussion will be to validate and firm up the collected information about the barangay. This will ensure that all the collected data represent the best estimate of the basic characteristics of the barangay and are acceptable to most, if not all, the KIs.

The list of all barangays taken from the Philippine Standard Geographic Classification (PSGC) will be used in the BAPS. This is to ensure that none of the barangays in the province is left out during data collection. The PSGC is a listing of all municipalities and barangays in the country with their corresponding geographic codes being used in the Philippine Statistical System (PSS).

The data collectors will be closely supervised by the BAS POC staff. To the extent possible, spot checks will be done by the supervisors to all data collectors. This is to make sure that errors committed during initial interviews are corrected right on the spot and hence not carried over to subsequent interviews. The supervisor may refer to the spot-checking guidelines prepared for the purpose. Aside from spot checks, follow-up meetings with the data collectors should be set by the field supervisor to assess the progress and quality of their work and discuss with them the problems they encounter in data gathering. He/she must see to it that all gray areas are clarified and all the problems encountered as well as the corresponding actions taken during the data collection are documented.

Field Data Processing

Data processing will be done at the POC in two stages: manual editing and electronic data processing. Manual editing involves item-by-item checks on the consistency and completeness of the data and data ranges. This is the initial stage where the data are judged as acceptable or not based on the situation in the barangay. The supervisor will do manual editing of returns, although the data collector should also see to it that the information collected are complete and acceptable before the questionnaires are submitted to him/her. A set of manual editing procedure will facilitate the completion of this activity.

Electronic data processing will be done at the ROC and POC with the RPO and PPO on top of the activity. This involves data coding, encoding, electronic data cleaning and generation of summary statistics. Before the data are submitted for electronic processing, the supervisor should see to it that these data have passed the consistency requirements set in the editing guidelines. Errors that are overlooked in the manual editing should be captured in electronic data cleaning.

Two types of outputs will be generated after the electronic processing stage: the raw data and the summary statistics. Both will be used as inputs in the data validation stage of the survey. For this reason, it is recommended that the raw data generated should be in Excel format so that the staff involved can access, examine and correct them as necessary.

Data Validation

Multi-level data validation is intended to ensure that the results of this survey are acceptable, reliable and usable. Technical working groups (TWGs) at the municipal and provincial levels will be created. The objectives are to thoroughly scrutinize the data and to allow the members of the group to evaluate the inconsistency. Input in validation includes the raw data, survey questionnaires and summary statistics. Validation materials will be prepared by the POC staff who will also be responsible in facilitating and documenting the validation process.

The municipal TWG will be composed of the BAS POC staff covering the municipality, the MAO, MPDO, Municipal Agriculture and Fishery Council (MAFC) Officer, Farm Cluster Leaders and the President of the Association of the Barangay Chairmen (ABC). The Municipal TWG will be responsible in reviewing the results of the survey at the municipal level with barangay disaggregation. They will also ensure that the changes made during the municipal data validation are reflected in the raw data and in the questionnaires. This further highlights the importance of the raw data being readily converted to Excel format right after table generation at the POC.

The PASO, the Provincial Agriculturist (PA), Provincial Agriculture and Fishery Council (PAFC) Officer, Provincial Planning and Development Officer (PPDO) to be supported by staff of the Research and Evaluation Division, and the President of the Provincial League of the MPDOs will compose the Provincial TWG. The TWG at the provincial level will be responsible in examining the results of the survey using the consolidated municipal results. They must send feedback to all municipalities on the analysis of data generated. As in the case of the municipal data validation, it is also important that all changes made in the data as a result of the validation process must be reflected at once to the municipal results and eventually to the raw data and the questionnaires.

On-site validation at each level will be conducted by the TWG if there are still unsettled issues and disagreements in the data after the review process.

V. GENERAL GUIDELINES IN THE CONDUCT OF THE BAPS

5.1 Role of Contractual Data Collectors (CDCs)

5.1.1 Main Duties and Responsibilities of CDCs

Prior to field operations, all CDCs are required to sign a Contract of Service which they should carry along all the time while the BAPS is going on. The Contract can serve as evidence of the CDCs' authority to conduct the BAPS and maybe shown to the respondents, if necessary, to obtain the needed information.

The Contract takes effect from the day the CDCs start working for the survey until the last day of data collection. As stipulated in the Contract, CDCs are required to perform the following tasks:

- a. attend the contractual data collectors' training;
- b. visit and interview as many qualified KIs until the BAPS questionnaire is fully accomplished; and
- c. record properly the responses to the questions, checking them from time to time for corrections and consistencies.

5.1.2 Other Responsibilities

CDCs are enjoined to strictly observe the following:

- a. Focus full attention on the survey. CDCs must confine themselves to the purpose of the survey during their visit to the KIs. They should not advertise, solicit nor sell anything. Politics and other controversial issues should not be discussed while conducting the interview.
- b. Know the questionnaire. CDCs must be well versed with all the details of the questionnaire. This will enable them to handle all types of problems/situations including those that are not discussed in the manual which may arise during the interview.
- c. Strive to meet high standard of accuracy and efficiency. CDCs are required to fill out the questionnaire correctly and completely. Questionnaires with noted mistake will be returned for corrections without additional compensation.
- d. Complete assignments within the specified period.

- e. Submit all accomplished questionnaires to supervisors on the designated dates, and
- f. Return to supervisor the manual and other excess survey materials at the end of BAPS field operations.

CDCs will be paid based on their actual accomplishments.

5.1.3 Procedures to Follow in Conducting the BAPS

CDCs play an important role in the success of the BAPS field operations. Thus, they should conform strictly with the rules, regulations, concepts and definition set for this survey. To further ensure the quality of BAPS results, they must also observe religiously the following procedures:

- a. Start the work in the assigned area by paying a call on the Barangay Chairman or in his/her absence, on one of the Barangay Council Members. Introduce oneself as a BAPS contractual data collector and inform him/her about the purpose of the visit in the barangay. Seek permission to do the work in the area and if possible, plan the work with him/her in order to avoid unnecessary waste of time.
- b. Familiarize oneself with the area. With the assistance of the barangay officials, prepare the sketch of the barangay showing the boundaries and other prominent landmarks such as school, chapel, etc.
- c. Identify the KIs that can be interviewed for the survey; specifically each module.
- d. Schedule visit to KIs at such time when they are most likely to be in their homes.
- e. Observe the following pointers during the interview session.
 - i. Be confident. Know what to ask. This will help convey to respondent the confidence and pride the CDC has in his work.
 - ii. Be tactful in approach. As soon as the CDC comes face to face with the respondent, introduce oneself, state the name of the agency undertaking the survey, and explain the importance of the survey.
 - iii. Do not show sign of discomfort or disgust if not offered a seat. Be prepared to interview under inconvenient circumstances.

- iv. Be courteous with respondent.
 - v. Be tactful in asking question.
 - vi. Follow the sequence of printed questions or items.
 - vii. Use English or any dialect that is convenient to the CDC and the KI.
 - viii. Resort to deeper probing if the respondent finds difficulty in giving the required information.
 - ix. At the end of interview, review the questionnaire.
 - x. Always thank the respondent after the interview.
- f. Be flexible - use discretion and judgment in selecting the KI and the most appropriate approach to any situation one may encounter.
 - g. At the end of the collection day, review the completed questionnaire. If there are errors or doubtful entries found, make call backs the following day.

5.2 Duties and Responsibilities of Supervisors

The successful execution of the field operations in an area depends heavily on the effective implementation of the survey instructions by a supervisor. The most important part of a supervisor's job is to ensure that all the CDCs in his/her area of responsibilities are doing accurately the assigned work. Efficiency and accuracy can be achieved if CDCs are well trained and closely guided so that their methods and interpretation will always be consistent with those prescribed for the operation. Among the major duties and responsibilities of supervisors are the following:

5.2.1 Pre Survey Operations

- a. to coordinate with the local government officials regarding the survey and how it can be efficiently undertaken in the area.
- b. to look and arrange for a suitable venue for the training of CDCs.
- c. to select and hire qualified CDCs who will work for the survey.
- d. to study and effect a fair distribution of workload among CDCs.

- e. to be responsible for the allocation and distribution of all survey forms and materials needed for the enumeration of his/her area of assignments.

5.2.2 During Training and Survey Operations

- a. to train the CDCs on the technical aspect of the survey.
- b. to designate the area of assignment of the CDCs and provide them with sufficient survey materials.
- c. to direct and supervise the conduct of the survey in his/her assigned area during the enumeration period.
- d. to guide and assist the CDCs in the resolutions of problems encountered in his/her area.
- e. to replace enumerators who are unable to perform their work satisfactorily.
- f. to check the quality of work of all his/her CDCs through close supervision and spot review of their work.
- g. to edit the accomplished questionnaires submitted by all his/her CDCs.
- h. to ensure proper and timely completion of the survey within the funds allocated for such operation through proper programming of survey resources and activities.

5.2.3 Post Survey Operation

- a. to complete editing of all questionnaires after the enumeration. Questionnaire must be signed by supervisors to signify that these have been properly scrutinized for completeness, consistency and accuracy.
- b. to consult with CDCs for verification of inconsistent/unreasonable entries.
- c. to organize Technical Working Groups (TWGs) at the municipal and provincial levels for validation of gathered information.
- d. to take the lead in the data reviews.
- e. to submit complete and edited survey returns to BAS provincial office.
- f. to confirm payment of CDCs wages.

VI. INSTRUCTIONS ON HOW TO ACCOMPLISH THE QUESTIONNAIRE

6.1 General Pointers

- a. Accomplish the questionnaire properly and neatly.
- b. Use pencil. Write entries legibly. Wrong entries must be properly erased and not crossed-out.
- c. Enter answers properly on corresponding spaces provided.
- d. For numerical answers, enter required number of decimal places on the space provided.
- e. Enter dash (-) for items with no responses.

6.2 Contents of the Barangay Agricultural Profiling Survey Form (BAPS Form)

The BAPS Core Questionnaire consists of seven pages with 14 blocks/modules. This is designed in such a way that the items to be generated will be common for all provinces. However, for the purpose of the **BAPS-CAR, two (2) more blocks/modules were added to address the region's specific data needs.**

- a. **Title:** Where the name of the BAPS Form, Implementing Agency and Proponent of the Survey can be found.
- b. **Reference Period:** Calendar Year 2005, except for the items on calamity and agricultural development programs/project which refer to the past two (2) years, and inventory data which refer to the first day of the enumeration month.

6.3 Specific Instructions

The BAPS questionnaire is divided into the following blocks:

- BLOCK A - Barangay Identification
- BLOCK B - Barangay Characteristics
- BLOCK C - Agricultural Crops
- BLOCK D - Irrigation
- BLOCK E - Livestock and Poultry
- BLOCK F - Fishery
- BLOCK G - Agricultural Practices
- BLOCK H - Marketing (Proceed to Block N for details)
- BLOCK I - Inventory of Farm Machineries/Other Implements

- BLOCK J - Infrastructure and Services
- BLOCK K - Other Information
- BLOCK L - Notes and Remarks
- BLOCK M - Details on Palay Crop, Organic Agriculture, Farm Machineries, Infrastructures and Services
- BLOCK N - Marketing
- BLOCK O - Contractual Data Collector, Supervisor & Verifier Identification

BLOCK A – BARANGAY IDENTIFICATION

This block accounts for the geographic information about the barangay together with the key informants and their corresponding designations.

1. Region

Write the name of the region on the space provided. Enter the 2-digit code of the region inside the boxes provided.

2. Province

Record the name of the province on the space provided. Enter the 2-digit code of the province inside the boxes provided.

3. Municipality

Write the name of the municipality where the barangay being screened is located. Enter the 2-digit code of the municipality inside the boxes provided.

4. Barangay

Write the name of the barangay being covered/screened. Enter the 3-digit code of the barangay inside the boxes provided. Refer to the Philippine Standard Geographic Code (PSGC).

5. Name of Barangay Chairman

Write down the given name of the Barangay Chairman, followed by last name.

6. Respondent's Identification

Fill up the spaces provided for the name of respondents interviewed. Write the given name followed by last name. Opposite the name of each respondent interviewed, indicate the corresponding position/designation, e.g. Barangay Chairman, Barangay Official, Farmer Leader, Trader, Cooperative Leader, Civic Leader, Municipal/City Agriculturist, Municipal/City Veterinarian, Municipal Engineer, Municipal Administrator, and others.

BLOCK B - BARANGAY CHARACTERISTICS

This block contains basic information about the barangay. This includes the classification, general geographic terrain, land utilization, population, and occurrence of calamities.

At the beginning of this block is a space for three respondents from whom the desired data for this block maybe obtained. Possible respondents are the Barangay Chairman, Barangay Secretary, and Barangay Health Worker. Indicate only the designation of the respondents on the space provided.

B.1 Classification of Barangay

Ask the respondent the updated classification of the barangay. A certain barangay is classified as either urban or rural barangay. *Encircle code.*

1 - **Urban areas/barangays** – refer to barangays having at least 1,000 inhabitants and meet at least three of the following:

- a) a town hall/barangay hall or a church or chapel with religious service at least once a month;
- b) a public plaza, a park or a cemetery;
- c) a market place or a building where trading activities are carried on at least once a week; and
- d) a public building like a school, hospital, a puericulture or health center or a library.

And in which the occupation of the inhabitants is predominantly non-farming/fishing.

2 – **Rural areas/barangays** – refer to all barangays that do not meet the requirements for classification as urban.

B.2 General Geographic Terrain

Encircle code for the general geographic terrain of the barangay.

1 – **Plains** – refers to an extensive area of land having few inequalities of surface; usually with very few trees or none at all.

2 – **Upland** – refers to highland areas; ground elevation above the lowlands along rivers or between hills.

3 – **Mountainous** – refers to areas having mountains

- 4 – ***Coastal*** – refers to areas located on or near a coast; land next to the sea and seashores.
- 5 – ***Others*** (specify) – refers to other areas (if any) other than those enumerated above.

B.3 Total Number of Purok/Sitio/Zone/Block

Ask the respondent the total number of purok/sitio/zone/block in the barangay. Record on the space provided. Some rural and urban barangays have different subdivisions like purok or sitio or zone or block. Indicate on the appropriate space provided.

B.4 Total Land Area (ha)

This refers to the physical area of the land according to its use in the barangay. Indicate the area in hectare. Areas of land may either be used as:

- a - ***Residential area*** – refers to land primarily devoted to residential houses and other buildings.
- b - ***Agricultural crop area*** – refers to cultivated cropland; non-forest areas planted within the past 12 months to low garden or field crops such as vegetables, rice, corn or sugarcane. Pasture land planted with feeder crops is included.
- c - ***Forest area*** – refers to areas with crown of more than 10 percent of trees able to reach a mature height of 5 meters or more. It includes natural and plantation forest. Areas that are temporarily not under trees but are expected to revert to forest are included. Forest tree nurseries that form an integral part of the forest should be included.
- d - ***Barren/Idle land*** - refers to land which is purposely allowed to stay idle for a certain period of time in order to recover its fertility after which it is again planted to crops.
- e - ***Mining/Quarrying*** – refers to areas where such activities (production of all metallic mineral ore and concentrates by extraction from nature and its related process) are purposely allowed.
- f - ***Others*** (specify) – refers to areas other than those enumerated above. It includes uncultivated land producing some kind of utilizable vegetable product. It also include land use for aquaculture fishpond, land occupied by buildings, parks and ornamental garden; roads or lanes; open spaces needed for storing equipment and products; wasteland; land under water; and any other land not reported above.

Indicate area in hectares and in two decimal places.

B.5 Total Population

Ask the total population of the barangay as of the latest record possibly December 31, 2005. Indicate also the number of male and female on the spaces provided.

B.6 Total number of households

Indicate the total number of households living within the barangay. For this survey, a *household* will be defined as a person or a group of persons who sleep under the same dwelling unit and usually have a common arrangement in the preparation and consumption of food. The household members may not necessarily be related by ties of kinship, although they are usually relatives. In some instances, more than one households may occupy the same dwelling unit.

Farming households

From the total number of households reported, inquire from the respondents how many are farming households.

A *farming household* is any household with at least one member operating a farm. Farm laborers are not included.

A *farm* is any parcel or parcels of land which satisfies any of the following:

- a. total area of at least 1,000 square meters or 1/10 of a hectare cultivated to crops such as palay, corn, vegetables, fruits and other agricultural crops.
- b. an area regardless of size used for raising at least 10 head of large animals like cattle, carabao, horse, etc., or 20 heads of small animals like goat, hog, sheep, etc., or 50 head of rabbit or 100 heads of poultry such as chicken, turkey, geese, etc. regardless of age and kind or a combination of large and small animals equivalent to at least 10 animal units, where one animal unit (for livestock and poultry) is one that satisfies the following characteristics:
 - 1 head of cattle, horse, carabao, etc. regardless of age and kind
 - 2 heads of small animals such as hog, goat, sheep, etc. regardless of age and kind
 - 10 heads of poultry regardless of age and kind
 - 5 heads of rabbit
- c. Total aquafarm area of at least 100 sq. m

Fishing households

A *fishing household* is any household whose primary source of income of at least a member is fishing.

Farming and Fishing households

A *farming and fishing household* is any household in which any member is/are engaged in both activities. In such case, this household is counted as one.

Non-farming / Non-fishing households

A *non-farming household* is any household in which no member operates an agricultural land. A *non-fishing household* is a household with no member engage in fishing activity.

(Take note that the numbers of the different households are strictly additive).

B.7 Did the barangay experience natural calamities such as typhoons, floods, etc? (Encircle code)

1 – Yes, specify calamity and number of times it regularly occurred over a period of time, say in the past two (2) years. Other calamities include earthquake, landslide, soil erosion, avian flu, red tide among others. However, not all typhoons caused harm to certain barangays/areas. On the contrary, these brought beneficial effects. Consider only those destructive typhoons.

2 – No, go to Block C.

BLOCK C - AGRICULTURAL CROPS

This block aims to determine the physical area devoted to agricultural crops grown in the barangay. It contains five sub-blocks, each of which pertains to palay, corn, temporary crops other than palay and corn, permanent and commercial crops.

At the beginning of this block is a space for three respondents from whom the desired data for this block maybe obtained. Possible respondents are the Barangay Chairman or any knowledgeable barangay officials (preferably the one in charge of agriculture), Municipal Agricultural Officer, Agricultural Technician, and Farmer Leader. Indicate only the designation of the respondents on the space provided.

1. Physical area devoted to palay production

This item aims to determine the types of palay farm grown in the barangay, the cropping calendar as well as the yield per hectare.

Physical area refers to the actual measurement of the land reported only once regardless of how many times it is used during a crop year.

Ask the physical area in hectare and in two-decimal places.

2. Usual Cropping Calendar and Yield per Hectare for the past three (3) years

Column 1 – Type of Palay Farm - This column enumerates the different types of palay farm by cropping period. A barangay may have three types of farm, namely irrigated, rainfed and upland in one cropping. It may have also more than one croppings in one crop year.

(Usual cropping calendar refers to the usual planting and harvesting practice in the barangay although some households vary in their cropping calendar.)

Type of Palay Farm:

Irrigated palay area - }
Rainfed palay area - } **(Proceed to Block M.1 for the details on irrigated palay area and Rainfed palay area)**

Upland palay area - a type of palay area that has no provisions for holding water and is usually located along elevated lands, along riverbanks, and between hillsides. Though palay crops planted in the area are drought- resistant and do not require standing water for normal growth, irrigation through flushing is sometimes practiced to improve the crop's performance during long dry spell.

Columns 2-3 - Cropping Calendar – or cropping period refers to the production cycle from pre-planting activities and ends in harvesting of the palay crops.

Ask the planting and harvesting month and indicate the month's code inside the boxes provided.

Columns 4-7 - Yield per Hectare

Indicate the quantity in local unit, name of local unit and the weight per local unit in fresh and in dry form in kilogram.

3. Physical Area Devoted to Corn

Inquire the physical land area devoted to corn within the barangay

4. Usual Cropping Calendar and Yield per Hectare for the past three (3) years

(Usual cropping calendar refers to the usual practice in the barangay although some households vary in their cropping calendar.)

Column 1 – Type of Corn

White - corn that is used generally for human consumption.

Yellow - corn that is used generally for animal feeds. It includes all types of corn other than white.

Columns 2-3 - Cropping Calendar – or cropping period refers to the production cycle from pre-planting activities and ends in harvesting of the corn crops.

Ask the planting and harvesting month and indicate the month's code inside the boxes provided.

Columns 4-10 - Yield per Hectare

Indicate the quantity in local unit, name of local unit and the weight per local unit in shelled form and in ears of matured and ears of green corn in pieces.

5. Temporary Crops Other than Palay and Corn

Column 1 – Name of Crop - Inquire from the respondent the other temporary crops, besides palay and corn, being grown/planted in the barangay.

Temporary crops - are those crops which are grown seasonally and whose growing cycle is less than one year and must be sown or planted again for production after each harvest like palay, corn sugarcane, camote, etc.

List all the names of the temporary crops planted or grown in the barangay in the questionnaire.

List of Temporary Crops other than Palay and Corn:

MAJOR/PRIORITY CROPS

Cabbage
Camote
 a. Tops
 b. Roots
Cassava
Eggplant
Garlic
Mongo
Onion
 a. Red
 b. Multiplier
 c. White
 d. Green (leeks)
Peanut
Sugar Beets
Sugarcane
Tobacco
 a. Native
 b. Virginia
 c. Other varieties
Tomato
Ampalaya
Asparagus
Carrots
Chayote
Gabi
Ginger
Gourd (Upo)
Habichuelas
Irish Potato
Okra
Pepper
 a. Bell
 b. Finger
 c. Chili
Ubi
Watermelon

MINOR CROPS

Alugbati
Arrowroot
 a. Native
 b. Chinese
Cantalope
Cauliflower
Cotton w/ seeds
Cowpeas
Cucumber
 a. Native
 b. Jerkins
Kadios
Kangkong
Kentucky beans (batao)
Lima beans (patani)
Pigeon Peas
Muskmelon
Mushroom
 a. Button
 b. Oyster
Mustard
Pao (Galiang)
Patola
Pechay
 a. Native
 b. Chinese
Raddish
Saluyot
Sitao
 a. String
 b. Bush
Sorghum
Soya beans
Squash
Sweet Peas
Tugue
Turnips
Winged beans
Yambeans

(At the back of page 1 of the questionnaire appears also the list of temporary crops)

Columns 2-3 - Cropping Calendar – or cropping period refers to the production cycle from pre-planting activities and ends in harvesting of a given temporary crop.

Ask the planting and harvesting month and indicate the month's code inside the boxes provided.

Column 4 - Area (ha.)

For each temporary crop identified, write its corresponding total hectareage (in 2 decimal places) on the space provided.

Columns 5-7 - Yield Per Hectare (local unit)

For each temporary crop identified, write its corresponding yield per hectare in local units (in one decimal place) on the space provided. Ask also the weight per local unit up to one decimal place.

(For additional sheet if necessary go to the back page of the questionnaire.)

6. Permanent Crops

Column 1 – Name of Crop - Inquire from the respondent the permanent crops found in the barangay.

Permanent crops are those crops which occupy the land for a long period of time and do not need to be replaced after each harvest like fruit trees.

For each permanent crop, identify the manner by which it is planted in the barangay whether compact, scattered or both.

Compact planting - refers to the area where plants or trees are planted in a regular or systematic manner. Plants or trees forming an irregular pattern but dense enough to permit the collection of information regarding the area are also considered compact.

Scattered planting - refers to the area where the trees, hills or vines are so scattered or isolated that it is difficult to adequately determine the aggregate area they occupy.

A plot or field in which one crop is planted between rows of another crop – for example sorghum and groundnuts between cotton rows – is referred to as having **inter-planted crops**. Here, the area of the inter-planted plot or field is assigned to individual crops in proportion to the area occupied by each crop. The sum of the areas of the individual inter-planted crops must be equal to the area of the plot or field.

The same applies to **mixed crops**, where more than one (often many) crops are grown unsystematically in a plot or field. Here, it is more difficult to calculate

areas and some estimation is needed. This may be based on quantities of seed used for crops in the mixture, plant density in the crop mixture, eye estimates of the proportions of area occupied by the component crops, or the number of plants per area unit. The sum of the areas of the individual mixed crops must be equal to the area of the plot or field.

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

List of Permanent Crops:

MAJOR/PRIORITY CROPS

Abaca
Banana
 a. Saba
 b. Lakatan
 c. Latundan
 d. Bungulan
 e. Señorita
 f. Butuan
Cacao
Calamansi
Coconut
Coffee
 a. Arabica
 b. Excelsa
 c. Liberica
 d. Robusta
Mango
 a. Piko
 b. Carabao
 c. Indian
Pineapple
Rubber
Cashew
Durian
Lanzones
Mandarin
Mangosteen
Papaya:
 a. Solo
 b. Hawaiian
 c. Native
 d. Sinta
Rambutan

MINOR CROPS

Ashuete
Atis
Avocado
Balimbing
Black Pepper
Breadfruit
Canistel
Castor beans
Chico
Duhat
Grapes
Guayabano
Guava
 a. Native
 b. Guapple
Jackfruit
Kapok w/ seeds
Lemon (Dayap)
Malunggay
Marang
Oranges (Dalandan)
Palm fruit/kernels
Pili nut
Pomelo
Santol
 a. Native
 b. Bangkok
Siniguelas
Star apple
Tamarind

(At the back of page 1 of the questionnaire is the list of permanent crops).

Column 2 – Area (ha.)

Write the total area (in hectares and in 2 decimal places) of each permanent crop in the barangay. Be sure to indicate the area in the proper column/s i.e. whether compact planting, scattered planting or both.

Columns 3–4 Total number of trees/hills/vines

Write the total number of trees/hills/vines of each crop separately for compact planting and scattered planting.

Total no. of bearing trees/hills/vines

From the total number reported above, indicate the number of bearing trees/hills/vines for each crop separately for compact planting and scattered planting.

Bearing trees/hills/vines are those that have borne fruit regardless of age; they may or may not have borne fruit during the reference period.

Non-bearing trees are those trees which have never borne fruit, regardless of age.

Trees/hills/vines of productive age are those that are already capable of bearing fruits. Crops that have already reached the bearing age but did not have any yield during the reference period due to climatic condition or other similar reasons are considered productive. Old trees, which are no longer productive and those trees whose branches have been destroyed and hence will not bear fruit anymore are not counted in this category. (2002 Census of Agriculture Enumerator's Manual and World Programme for the 2010 WCA: FAO 2005)

Column 5 - Planting Density (no. of trees per ha.)

Ask the respondent the number of trees per hectare and indicate on the space provided.

Columns 6–7 - Follow the instructions in filling up same portions of columns 3-4 under compact planting.

7. Commercial Farms

Commercial farms refer to farms planted with commercial crops. Commercial crops refer to the crops that are cultivated in well ordered orchards and compact plantations, but significant quantities are also collected from scattered plants, either cultivated or growing spontaneously.

Column 1 - Name of Operator/Business Name

List down the name of operator/business name of commercial farms (include ornamental plants, folial, grass) located within the barangay. Write the given name first followed by the last name.

Column 2 - Name of Crop

Ask the respondent about the name of commercial crops found in the barangay including ornamental plants, folial and grass.

Column 3 - Area Planted

For each commercial crop identified, write the corresponding hectarage (in 2 decimal places) on the space provided.

Columns 4 – 5 - Name of Contact Person/Telephone Number

Ask the respondent the name of the contact person and the telephone number if available.

BLOCK D - IRRIGATION

This block aims to gather information on the various irrigation facilities, sources of irrigation water, irrigated areas and the irrigation fees by cropping.

At the beginning of this block is a space for three respondents from whom the desired data for this block are obtained. Possible respondents are the Barangay Chairman or any knowledgeable barangay officials (preferably the one in charge of agriculture), Municipal Agricultural Officer, Agricultural Technician, Farmer Leader, Irrigators Association, and the Municipal Planning and Development Officer. Indicate only the designation of the respondents on the space provided.

Column 1 - Irrigation Facilities

Ask the respondent and indicate code of the irrigation facilities that is/are utilized in the barangay.

Irrigation Facilities:

- 1 - National Irrigation System** - a government irrigation system built or constructed and managed by the National Irrigation Administration to provide continuous supply of water for agricultural purposes to farmers in exchange for a fee.
- 2 - Communal Irrigation System** - includes all irrigation facilities constructed by NIA and turned over to Irrigators Association (IA) upon completion. Operation and maintenance become the responsibility of the IA which in turn, collects direct operating cost of the project from farmer members.
- 3 - Pumps** - an irrigation device provided personally by the operator for his farm's irrigation needs. It could be rented, borrowed or owned by him or any other members of his household. Examples are the Shallow Tubewell and Open Source Pump.
- 4 - Small Diversion Dam (SDD)** – A channel and supporting ridge constructed across the slope to collect and divert run off. The purpose of this practice is to divert excess surface water from one area for use or safe disposal.
- 5 - Small Water Impounding Project (SWIP)** - a structure constructed across a narrow depression or valley to hold-back water and develop a reservoir that will store rainfall and run-off during the rainy season for immediate or future use. Its structural height does not exceed 30 meters and has a volume storage not exceeding 50 million cubic meters. The average service area of SWIP is about 60 hectares (25-150 hectares)
- 6 - Small Farm Reservoir (SFR)** – a smaller version of SWIP and is designed to collect and store rainfall and runoff for use in a single farm. It has a reservoir area of about 300 – 5,000 square meters and can serve 0.50 – 1.00 hectare. The embankment height above ground level is 4 meters and below. It can easily be constructed using manual digging or through a bulldozer. Irrigation is done with the use of a PVC siphon pipes or pumps.

Column 2 – Sources of Water

Sources of irrigation water - refer to the original source of the water. Thus, if a canal network is used to distribute water from a dam to farms, the source of water is the dam.

Ask the respondent and indicate code/s of the source/s of irrigation water.

- | | | | |
|----------------------|--------------|--------------|---------|
| 1 - River | 2 - Lake | 3 - Pond | 4 - Dam |
| 5 - Reservoir | 6 - Deepwell | 7 - Tubewell | |
| 8 - Shallow tubewell | | | |

1. Area

Columns 3-5 - Area (ha.)

Determine the area of the irrigated farm in the barangay.

Column 3 - **Actual area** - or benefited area; the actual portion of the service area of an irrigation system planted to crops during a particular planting season and where reasonable harvest was made.

Column 4 - **Service area** - or irrigable area; the area of an irrigation system that is properly provided with irrigation and drainage facilities and irrigation and drainage services could already be rendered.

Column 5 - **Potential area** - the maximum area which an irrigation project can serve considering the extent of arable lands and the available water supply. In the case of an existing irrigation system, the potential irrigable area is limited to the area that can be serviced by the present operating level at the diversified point.

Irrigation Fee - refers to the amount spent per hectare for irrigating the palay or any other crop in hectare and by cropping period. The irrigation fee may either in cash or in kind. Indicate the amount in pesos.

Column 6 - Cropping Period

This refers to the cropping period the farmers in the barangay availed of irrigation facilities. There maybe instances that the irrigation fee varies by cropping period.

Column 7 - In Cash

This column refers to the amount paid in cash. Enter amount in nearest peso.

Column 8 - In Kind

If irrigation fee is paid in kind, compute the value in peso.

BLOCK E – LIVESTOCK AND POULTRY

This block asks for the inventory of animals raised on all backyard and commercial farms within the barangay as of the reference date. Farms located outside the barangay are excluded even if the owner or operator lives within the barangay. Include inventory of government and non-government-owned farms within the barangay.

At the beginning of this block is a space for three respondents from whom the desired data for this block maybe obtained. Possible respondents are the Barangay Chairman or any knowledgeable barangay officials (preferably the one in charge of livestock and poultry), Municipal Agricultural Officer, Municipal/City Veterinarian, Meat Inspector, Livestock Technician, Poultry Association and the Municipal Planning and Development Officer. Indicate only the designation of the respondents on the space provided.

Livestock are farm animals kept or raised for consumption, sale, work or leisure. In general, **poultry** is separated as a distinct group of farm animals. For purposes of censuses and surveys, livestock covers only those that are tended and raised by an operator.

1. Backyard Farms

Column 1 - Type of Animal

Specific types of animals are carabao, cattle, hog, goat, dog, horse, sheep, monkey, rabbit, poultry which includes chicken (referring to native/improved which includes improved native chicken, kaber, sassoo and other ranged chicken), broiler, layer, gamefowls (which includes breeders such as the hen and rooster, chicks, gamefighting cocks and others) quail, ducks (such as mallard and muscovy), turkey, pet birds, geese, ostrich and others like pigeon/dove. Use the rows without any entries but be sure to specify the type of animal or use the back page of the questionnaire for additional entries on the type of animal.

Column 2 - Inventory as of July 1, 2006 (Number of Heads/Birds)

For each type of livestock found in the barangay, get the total number of heads/birds, and raisers with or without housing provisions, as of the reference date.

Columns 3-4 - Total Number of Raisers

Ask the respondent the number of raisers with or without housing provisions by animal type. Include also those animals that fall under others.

2. Commercial Farms

Commercial farms are those having at least 21 heads of carabao, cattle, hog, goat, sheep, horse or at least 500 layers or 1000 broilers, 100 ducks, 500 quails, 50 turkeys, 20 gamefowls, 20 ostrich. Include government and non-government owned farms.

Column 1 - Business Name

List down the registered names of the commercial farms located within the barangay.

Column 2 - Name of Operator/Owner

List down the names of operators of commercial farms located within the barangay. Write the given name first followed by the last name.

Column 3 - Telephone Number of Contact Person

Ask for the telephone number of the contact person if available. This refers to the items in columns 1-2.

Column 4 - Name of Mother Company/Address

List down the name of mother company and address of commercial farms. This maybe located outside the commercial farm, e.g., San Miguel Corporation/Mandaluyong City, Tyson Agro-ventures/Caloocan City, Republic Flour Mills/Mandaluyong City, Universal Robina Corp./Quezon City.

Column 5 - Type of Animal Raised

Ask for the type of animal raised and indicate on the spaces provided. Refer to the list of animal enumerated earlier in item E.1.

Column 6 - Type of Farm Operation

For each operator listed, indicate the type of farm being operated. The type of farm refers to the type of animal being raised, e.g. breeding farm, dairy farm, layer farm, stud farm, cattle fattening, hog farm, poultry integrator farm, ranch farm, stock farm, hatchery farm, game fowl, broiler farm like: GP Farm (Grandparent Stock), PS Farm (Parent Stock), Grow out Farm (Integrator's Owned-Farm), and Contract Growers (Partnership/Integrators).

Column 7 - Farm Capacity

Ask for the maximum number of animal raised by type of farm.

Column 8 - Inventory as of July 1, 2006

For each operator and type of farm, indicate the actual number of head for livestock and number of birds for poultry farms as of the reference date.

BLOCK F - FISHERY

This block aims to gather fishery information in the barangay. This includes the fishing boats and gears used and different fishery operations.

At the beginning of this block is a space for three respondents from whom the desired data for this block maybe obtained. Possible respondents are the Barangay Chairman or any knowledgeable barangay officials (preferably the one in charge of fishery), Municipal Agricultural Officer, fisherman, fish broker, landing center manager and the Municipal Planning and Development Officer. Indicate only the designation of the respondents on the space provided.

Fishing activities include catching, gathering, culture of fish, crustaceans, mollusk, seaweeds, etc.

1. Commercial Fishing Boats (3.1 tons and above)

Commercial fishing is the catching of fish with the use of fishing boats having a capacity of more than three gross tons for trade, business or profit beyond subsistence or sports fishing.

A ***commercial fishing boat*** is defined as a boat intended for fishing activity with a gross tonnage above 3 tons.

Column 1 - Name of Operator

Ask for the name/s of operator/s and indicate in the column provided.

Column 2 - Number of Boats

Ask for the number of boats each of the operators has and indicate in the column provided.

Column 3 - Fishing Grounds

Ask the respondent the usual fishing grounds of the households in the barangay and indicate in the column provided.

2. Municipal Fishing Boats (less than 3 tons)

Municipal fishing is fishing within municipal waters using fishing vessels of three (3) gross tons or less, or fishing not requiring the use of fishing vessels.

A **municipal fishing boat** is a fishing boat with a gross tonnage of 3 tons and less, either motorized or non-motorized.

Column 1 - Type of Boats

Ask the respondent the type of boat either motorized or non-motorized.

Column 2 Number of Boats

List down the number of boats found in the barangay and indicate in the column provided.

3. Landing Centers

Landing center refers to place where the fish catch and other aquatic products are unloaded and traded.

Column 1 - Ask the name of landing center and indicate in the column provided.

Columns 2-3 - Usual Number of Boats Unloading per day

Ask the usual number of boats unloading in a given landing center per day and indicate in the column provided, i.e., municipal or commercial.

4. Inland Fishing

Inland fishing refers to fishing activities in inland water such as lakes, reservoirs and rivers including estuaries.

Column 1 - Fishing Grounds

List down the identified fishing grounds and indicate in the column provided.

Column 2 - Major Fishing Gears Used

List down the major types of fishing gears and indicate in the column provided.

5. Aquaculture

Aquaculture is a fishery operation involving all forms of raising and culturing of fish and other fishery species in fresh, brackish and marine water.

5.1 Ask the respondent for the number of seaweed farmers in the barangay and indicate on the space provided.

5.2 Aquafarm details

Column 1 - Name of Operator

Ask the respondent for the name of operator and indicate in the column provided.

Column 2 - Type of Environment

For each of the listed operator indicate the type of environment where he is operating.

Type of Environment:

Brackish water refers to a mixture of sea water and freshwater, the salinity of which varies with the tidal movements. It is characterized by fluctuations in salinity due to regular influxes of freshwater and seawater, such as in estuaries, coves, bays and fjords. Enclosed water bodies in which salinity is greater than freshwater but less than seawater are also regarded as brackish.

Freshwater refers to the type of water whose level of salinity is from negligible to zero. Examples are the reservoirs, rivers, lakes and canals.

Marine water/seawater/saltwater refers to coastal and offshore waters where salinity is high and is not subject to significant daily or seasonal variation.

Column 3 - Type of Farm

Type of Farm:

For each of the listed operators indicate the type of farm operated; the area devoted to each and the species cultured.

Fishpond - a body of water artificial or natural where fish and other aquatic products are cultured raised, and cultivated under controlled conditions.

Fishcage - a stationary or floating fish enclosure made of synthetic netwire/bamboo screen or other materials set in the form of inverted mosquito net with or without cover with all the sides either tied to poles staked to the water bottom or with anchored floats for aquaculture purposes.

Fishpen - fish enclosure made of woven bamboo screen, nylon screens or nets, other materials attached to poles staked to water bottom for the purpose of growing and/or culture of fish to various sizes in both fresh and brackish water.

Hatchery - a body of water artificial or natural where brood stock (prawn or tilapia spawned) eggs are hatched into fry under controlled condition.

Rice-fish culture - culture of fish within paddy rice fields.

Mussel farm – a farm devoted to the cultivation of mussels in suitable water area by method with appropriate intensive care for production.

Oyster farm - a farm devoted to the cultivation of oyster in suitable water area by a method with appropriate intensive care for production purposes.

Seaweed farm - a farm for the cultivation of any seaweed in any suitable water area by any method with appropriate intensive care for the production in commercial quantities.

Hatchery farm - a facility for hatching of eggs for the purpose of producing seed stock for aquaculture.

Column 4 - Area (sq.m.)

Report the area in square meters (sq. m.). ***Area*** pertains to the physical area of the farm which has already been fully developed either actually producing or operational where fish and other aquatic products are stocked, cared for and/or harvested.

BLOCK G – AGRICULTURAL PRACTICES

This block seeks to identify the various agricultural practices being done in the barangay.

At the beginning of this block is a space for three respondents from whom the desired data for this block maybe obtained. Possible respondents are the Barangay Chairman or any knowledgeable barangay officials (preferably the one in charge of agriculture), Municipal Agricultural Officer, Agricultural Technician, and Farmer Leader. Indicate only the designation of the respondents on the space provided.

Columns 1 and 2 - Agricultural Practices

Ask the respondent if the following practices are being done in the barangay. *Encircle code 1* if Yes, otherwise *encircle code 2*.

The following are some of the agricultural practices:

Integrated Pest Management (IPM) - refers to the appropriate utilization of several pest and disease control measures as cultural, chemical and biological means resulting in productive and sustainable crop production.

Cultivation of Genetically Modified Crops – refers to the living organisms that possess a novel combination of genetic material through the use of modern biotechnology; combining genes from different organisms known as recombinant DNA technology, and the resulting organism is said to be “genetically modified”, “genetically engineered”, or “transgenic”.

Cultivation of Hybrid Rice – refers to the intervarietal crosses involving two genetically different parents. The combination of two positive qualities of the parent plants results in what scientists refer to as “heterosis” or unusual hybrid vigor wherein the young seedlings are highly vigorous and the matured plant has better reproductive characteristics.

Cultivation of BT Corn/Yield Guard - refers to the cultivation of *Bacillus Thuringensis*, a genetically- modified corn variety containing proteins that kill corn borer. Yield Guard refers to other term for BT Corn commonly used by seed growers that appears in their packaging.

Organic Agriculture - refers to the ecological management system that promotes and enhances biodiversity, biological cycles, and soil biological activity and is based on management practices that restore, maintain and enhance ecological harmony. It is characterized as farming without synthetic chemicals, pesticides, herbicides and conventional fertilizers. Some of the practices are: planned crop rotation, green manures and crop covers, manuring and composting, intercropping and companion planting, biological pest control, sanitation, tillage and cultivation, mulching, fire, supplemental fertilization, biorational pesticides, foliar fertilization, esoteric practices, and buffers and barriers. **(Proceed to Block M.2 for details on organic agriculture).**

Cross Breeding - refers to livestock practice.

Columns 3-8 - If the answer is Yes, *check* or *specify* the commodity where the technique is applied. For example if vegetable, indicate the specific type.

BLOCK H - MARKETING

(Proceed to Block N for details)

BLOCK I - FARM MACHINERIES/OTHER IMPLEMENTS

For each type of farm machinery listed, ask for the number available in the barangay as of the reference date which is/are operational during the time of interview. Include government owned machineries which are serving the barangay.

At the beginning of this block is a space for three respondents from whom the desired data for this block maybe obtained. Possible respondents are the Barangay Chairman or any knowledgeable barangay officials, Farmer Leader, Market Administrator, Cooperative Leader and Dealer. Indicate only the designation of the respondents on the space provided.

Column 1 – List of Machinery/Implement

a. Transplanter - a device used for transplanting seedlings.

b. Animal drawn machineries – these refers to plow and harrow;

Plow – is a farming implement used to cut, lift and turn over soil especially in preparing a seedbed

Harrow – is a cultivating implement set with spikes, spring teeth or discs and used primarily for pulverizing and smoothing the soil.

c. Two-wheel tractor – a hand tractor with two-wheeled apparatus controlled through the handle bars by walking operator.

d. Four-wheel Tractor - an engine powered which is used to draw other vehicles or equipment such as plow or harrow, or sometimes used to provide power as for threshing. Its engine may use gasoline or diesel fuel.

e. Attachments:

i. Rotavator – commonly used for secondary workings and especially seedbed preparation. They are used with 2-wheel and 4-wheel tractors in both upland and flooded fields. Rotavators have a very aggressive action, which pulverizes the soil and buries weeds and crop residues. In some flooded situations rotavators are used for primary tillage.

ii. Disc Plow – implement with individually mounted concave disc blades which cut, partially or completely invert a layer of soil to bury surface material, and pulverize soil.

iii. Moldboard plow – implement which cuts, partially or completely inverts a layer of soil to bury surface materials, and pulverizes the soil.

- iv. Disc harrow* – a farm implement containing a plate like disk to pulverize and pack the soil, leaving surface mulch and a compact sub-surface.
- v. Spiketooth harrow* – implement consisting of long spikes attached rigidly to cross bars and staggered to attain maximum stirring and raking of soil.
- vi. Others (Specify)* – refers to other implements aside from those mentioned above.
- f. Irrigation Pump* – an irrigation device in which water is pumped from the source of supply.
- g. Hydraulic (motorized/manual) sprayer* – is a device such as atomizer, used in applying insecticides to crops.
- h. Drum Seeder* – is a cylindrical or drum like shape with side holes of regular interval with self shutters to regulate the outflow of seeds when it rolls. It has spikes and mounted on spiral springs. This is pulled manually or by a prime mover.
- i. Weeder* - a mechanical device used for removing grass from the farm.
- j. Thresher* – a machine that separates grains from stalk.
- k. Sheller* - a farm equipment which separates the kernels from the cobs.
- l. Mechanical Dryer* - a machine operated dryer. A facility used to remove moisture from newly harvested crops.
- m. Reaper* - a machine that cuts a crop and drops it in unbound gavels.
- n. Husker/Sheller* - a power machine that husks corn ears and cuts up the husks and stalks for fodder and it may be used for shelling peanut after changing/attaching certain part of a machine.
- o. Generator* – an apparatus for the manufacture of gas involving the combustion of fuel.
- p. Incubator* - an apparatus for hatching eggs; an apparatus in which microorganisms are cultivated at a constant temperature
- q. Aerator* – devices used to increase the dissolved oxygen content of the pond water to support an increased biomass. **(Proceed to Block M.3 for additional items).**

Column 2 – Total Number of Units as of July 1, 2006

Ask the respondent the total number of units available as of the reference date for every item available in column 1 and indicate in the column provided.

Columns 3-6 - Ask the respondent the question: Of the total number of units in column 2, how many were...

Column 3 - Privately Owned

Columns 4-6 - Acquired through ...

Column 4 - Local Government

Column 5 - DA (Department of Agriculture)

Column 6 - Others (example is the Cooperative)

BLOCK J - INFRASTRUCTURE AND SERVICES

This block seeks to determine the various post harvest facilities/services available in the barangay as well as the owners of these different facilities/services.

At the beginning of this block is a space for three respondents from whom the desired data for this block maybe obtained. Possible respondents are the Barangay Chairman or any knowledgeable barangay officials Farmer Leader, Market Administrator, Cooperative Leader and Dealer. Indicate only the designation of the respondents on the space provided.

1. Post harvest facilities/services

Columns 1 - 2 - Ask the question: Are the following post harvest facilities/services present in the barangay? *Encircle code 1* if Yes, otherwise *encircle code 2*.

The following are:

- a. Fixed Rice Mill*- a machine which dehulls or polishes grain in one operation and generally produces a high proportion of broken kernels. Rice mills are classified into cono, kiskisan, rubber roll and centrifugal impact.
- b. Mobile Rice Mill* – a rice mill that can be transported from one place to another to meet the demand of the farmer
- c. Corn Mill* - a mill for grinding corn. Rubber and grinder mills are used for corn mill purposes.

- d. **Feed Mill** - a mill in which stock feeds are prepared.
- e. **Solar Dryer** – is an open space use for natural method of drying harvested agricultural products like palay and corn which relies mainly on solar energy and natural air movement. This requires drying floor occasional mixing and turning of grains. Example: Concrete pavements such as basketball courts and paved roads.
- f. **Mechanical Dryer** – machine used to remove the moisture content of harvested palay.
- g. **Warehouse** – is a farm structure or building used for storage of farm products and/or other farm products. This is usually made of concrete materials.
- h. **Others (Specify)** – refers to other post harvest facilities/services aside from those mention above, e.g., ice plant, cold storage. **(Proceed to Block M.4 for additional items).**

Columns 3-4 - If Yes in Column 2, ask the respondent the name of owner/operator and telephone number of the available harvest facilities/services

Columns 5-6 - If No in Column 2, ask the respondent the distance of the barangay to the nearest post facility/service and the usual means of transportation.

2. Facilities/services

Columns 1 – 2 - Ask the question: Are the following facilities/services present in the barangay? *Encircle code 1* if Yes, otherwise *encircle code 2*.

The following facilities are:

- a. **Agricultural produce market** – tiange, oksyon market, landing center
- b. **Agri product processing facilities**- rice and corn mill, food processing
- c. **Agri machinery maintenance facilities** – repair shops of machineries
- d. **Veterinary services** – covers all professional veterinary services used to protect animal health for the livestock dept on the holding, including treatment of diseases, artificial insemination, vaccination, and surgical procedures, it includes services provided by government organizations, such as through veterinary field workers, as well as by the private sector.
- e. **Animal laboratory** – animal breeding center
- f. **Credit institution** – cooperative, pawnshop, bank

- g. *Stores for farm inputs* – stores selling fertilizers, pesticides
- h. *Dressing plants* - an establishment, either private or government-owned/operated/managed whose premises are approved and registered by the controlling authority in which poultry are dressed for human consumption.
- i. *Slaughterhouse (Abattoir)* - an establishment, either private or government-owned/operated/managed whose premises are approved and registered by the controlling authority in which animals such as cattle, carabao, hogs, horses, and goat, are slaughtered for human consumption.
- j. *Educational institution* – day care center, nursery, primary, intermediate, elementary, high school, college/university, vocational/technical
- k. *Postal service* – post office
- l. *Radio, telephone, internet services* – or other information dissemination
- m. *Health facilities* – barangay health station, rural health unit, puericulture center, clinic/lying-in, hospital, drug store, trained paramedics, traditional healer
- n. *Barangay hall* – place where the barangay officials conduct meetings
- o. *Police outpost/barangay outpost* – or either detachment or camp
- p. *Farm to market road* – a road leading from farm to municipal road excluding provincial and national roads.
- q. *Places of recreation* – basketball courts, badminton court, gymnasium
- r. *Place of worship* – chapel, church, mosque
- s. *Personal services shops* – beauty parlor, barber shop
- t. *Eateries and food shops* – carinderia, bakery
- u. *Electricity connection* – presence of electricity **(Proceed to Block M.4 for additional items)**

Columns 3-4 - If No in Column 2, ask the respondent the distance of the barangay to the nearest facility/services and the usual means of transportation.

BLOCK K - OTHER INFORMATION

This block seeks to gather other information in the barangay like the various organization, agricultural programs/projects, livelihood activities and the women's participation in agriculture and fishery.

At the beginning of this block is a space for three respondents from whom the desired data for this block maybe obtained. Possible respondents are the Barangay Chairman or any knowledgeable barangay officials Farmer Leader, Market Administrator, Cooperative Leader and Municipal/Barangay Health Worker/Officer. Indicate only the designation of the respondents on the space provided.

1. Farmer's Association, Cooperatives and other bodies providing support to farmers

Columns 1 – 3 - Ask the question: Are there any farmer's association, cooperatives and other bodies providing support to farmers?

Column 1 - Name of Association

Ask the respondent the specific name of the association, cooperative, or other bodies providing support to farmers. Indicate in the column provided.

List of Association, Cooperative and other agri-fishery related organization:

1. Farmer's Irrigators Association
2. Fishermen's Association
3. Coconut Farmer's Association
4. Swine Raiser's Association
5. Calapan Farmers Cooperative

Column 2 - Number of Members

Ask for the number of members for each of the indicated association and write down in the column provided.

Column 3 - Status

Ask for the status of the association, cooperative or other bodies and *encircle code 1* if active and code 2 if inactive.

2. Agricultural Development Programs/Projects in the barangay in the last two (2) years

Column 1 - Name of Program/Project

Ask for the name of the program/project in the barangay for the last two (2) years and indicate in the column provided. Examples of the agricultural program/project are:

- Procurement and distribution of seed
- Procurement and distribution of fertilizer
- Construction of new irrigation system
- Rehabilitation/repair of existing irrigation system
- Establishment of post harvest facilities
- Training on rice production technology
- Research and development on soil testing/seed testing

Column 2 - Sponsor

Ask for the sponsor of the particular program/project and write down in the column provided. Examples are: Department of Agriculture (DA), National Irrigation Administration (NIA), Bureau of Post Harvest Research and Extension (BPHRE), Bureau of Agricultural Research (BAR), and others.

Column 3 - Budget Allocation

Ask for the budget allocation of the particular agricultural development program/project.

Column 4 - Status

Ask for the status of the programs/projects and *encircle code*.

1 - Completed 2 - On-going 3 - Suspended 4 - Abandoned

3. Livelihood Activities

a. Major source of livelihood

Ask the respondent the major source of livelihood of people in the barangay. *Encircle code*.

- 1 - Agri Crops – like broom making, timber, charcoal making, banana chips, pop rice factory
- 2- Livestock/Poultry Raising – like Livestock/Poultry farm e.g., cattle, goat, swine, layer, broiler, gamecock, etc.
- 3 - Fishing - hatchery, aquaculture, inland fishing, commercial fishing

4 - Handicrafts - knitting, weaving, embroidery, bag making

5 - Agro-processing - like food processing e.g., tocino, tinapa, bagoong making, tapa, sardine, canning, pickle

6 - Non-agri activities- like garment making, hollow block making, light and heavy industries

b. Other means of livelihood

Ask the respondent the other means of livelihood of most people in the barangay. *Encircle codes* of all possible answers. (Same choices as in item 3.a).

4. Women's Participation in Agriculture/Fishery

a. Ask the respondent the various specific agriculture/fishery related activities usually participated in by women in the barangay. Write down on the spaces provided. Examples are: pulling of seedlings, transplanting of seedlings, weeding, harvesting, and others.

b. Ask the respondent the number of women engaged in the agriculture/fishery related activities.

BLOCK L – NOTES AND REMARKS

Under this block, ask the respondent/s to indicate any relevant notes pertaining to the barangay.

BLOCK M – DETAILS ON PALAY CROP, ORGANIC AGRICULTURE, FARM MACHINERIES, INFRASTRUCTURES AND SERVICES

This block seeks to gather details about the cropping calendar and yield by type of palay farm, organic agriculture, farm machineries/implements, infrastructure and services.

At the beginning of this block is a space for three respondents from whom the desired data for this block maybe obtained. Possible respondents are the Barangay Chairman or any knowledgeable barangay officials Farmer Leader, Market Administrator, Cooperative Leader, and Dealer. Indicate only the designation of the respondents on the space provided.

Item 1, Column 1 - Type of Palay Farm (**Additional Item from Block C, item 1**)

Irrigated Palay Farm – type of palay farm which requires standing water for its normal growth. It is not confined to lowland but also to high places where paddies are built for standing rice. It is one that requires irrigation water made available through artificial means (gravity, force, power, pumps, etc.)

Irrigated lowland – refers to farm area whose elevation is **600 meters above sea level**.

Irrigated middle - refers to farm area whose elevation is between **600--900 meters above sea level**.

Irrigated highland - refers to farm area whose elevation is **above 900 meters above sea level**. Farm areas even as high as 1500 meters above sea level can still be utilized for farming as long as there are irrigation facilities.

Rainfed Palay Farm - type of palay farm with dikes that retain water and solely dependent upon rainfall for its water supply.

Rainfed lowland – type of palay farm where dikes were built but it also depends on rainfall to hold water.

Rainfed Upland – ground elevation above the lowlands along rivers or between hills that depends on rainfall.

Item 2 - Details on the organic agriculture in CAR (**Additional Items from Block G, item e**)

Column 1 - Name of Crop

This column enumerates the various crops wherein organic agriculture was or being practiced in the barangay. Ask the key informant/s the specific vegetables and/or specific name of crops other than those enumerated.

Column 2 - Area for Organic Production

Ask the respondent the area for organic production for a particular crop in the barangay. Indicate the area in hectare and in two decimal place.

Column 3 – Number of Farmers

Ask the respondent the number of farmers that practice organic agriculture in the barangay and indicate on the space provided.

Item 3 - Farm Machineries/Implements (**Additional Items from Block I**)

Column 1 - List of Machinery/Implement

This column enumerates the specific farm machineries/implements other than those mentioned in the core questionnaire. The following are:

- a. **Power Sprayer/Duster*** – a motor-driven agricultural machine for spreading insecticidal dusts
- b. **Power Tiller*** - a power driven multi-purpose machine for land preparation, transport and other applications in the field. It can be used for both lowland and upland conditions. During harvest, a trailer can be installed for easy transport of produced crops. Implements such as disc plows, harrows and seeders are provided as attachments in performing different operations.
- c. **Coffee Dehuller*** – a machine that removes the hull from the seed
- d. **Coffee Roaster*** – a device for roasting coffee
- e. **Coffee Pulper*** – a device to produce or reproduce in pulp form; mixes or remove pulp
- f. **Coffee Grinder*** – a device that crush the coffee beans into powder form.
- g. **Cassava Chipper*** – a machine used for removing unwanted material or surface roughness by chipping; a device for reducing something chips
- h. **Cassava Granulator*** – a machine used for the process of forming or coming out into grains, granules or small masses
- i. **Grass Cutter*** – a machine that cuts grasses
- j. **Tram Line (Cable Car)*** – cable car is a car suspended from overhead cable, used to transport passengers up and down steep hills or across valleys.

Column 2 - Total Number of Units as of July 1, 2006

Ask the respondent the total number of units available as of the reference date for every item available in column 1 and indicate in the column provided.

Columns 3-6 - Ask the respondent the question: Of the total number of units in column 2, how many were...

Column 3 - Privately Owned

Columns 4-6 - Acquired through ...

Column 4 - Local Government

Column 5 - DA (Department of Agriculture)

Column 6 - Others (example is the Cooperative)

Item 4 - Infrastructure and Services (**Additional Items from Block J**)

Sub-Item 1, Columns 1 - 2 - Ask the question: Are the following post harvest facilities/services present in the barangay? *Encircle code 1* if Yes, otherwise *encircle code 2*. This column enumerates the specific post harvest facilities/services other than those mentioned in the core questionnaire. The following are:

- a. ***Farm to Market Road / Footpath / Footbridge*** - a bridge designed for pedestrians rather than vehicular traffic.
- b. ***Green house / Screen house / Net house*** - Building designed for the protection of tender or out-of-season plants against excessive cold or heat. Usually a glass- or plastic-enclosed structure with a framing of aluminum, galvanized steel, or such woods as redwood, cedar, or cypress, it is used for the production of fruits, vegetables, flowers, and any other plants requiring special temperature conditions. It is heated partly by the sun and partly by artificial means. This controlled environment can be adapted to the needs of particular plants.
- c. ***Reefer Van*** - a trailer or semi-trailer equipped with either a refrigeration unit or a heating unit or both.
- d. ***Storage house*** – a building where the holding and housing of goods from the time they are produced until their sale.
- e. ***Spring Irrigation System*** –refers to an irrigation system whose source is a spring or creek that doesn't dry anytime of the year. It usually have the following parts:
 - a) *main line* - hose or pipe that convey water from the source to a reservoir/distribution tank (concrete structure that temporary store irrigation water from the main line), and
 - b) *distribution line* - hose or pipe lines that distribute irrigation water from reservoir to the different service areas.
- f. ***Pressurized Irrigation System (PIS)*** – water is piped to one or more central locations within the field and distributed by overhead high-pressure sprinklers or guns or by lower-pressure sprays.

Columns 3-4 - If Yes in Column 2, ask the respondent the name of owner/operator and telephone number of the available harvest facilities/services

Columns 5-6 - If No in Column 2, ask the respondent the distance of the barangay to the nearest post harvest facility/service and the usual means of transportation.

Sub-Item 2, Columns 1 - 2 - Ask the question: Are the following facilities/services present in the barangay? *Encircle code 1* if Yes, otherwise *encircle code 2*. This column enumerates the specific facilities/services other than those mentioned in the core questionnaire. The following are:

- a. **Organic Input Supplier** – engaged in the supply of organic fertilizer.
- b. **Organic Input Producer** – engaged in producing organic fertilizer which consist mainly of products from plants and animals

Columns 3-4 - If No in Column 2, ask the respondent the distance of the barangay to the nearest facility/services and the usual means of transportation.

BLOCK N – MARKETING

This block seeks to collect information on the presence of market physical structure/s in the barangay.

At the beginning of this block is a space for three respondents from whom the desired data for this block maybe obtained. Possible respondents are the Barangay Chairman or any knowledgeable barangay officials, Farmer Leader, Market Administrator, and Market Reporter. Indicate only the designation of the respondents on the space provided.

1. Ask the respondent if there is any market structure or trading area for agriculture/fishery commodities in the barangay. *Encircle code 1* if Yes, otherwise *encircle code 2*.

Market refers to the area within which buyers and sellers are in communication with one another and within which exchanges take place. The communication sometimes takes place face to face, and the market, then, is a very restricted area.

2. Ask the question: What is the built/structure of the market or trading area? *Encircle code*.

1- **Temporary market structure** is one made up of tents that are usually set up a day before or during the barangay market day to be removed later in the day. This can also refer to the pooling place for livestock and poultry.

2 - **Permanent market structure** is one that has a fixed structure, say Calapan City Public Market of Mindoro Oriental, San Jose City Public Market of Mindoro Occidental. or the Balintawak Public Market of Quezon City.

SUPERMARKETS are not to be included in this survey.

3. Ask the question: What is the classification of the market? *Encircle code.*

1 - **Private market** - is a market under the supervision and management of private individual or corporation.

2 - **Public market** – is a market under the supervision and management of the government

4. Ask question: What type of operation is it? *Encircle code.*

1 - **Wholesale** – refers to the type of operation where there is buying in fairly large volume and transaction to other traders intended for reselling to retailers.

2 - **Retail** - refers to the type of operation where there is selling to the ultimate consumer or end-user; the quantity of purchases is usually much smaller than that of the wholesaler.

3 - **Wholesale-retail** - refers to the type of operation where there is both buying in large quantities and selling to other traders and/or directly to the end-users.

4 - **Assembly** – refers to the type of operation where a trader sources and procures his stocks from contract growers or independent farmers in several barangays in a specific municipality, and transports the produce to a trading or market center. Assemblers are classified according to geographic area of procurement.

The next part of the questionnaire aims to describe in general the marketing structure and flow of specific commodities being marketed in the barangay.

Column 1 – Major Commodities Traded

Line up of the major commodities traded in the barangay.

- | | |
|--------------------|----------------------|
| a. Potato | k. Cutflowers |
| b. Carrots | i. Mums |
| c. Cabbage | ii. Anthurium |
| d. Cauliflower | iii. Rose |
| e. Broccoli | iv. Others (Specify) |
| f. Sweet Pepper | l. Strawberry |
| g. Beans (Snap) | m. Banana |
| h. Celery | n. Rootcrops |
| i. Chinese Cabbage | o. Coffee |
| j. Others | |
| i. Garden Pea | |
| ii. Chayote | |

Column 2 - Type of Market Operations / Number of Traders

Identify the type of market operations by encircling the corresponding code, and ask the usual number of traders engaged in the specific commodity and indicate on the space provided.

Column 3 - Average Volume Traded

Ask the respondent the average volume traded by each type of operations identified in column 2. Indicate the volume in metric ton(MT).

Column 4 - Major Sources

Ask the respondent the major sources of the commodities traded by each type of market operations. *Encircle code* and give details in the column provided.

- 1 - within the barangay
- 2 - within the municipality
- 3 - outside the municipality but within the province (specify municipality).
- 4 - other province (specify province)

Column 5 - Major Destination

Ask the respondent the major destination of the commodities traded by each type of market operations. *Encircle code* and give details in the column provided. (*Refer to codes* used in column 3).

BLOCK O – CONTRACTUAL DATA COLLECTOR, SUPERVISOR AND VERIFIER IDENTIFICATION

Once all items are accomplished, affix your name, signature and code as contractual data collector and the date of accomplishing the questionnaire. Similarly, the field supervisor, after the necessary editing and verification has been done, should write down his/her name, signature, and date of editing on the provided spaces. Finally, the PASO after the necessary validating of returns should write down his/her name, signature, and date on the space provided.