

CORN PRODUCTION SURVEY (CPS)

MANUAL of OPERATIONS



Republic of the Philippines
PHILIPPINE STATISTICS AUTHORITY

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1. HISTORICAL BACKGROUND

Over the years, the Philippine Statistics Authority at Quezon Avenue (PSA-QA) which was formerly known as Bureau of Agricultural Statistics (BAS) has developed and implemented a statistical system for palay and corn, which dates back to as early as 1954 when it was still a division (Agricultural Economics Division) of the Department of Agriculture and Natural Resources (DANR). The system includes the quarterly Rice and Corn Production Survey (RCPS), now known as Palay and Corn Production Survey (PCPS) and the monthly Palay and Corn Stock Survey 1 (PCSS1).

The PCPS has for its predecessor the Crops and Livestock Survey (CLS, 1954-1968); the Integrated Agricultural Survey (IAS, 1968-1985); and the Rice and Corn Survey (RCS, 1985-1993). Prior to 1986, the RCS employed a two-stage stratified sampling design with municipality as the domain. However, in 1986, the RCS adopted a three-stage sampling design with province as the domain. The RCPS design evolved from a statistical research undertaken in 1989 jointly by the Philippine Statistics Association, Incorporated (PSAI) and BAS under a grant from the USAID. It was conceived as an improvement to the RCS with a completely different sampling frame and design.

In July 1994, the then BAS officially adopted the new RCPS design which uses the results of the 1991 Census of Agriculture (CA) as basis for sampling frame. Beginning 2003, the Bureau has instituted reductions in sample size and provincial coverage due to budgetary constraints. In July 2004, the survey using RCPS questionnaires was limited to 24 major palay and 18 major corn producing provinces. For the rest of the provinces not covered by the survey, the Bureau has designed a monitoring system intended to collect information on last quarter's production, standing crop and planting intentions of farmers.

The improved Rice and Corn Production Survey (RCPS) is now known as Palay and Corn Production Survey (PCPS). This was implemented in December 2007 (January 2008 Round) covering all provinces except Batanes. The new features of this survey are the following: updated sampling frame for the secondary units; more detailed sample status categories; production, area and yield by seed type; inclusion of items on application of yield enhancing and yield protecting inputs; additional items on palay and corn disposition and utilization, and GMA Rice and Corn Program components/benefits/services.

True to the Bureau's commitment of making available to the public the reliable statistics in agriculture, particularly palay and corn, continuous efforts in developing approaches and methodologies in estimating such statistics had been and being done, particularly the survey questionnaires. The Technical Working Group on Cereals Statistics of the Bureau reviewed the current PCPS questionnaires and came up with sets of user-friendly survey instruments. The major features of the new sets of questionnaires are: shift from barangay level to farm level questionnaire i.e., from a maximum of five (5) households to one (1) household per questionnaire; change in questionnaire format; more detailed sample status categories; defined types of ecosystem; inclusion of items on labor inputs; and application of organic pesticides. These new sets of questionnaires was used since April 2012 survey round until to date.

1.1 Scope

The Corn Production Survey (CPS) covers sample farming households in sample barangays in all provinces except Batanes but including Zamboanga City, Davao City and Dinagat Island. This is conducted quarterly with the quarters as the reference periods, as follows:

April Round - January to March

July Round - April to June

October Round - July to September

January Round - October to December

1.2 Objective

The objective of the survey is to generate estimates and forecasts on corn areas, production and yield to serve as inputs for policy and programs on corn.

2. SAMPLING METHODOLOGY

2.1. Sampling Frame

The 1991 Census of Agriculture and Fisheries (CAF) provides the basis for the sampling frame for the CPS. With the exception of Isabela, Laguna and Bukidnon where the traditional complete enumeration strategy was employed, the 1991 CAF used sampling techniques for selecting the primary sampling units – the barangays.

The largest barangay in a municipality was taken with certainty while a one in two sampling rate was used in selecting the remaining barangays in the municipality. This scheme effectively resulted in the generation of two sub-universes: a sub-universe of barangays with probability of selection equal to 1.0 and another sub-universe of barangays with probability of selection equal to 0.5.

This characteristic of the 1991 CAF is taken into account in the sampling design for the Corn Production Survey.

2.2. Sampling Design

The domain of the survey is the province. A two-stage stratified sampling design is used. The primary sampling unit (PSU) is the barangay which is selected using probability proportional to size CPS sampling. The farming household, systematically selected, serves as the secondary sampling unit (SSU). Moreover, to provide ease and flexibility in estimation, rotation of samples, etc., a replicated sampling design is instituted. The complete design includes four (4) independent sets of sample replicates (Figure 1).

2.2.1. First Stage (Primary) Sampling Unit Selection

A general feature of the sampling design used for the survey is the division of primary sampling units into strata of approximately equal sizes relative to total farm area devoted to corn. Considering, however, that the 1991 CAF effectively curved out two sub-universes, the division of the barangays within the province was effected as follows:

All barangays with probability of selection equal to 1.0 (certainty barangays) were first lumped into one stratum (generally, it is the 10th stratum). The remaining barangays (those with probability of selection equal to 0.5) were then divided into nine strata such that the aggregate corn farm area of all the barangays constituting anyone stratum was approximately of the same magnitude with the rest of the individual strata. To compensate for the unlisted barangays in the 1991 CAF and to have an estimate of the corn farm area in the province, this aggregate area was doubled for provinces with half-listed strata. Using the estimated area to devoted to corn as the estimated size of the barangay, a CPS sample of four (4) independent barangays were selected from each stratum. Each sample barangay represents the *i*th replicate sample for that stratum.¹

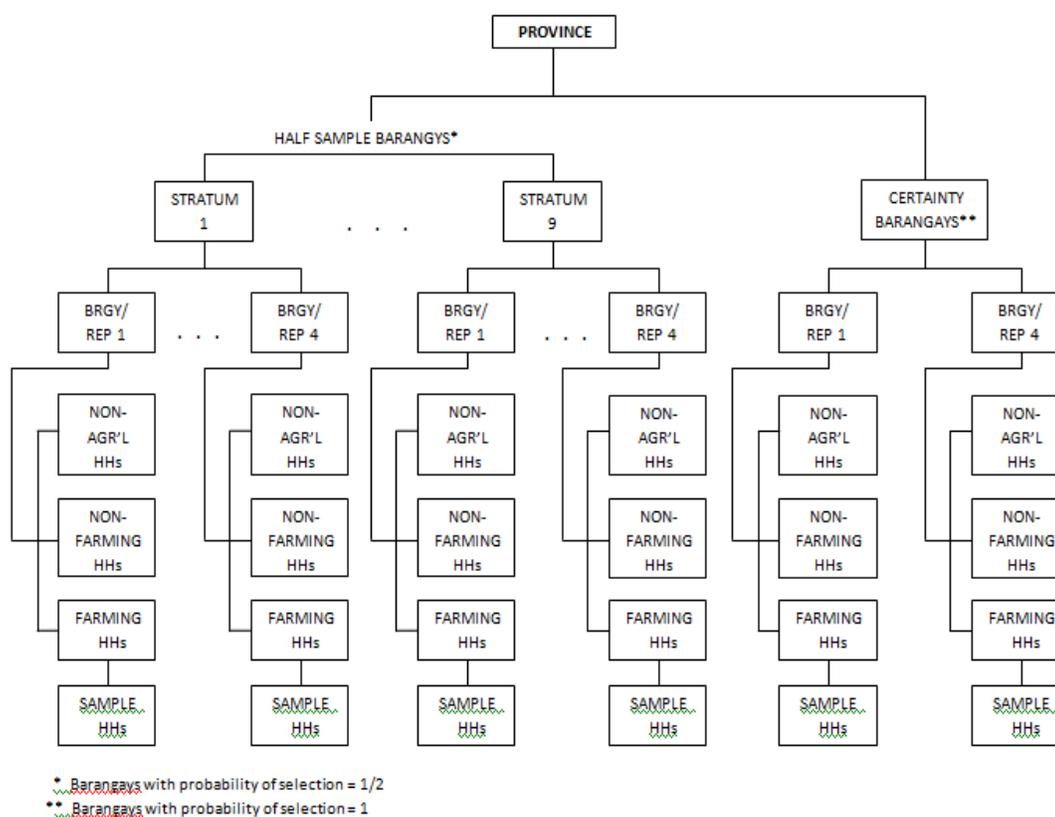


Figure 1. Schematic Diagram of the sampling Design for the Corn Production Survey

¹ The original four replicates per province have been reduced for budgetary considerations. The current set of samples covers two replicates per province.

2.2.2. Second Stage (Secondary) Sampling Unit Selection

Households in each sample barangay were categorized as either farming or non-farming based on the following definitions:

Household – a person or a group of person 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 household may occupy the same dwelling unit

Farming household – any household in which a member operates an agricultural land, either solely or jointly with other members, and the aggregate area operated by the operator-members of such household qualifies to be called a farm

Non-farming household – any household in which a member operates an agricultural land, either solely or jointly with other members, and the aggregate area operated by the operator-members of such household does not qualify as a farm

Non-agricultural household – any household in which none of the members operates an agricultural land

Operator – a person who takes the technical, financial and administrative responsibility in managing the farm, including the management and supervision of hired labor; he may work on the land himself or may employ others to work on the land. He may or may not be the owner of the land

Farm – a parcel or parcels of land which has a total land area of at least 1,000 square meters (one-tenth of a hectare) used for agricultural purposes

Parcel – a piece of agricultural land which meets any of the following characteristics arranged in order of importance:

- a) Contiguous area with natural boundaries;
- b) Under only one tenurial status; and
- c) Regarded as such by the farmer

For this survey, selection of sample households has been limited to the group categorized as farming households. The number of sample households drawn for each sample barangay varied. The size of sample households was determined using the general formula:

$$n_{khi} = \frac{1}{b_h} \cdot \frac{P_{kh}}{P_{khi}} \cdot \frac{N_{khi}}{R_k}$$

where:

n_{khi} = number of sample farming households in the i^{th} sample barangay in the h^{th} stratum;

- N_{khi} = total number of farming households in the i^{th} sample barangay in the h^{th} stratum
 R_k = uniform raising (expansion) factor used for the k^{th} province
 b_h = number of sample barangays in the h^{th} stratum (=4)
 P_{khi} = corn area of the i^{th} sample barangay in the h^{th} stratum
 P_{kh} = aggregate corn area in the h^{th} stratum

This will result in a self-weighted sampling scheme that will facilitate estimation of the survey characteristics.

The uniform expansion factor R_k for the k^{th} province used in determining n_{khi} is:

$$R_k (\text{rounded off to the lower 50}) = \frac{1}{b_k} \cdot \frac{\bar{P}_k}{\bar{P}_{k..}} \cdot \frac{\bar{N}_{k..}}{\bar{n}_{k..}}$$

where:

$$\bar{b}_k = \text{average number of sample barangays per stratum (=4)}$$

$$\bar{P}_k = \text{average total area planted to corn per stratum, or}$$

$$= \frac{\text{total area planted to corn for the } H_k \text{ strata}}{H_k \text{ strata}}$$

$$\bar{P}_{k..} = \text{average total area planted to corn per barangay}$$

$$\bar{N}_{k..} = \text{average number of farming households per barangay}$$

$$\bar{n}_{k..} = \text{average number of sample farming households per barangay (=10)}$$

For economic reasons, sample size at the SSU level was set to a minimum of 4 and a maximum of 25 households. To correct for this limitation of the design, the use of the so-called household weights was instituted. The uniform household weight for the i^{th} barangay, W_{khi} , was computed as follows:

$$W_{khi} = 1.00 \text{ if } 4 \leq n_{khi} \leq 25;$$

$$W_{khi} = \frac{n_{khi}}{4} \text{ if } n_{khi} < 4;$$

$$W_{khi} = \frac{4}{n_{khi}} \text{ if } n_{khi} > 25;$$

$$W_{khi} = \frac{n_{khi}}{N_{khi}} \text{ if } n_{khi} > 25 \text{ and } n_{khi} > N_{khi}.$$

Replace the barangay if none of the above conditions is met.

2.3. Estimation Procedure

2.3.1. Stratum Estimates

Each replicate (represented by the sample psu) in a stratum will yield an independent estimate for the stratum. Hence, there will be four (4) independent estimates and the mean of these four (4) estimates will be the unbiased estimate for the stratum.

For the h^{th} stratum of the k^{th} province, the independent estimate of total from the i^{th} psu is obtained from the equation.

$$\begin{aligned} x'_{khi} &= \frac{P_{kh}}{P_{khi}} \cdot \frac{N_{khi}}{n_{khi}} \cdot W_{khi} \cdot \sum_{j=1}^{N_{khi}} x_{khij} \\ &= b_h \cdot R_k \cdot x_{hi} \\ &= 4 \cdot R_k \cdot x_{hi} \end{aligned}$$

where:

x_{khij} = value obtained from the j^{th} sample farm household of the i^{th} barangay in the h^{th} stratum of the k^{th} province;

x_{khi} = weighted total for the i^{th} barangay

$$= W_{khi} \cdot \sum_{j=1}^{N_{khi}} x_{khij}$$

and

W_{khi} , n_{khi} , N_{khi} , P_{kh} and P_{khi} are the ones defined in the sampling design.

The unbiased estimate of total for the h^{th} stratum is simply the mean of the four (4) independent estimates, that is,

$$\begin{aligned} x'_{kh} &= \frac{1}{b_h} \cdot \sum_{i=1}^{b_k} x'_{khi} \\ &= R_k \cdot x_h, \end{aligned}$$

where x_h is the weighted total for the h^{th} stratum. The variance of x'_{kh} is given by

$$v(x'_{kh}) = \frac{\sum_{i=1}^{b_k} (x'_{khi} - x'_{kh})^2}{b_h(b_h - 1)}$$

2.3.2. Provincial Estimates

Estimates of total for the province are obtained simply by aggregating all the stratum estimates in the province. Hence, the estimate of total for the k^{th} province is given by

$$X'_{k} = \sum_{h=1}^{H_k} X'_{h}$$

where H_k is the total number of strata in the k^{th} province (domain), and its variance is estimated by the sum of the stratum variances, that is,

$$V(X'_{k}) = \sum_{h=1}^{H_k} V(X'_{kh})$$

2.3.3. Regional and National Estimates

Estimates of total for the region and for the whole country, together with their respective variances, are obtained in the same manner as those for the province, that is, by aggregating relevant stratum estimates. These may also be obtained by aggregating relevant provincial estimates (for the region) and aggregating relevant provincial estimates (for the whole country).

3. INSTRUCTIONS IN ACCOMPLISHING THE QUESTIONNAIRE

3.1 The Corn Production Survey Questionnaire

The Corn Production Survey (CPS) April 2015 Round questionnaire intends to obtain information on corn area, production, disposition, irrigation, usage of fertilizer and pesticide, area and production forecasts based on standing crop and planting intentions, assessment of farms' corn production and farmers' participation in the corn program of the government.

Shown below are the different blocks and their corresponding pages in the Corn Production Survey (CPS) April 2015 Round questionnaire:

| Block | Location in the Questionnaire |
|--|--------------------------------------|
| Block A – Sample Identification | Page 1 |
| Block B – Sample Particulars | Page 1 |
| Block C – Information on Corn Harvested | Page 1 |
| C1 – Area, Production, Seed and Irrigation Information for the First Quarter (January to March 2015) | Page 1-2 |
| C2 – Fertilizer Usage for the First Quarter (January to March 2015) | Page 2 |
| C3 – Pesticide Usage for the First Quarter (January to March 2015) | Page 2-3 |
| C4 – Labor Inputs | Page 3 |
| Block D – Corn Production Disposition (January to March 2015) | Page 3 |
| Block E – Corn Production Forecast (On Standing Crop) | Page 3-4 |
| Block F – Corn Planting Intentions (April to June 2015) | Page 4 |
| Block G – Respondent’s Assessment of the Household Corn Production | Page 4 |
| Block H – Farmer’s Participation in Corn Program | Page 4 |
| Block I – Data Collector, Supervisor, PSO, and Encoder Identification | Page 4 |

3.2 Specific Instructions in Filling out the Questionnaire

Block A – Sample Identification

For items 1 to 7, copy from the list of samples the name and code for the region, province, municipality and barangay, the stratum and replicate number and the household weight, respectively.

For item 8, indicate the household code. This is a five-digit serial number of the sample household indicated on the list of samples. The first two (2) digits represent the enumeration area (EA) code and the last three digits represent the PSA at Sta. Mesa (then NSO) assigned household code.

Block B – Sample Particulars

Item 1. Name of agricultural operator - Copy the complete name of the sample farm operator from the list of samples on the space provided following the last name, first name and middle name format.

Item 2. Sample Status - This seeks to obtain information on the status of the sample household during the survey period, which should be determined by both the Contractual Data Collector (CDC) and the field supervisor. The CDC will be the one to categorize the sample household either as corn household, non-corn household or non-agricultural household during the data collection phase. Below are the specific guidelines on how to accomplish Item 2.

| Sample Status | Definition | Instruction |
|----------------------------|--|---|
| Corn household | The sample household operates an agricultural land, whole or part of which is corn area within the nine-month period, or the land is temporarily in-fallow but the respondent declares that it is devoted to corn production. Specifically, any of the following conditions must be satisfied: <ul style="list-style-type: none"> a. Household harvested corn during the reference quarter (January to March 2015). b. Household has standing corn crop in the farm. c. Household intends to plant corn within the succeeding quarter. d. The land is temporarily in-fallow but the respondent declares that it is devoted to corn production. | Encircle code 10 in item 2, and continue with the interview. Fill up item 2.1 by encircling the appropriate code after the end of the interview. |
| Non-corn household | Household operates an agricultural land which is not intended for/devoted to corn production, i.e., zero corn production, no standing corn crop and planting intention. | Encircle code 20 in item 2, ask items 3 to 5 then end interview |
| Non-agricultural household | The sample household does not operate an agricultural land e.g., agricultural operator dies/gives up agricultural operation and nobody within the same household takes over. | Encircle code 30 in item 2, ask items 3 and 4 then end interview. |

The CDC should be very careful in determining the status of the sample household. Always bear in mind that the data to be gathered refer to the entire household and not only to the person identified in the list of samples. For example, the listed farm operator has given up farming, the CDC should first consider the following cases in categorizing the sample household:

| Case | Instruction | Sample Status |
|--|--|--|
| Case 1 - Operation of the farm is transferred to another member of the household. | Cancel out the listed operator's name and indicate above it the new operator's name | Ask if corn household, or non-corn household, and encircle the appropriate code. |
| Case 2 - Operation is transferred to a person who is not a member of the same household, but there is still another member of the same house who is an agricultural operator | Cancel out the listed operator's name and indicate above it the name of the household member who is an agricultural operator as the new operator. In case there are multiple agricultural operators in the same household, choose the one with the <u>biggest agricultural area</u> to replace the listed operator. | Ask if corn household, or non-corn household, and encircle the appropriate code. |
| Case 3 - Operation is transferred to a person who is not a member of the same household, and nobody from the same household is an agricultural operator. | Retain the listed name and classify the sample household as 'non-agricultural' | Encircle the code for non-agricultural household. |

NOTE: Reflect all corrections made as to the name of agricultural operator as well as the status of the sample household in both the questionnaire and list of samples.

The following items of the SAMPLE PARTICULARS are to be accomplished after the interview:

- 2.1 Result of visit (*Encircle code*)
 - 40 – Interview completed
 - 50 – Interview not completed
 - 60 – Refused to be interviewed
 - 70 – Target respondent not contacted (Ask items 2.2 to 2.4)

- 2.2 Reason for code 70
 - 71 – Temporarily away/Not at home
 - 72 – Area temporarily not accessible
 - 73 – Resides outside the sample barangay
 - 74 – Unknown in the locality

- 2.3 Full name of informant _____

- 2.4 Designation of informant (*Encircle code and end interview*)
 - 1 – Barangay/Purok official
 - 2 – Neighbor
 - 3 – Other household member

3. First name of respondent _____

4. Respondent's classification (*Encircle code*)
 - 1 - Household head and operator
 - 2 - Operator other than household head
 - 3 - Other knowledgeable member of the household

Item 2.1 Result of visit (Encircle code)

Code 40 - Interview completed. The interview is said to be completed when the data collector was able to collect all the required information from the respondent.

Code 50 – Interview not completed. It is the case of not getting all the required data especially when the respondent avoided or stopped giving information on the household's corn farming activities.

Code 60 – Refused to be interviewed. This is the case wherein the respondent does not want to provide any information at all. Ask item 3 and 4.

Code 70 – Target respondent not contacted. If the data collector was not able to contact the sample farmer, he/she has to ask items 2.2 to 2.4.

Item 2.2. Reason for code 70 - Enumerated here are the possible reasons why the target respondent may not be contacted. It could be that the sample farmer is temporarily away or not at home, area of the household is temporarily not accessible, target respondent reside outside the sample barangay and the sample is unknown in the locality. Encircle the code of the appropriate reason.

Item 2.3. Full name of informant - Ask the name of the informant and indicate in the space provided. This item must be filled up if the answer for item 2.1 is code 70.

Item 2.4. Designation of informant - Determine the designation of the informant and encircle code, then end the interview. Possible informants are either Code 1– Barangay/Purok Officials; Code 2 – Neighbors; and Code 3 – Other household member.

Item 3. First name of respondent – A respondent refers to the person being interviewed. He/she is a responsible member of the household who provides reliable answers to queries related to the household’s corn farming operations.

Ask the first name of the respondent and write it down on the space provided. In case there are two (2) or more persons being interviewed, the one who provides most of the answers needed should be reported as the respondent.

If the household member/s knowledgeable on the farm operation of the household is/are not available, inquire when you can most likely interview them so that a re-visit (call back) can be scheduled.

Item 4. Respondent’s classification – Encircle the appropriate respondent code, 1 for household head and at the same time operator of the sample farm, 2 for operator other than the household head or 3 for other knowledgeable member of the household.

Item 5. Total agricultural area – Ask the respondent for the sample household of the TOTAL AGRICULTURAL AREA operated by the household. This includes agricultural areas within the province and those located in other parts of the country. Indicate area in hectare and in four (4) decimal places.

Item 6. Total corn area – Get the TOTAL PHYSICAL AREA of the corn farm operated by the sample household within the province and those located in other parts of the country. This includes corn areas acquired by the sample household as of the date of interview, and those corn areas being operated by the sample household which are temporarily in fallow during the reference period. This excludes areas which were previously part of the farm but are no longer part of it by reason of sale (including farming rights), giving up of lease or tenancy rights, abandonment of squatted areas, etc.

Enter area in hectare and in four (4) decimal places. If the household operates more than one parcel, inquire on the number of parcels being operated and the corresponding area. Indicate the sum of areas of all the corn parcels in item 6. Some validating techniques to determine area are the quantity of seeds used, production, tractor fee, etc.

Lands temporarily in-fallow – these are lands which are allowed to stay idle for a period of at least one (1) year and at most five (5) years in order to recover its fertility after which it will again be planted to crops.

Block C – Information on Corn Harvested

This portion of the questionnaire gathers detailed information on corn harvested during the period (January to March 2016).

Sub-Block C1 – Area, Production, Seed and Irrigation Information for the First Quarter (January – March 2016)

This block will gather information on corn production, harvest area by type of corn, class and quantity of seeds used, and irrigation system during the period January to March 2016.

Item 1. Did you harvest corn during the period January – March 2015? – Ask the respondent if he/she harvested corn in any of its parcels anytime during the period January – March 2016 and encircle Code 1 for Yes or Code 0 for No. If No, go to Block E on page 3.

Item 2. Type of corn harvested – Encircle the corresponding code for the type of corn harvested. Two columns are allotted assuming that a farmer harvested two types of corn. These columns holds true up to Block C4 (Labor Inputs).

Two pre-coded types of corn are provided:

Code 1 – **White corn.** Type of corn used primarily for human consumption.

Code 2 – **Yellow corn.** Corn used generally as feed grains. They include all types of corn other than white.

Item 3. Type of seed planted – Indicate the code of the major type of corn seed planted. Three pre-coded major types of corn seeds are provided at the bottom of the questionnaire. They are as follows:

Code 1 – **Hybrid**

Hybrid corn varieties are the result of a repeated process of self-pollination of corn varieties of the same kind, called inbred lines. Different inbred lines are then crossed to produce hybrids. Hybrid varieties tend to have extended vigor and produced higher yield.

Code 2 – **Modern Open Pollinated Varieties (OPV)**

A **modern open pollinated variety** refer to corn seed materials which are grown for a longer period of time and maintained by natural cross pollination from generation to generation. These are purebred strains with seed that can be saved and planted from year to year. Open pollinated varieties will bred true if they are isolated from other varieties, avoiding

cross-pollination. They are usually distinguished by their kernel color, kernel shape and other agronomic characteristics

Code 3 – Native OPV

Native open pollinated varieties refer to the indigenous varieties.

Item 4. Characteristics of the variety harvested – Ask for the characteristics of the corn harvested. Indicate code in the answer grid.

Code 1 – **Glutinous** – This refers to the corn popularly known as the “sticky” or “lagkitan”.

Code 2 – **Non-Glutinous** – refer to other corn that are not glutinous or sweet. Example is the popcorn.

Code 3 – **Sweet corn** – This is grown almost exclusively for human consumption, either as a fresh product or a processed product. The endosperm (storage area) of the sweet corn kernel accumulated more sugar than that of a dent corn kernel. Sweet corn when dried is characterized by wrinkled kernels.

Item 5. Month harvested – Ask for the month when the crop was harvested for each type of corn. Encircle the month’s code on the space provided. It is possible that harvestings were not done within the same month especially when the household has several parcels. In such case, use the major portion concept.

Item 6. Area harvested – This refers to the total area harvested to corn during the reference quarter. It may be less than or equal to the total area planted to corn. Ascertain first whether the entire area planted was harvested during the reference quarter by asking the respondent the screening question:

“Were you able to harvest the entire area you planted to the crop?”

If the answer is yes, the data collector may already ask for the area planted and record the response in Item 14. If the answer is no, meaning there was a DECREASE in area, determine the ACTUAL area of corn that was harvested during the reference quarter and write it down on the space provided.

If the farmer finds difficulty in giving the area harvested, resort to deeper probing by asking question on the household’s ACTUAL PRODUCTION and YIELD PER HECTARE to estimate the area. This estimation technique, however, can be used by the CDC in consultation with the PSA supervisor. After estimating the area based on this technique, try to

confirm with the respondent if the estimated area is within acceptable range for him.

Items 7 to 12. Quantity of corn produced – This refers to the household’s GROSS PRODUCTION during the reference quarter. This may be in the form of shelled corn, ears of matured corn, and ears of green corn, or a combination of these.

Item 7 to 9. Shelled corn – This refers to the corn grains that have been removed from the cob in dry weight. **Dry weight** refers to the weight of corn with about 14% moisture content and ready for storing.

Item 7. Total number of units – Determine from the respondent the total or **gross volume** of corn produced in dry weight during the reference quarter and indicate it in two (2) decimal places on the space provided.

Item 8. Unit of measure – Ask the unit of measure used in getting the volume of production in dry weight of the crop, e.g., sack, ganta, kerosene can, etc., and indicate it on the space provided.

Item 9. Weight per unit of measure - Ask for the equivalent dry weight in kilogram of corn contained per unit of measure reported. Enter the response in two (2) decimal places on the space provided. If the respondent gives a range of weight, ask for the average equivalent weight per unit of measure used in measuring the farm’s harvest.

Items 10 to 11. Ears of matured corn – This refers to the corn on cobs that are harvested as they reached full maturity or at hard-dough stage. This **excludes** corn production reported in items 7 to 9 (shelled corn).

Item 10. Total number of ears – Determine the total number of corn ears harvested and indicate on the space provided.

Item 11. Equivalent weight in shelled corn – Ask for the equivalent weight in shelled corn the corn ears harvested. Indicate in kilogram and in two (2) decimal places on the space provided.

Item 12. Ears of green corn – This refers to the ears of young corn that are harvested on or before they reached full maturity. They are either harvested at soft or hard-dough stage (for boiling or broiling). Indicate the total number of ears of green corn gathered on the answer space.

Take note that the information being asked for is the household’s TOTAL harvests in all parcels, if more than one as the case maybe. It includes those paid to harvesters, shellers, and other farm laborers. Likewise, those wasted or lost during shelling and hauling the harvest.

If the respondent's initial reply refers to NET rather than GROSS harvest, make the necessary recomputations and include portion of the harvest that were not accounted for by the respondent earlier.

Items 13. Month planted – Ask for the specific month of planting of the harvested crop and encircle its code on the space provided. If plantings were not done within the same month, use the major-portion concept.

Item 14. Area planted – Record in hectare and in four (4) decimal places the area planted to the harvested crop. If the respondent cannot give at once the required area, explain to him that the figure being asked for is only the area planted to corn that was harvested during the reference quarter. If he still finds difficulty in giving the required answer, resort to deeper probing by asking questions on farm activities paid on per-hectare basis such as tractor fee. Another option is to ask for the quantity of seeds used and the planting method to derive the area accordingly. Again, this derivation technique can be done only by the CDC in consultation with the PSA-BAS supervisor. Try to confirm from the respondent if he finds the result within the acceptable range.

Item 15. Breeding method of the seeds used – This refers to the breeding method of **hybrid corn seed**. Corn breeding could be by **conventional method** or through more advanced means such as **genetic engineering**. Crops developed by genetic engineering are commonly called **transgenic** or **genetically modified (GM) crop**.

Determine whether the seeds planted were:

Code 1 – **Genetically Modified (GM)** – A transgenic or genetically modified (GM) crop is a plant that has novel combination of genetic material obtained through the use of modern technology. For example, a transgenic crop can contain gene/s that has been artificially inserted instead of the plant acquiring it through pollination. The resulting plant is said to be “genetically modified” from the original wild state by domestication, selection, and controlled breeding over long period of time.

Transgenic crops are made through a process known as genetic engineering. Genes of commercial interest are transferred from one organism to another. Two primary methods currently exist for introducing transgenes into plant genomes. The first involves a device called a “gene gun”. The DNA to be introduced into the plant cells is coated onto tiny particles. These particles are then physically shot onto plant cells. Some of the DNA comes off and is incorporated into the DNA of the recipient plant. The second method uses a bacterium to introduce the gene/s of interest into the plant.

Code 2 – **Ordinary Hybrid** – This refers to the usual or common type of corn seed breeding.

Item 16. Name of the variety planted – This refers to the local/commercial variety. Ask the respondent about the product name of the variety planted and write down on the space provided.

Note: Refer to the Updated List of NSIC Registered Corn Varieties

Items 17 to 19. Quantity of seeds used – These items are intended to determine the amount of seeds planted corresponding to the harvested crop.

Item 17. Total number of units – Ask for the total volume of seeds used in all parcels that were harvested during the reference period and enter the response in two (2) decimal places on the space provided.

Item 18. Unit of measure – This refers to the unit of measure used in quantifying the volume of seeds planted.

Item 19. Weight per unit of measure – Ask for the average weight per unit of measure used in kilogram. Entries must be in two (2) decimal places. Three-way cross hybrid come in 18 kilograms bag, single cross hybrid which are small-seeded come in 16 kilograms bag and open pollinated varieties (OPV) are available in 29 kilograms bag to plant a hectare.

Items 20 to 22. Irrigation system – These items solicit information on irrigation for **irrigated corn only** and should be SKIPPED if not applicable. Irrigated corn refers to the corn area with irrigation facilities that supplies water to the farm thru artificial means like gravity, force/power, pump, etc.

Item 20. Type of irrigation facility – Ask for the major type of irrigation facility that covers the corn farm and indicate the appropriate code. The types of irrigation facilities are enumerated at the bottom of the questionnaire as follows:

Code 01 – **NIS** (National Irrigation System) – A government irrigation system built or constructed and managed by the National Irrigation Administration (NIA) to provide continuous supply of water for agricultural purposes to farmers in exchange for a fee.

Code 02 - **CIS - NIA assisted**

Code 03 - **CIS - LGU** (Local Government Unit) assisted

Code 04 - **CIS - Private**

CIS (Communal Irrigation System) – Irrigation facilities constructed by the NIA and turned over to Irrigators Associations (IA) upon completion. Operation and maintenance become the responsibility of the IAs which in turn collects direct operating cost of the project from farmer members.

Code 05 - **SWIP/SFR (Non-NIA)**

Code 06 - **SWIP/SFR (NIA)**

SWIP (Small Water Impounding Project) – A structure constructed across a narrow depression or valley developed as a reservoir that holds-back water and that store rainfall and run-off during the rainy season. 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).

SFR (Small Farm Reservoir) – A small version of SWIP and is designed to collect and store rainfall and run-off 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 by usual manual digging or through a bulldozer. Irrigation is done with the use of a PVC siphon pipes or pumps.

Code 07 - **Pump (Non-NIA)**

Code 08 - **Pump (NIA)**

Pumps (STW or Shallow Tube Well, open source pump) – An irrigation device provided personally by the operator for his/her farm’s irrigation needs. It could be rented, borrowed or owned by him or any other member of his/her household

Code 09 - **SDD** (Small Diversion Dam) - 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.

Code 10 - Others (specify) - Includes those not previously classified.

Item 21. Was the area actually irrigated? - Ask the respondent if the area was actually irrigated during the period and encircle the appropriate response, Code 1 for YES and Code 0 for NO. For NO reply, skip item 22 and go to SUB-BLOCK C2.

Item 22. Adequacy of irrigation water - Ask the respondent’s opinion on the supply level of irrigation water availed from the system and encircle the appropriate response, code 1 for **adequate** or code 2 for **inadequate**.

Sub-Block C2 – Fertilizer Usage for the First Quarter (January – March 2016)

Item 1. Did you apply fertilizer on the harvested area? – Ask if any portion of the area planted and was harvested during the quarter was applied with fertilizer. For a YES response, meaning applied, indicate Code 1 and ask the succeeding items. Otherwise, indicate Code 0 and proceed to SUB-BLOCK C3.

Item 2. Area applied with fertilizer – Ask the respondent of the area that was applied with fertilizer. Enter area in hectare and in four (4) decimal places.

Item 3. Quantity of inorganic fertilizer applied – This item will gather information on the four (4) most common grades of fertilizer applied in the area that was planted and harvested by the farmer namely: urea, ammonium sulfate, ammonium phosphate and complete.

Sub-items 3.1 to 3.4 - Four rows are allotted for the most common grade of fertilizer applied. Inquire from the respondent the grade/s of fertilizer used and the NPK composition. Further, indicate the respective quantity applied, in bag of fifty (50) kilograms and in two (2) decimal places. In the case of a farmer who applies multiple grades of common inorganic fertilizer, such that the four allotted rows are not sufficient, the CDC can utilize the other space/s in Item 4.

NPK refers to the elements found in the fertilizer in the form of Nitrogen, Phosphorus and Potassium. Example, urea 46-0-0, 46 stands for Nitrogen, 0 Phosphorous and 0 Potassium; complete 14-14-14, each 14 stands for the three elements. Other major inorganic fertilizers are ammosul 21-0-0 and ammophos 16-0-0.

Item 4. Other inorganic fertilizer applied - Ask for the product name and **NPK content** of other inorganic fertilizer applied whether in solid or liquid form. Example:

Item 4.1.a. Product name: Crop Giant;

Item 4.1.b. Fertilizer grade (NPK): 15-15-30;

Item 4.1.c. Total no. of units applied 2.50;

Item 4.1.d. Weight per unit (Kg): 50.00

Ask the same information for the liquid type of inorganic fertilizer, e.g.,

Item 4.1.a. Product name: MRG Liquid Fertilizer

Item 4.1.b. Fertilizer grade (NPK): 1.43-0.44-3.79;

Item 4.1.c. Total no. of units applied 1.50;

Item 4.1.d. Volume per unit (liter): 1.000

Item 5. Organic fertilizer applied – Ask for the product name of organic fertilizer applied including solid or liquid type. Examples are Provider's Organic Fertilizer (1-1-1); and Coco-rich organic fertilizer. Others are animal manure, crop residues or stubbles. Ask for the total number of units applied, the unit of

measure and the weight in kilogram or volume in liter per unit. Indicate responses in two (2) decimal places weight per unit and in three (3) decimal places volume.

Note: Refer to the Updated List of Provisionally Registered Fertilizers

Sub-Block C3 – Pesticide Usage for the First Quarter (January–March 2016)

Pesticide – This refers to chemicals used to control/eradicate insects, weeds and/or animal pests.

Item 1. Did you apply pesticide on the harvested area? – Ask from the respondent if any portion of the area planted that was harvested during the quarter was applied with pesticide. For a YES response, meaning applied, indicate Code 1 and ask the succeeding items. Otherwise, indicate Code 0 and proceed to SUB-BLOCK C.4, page 3.

Item 2. Area applied with pesticide – Ask the total area that was applied with pesticide. Enter area in hectare and in four (4) decimal places.

Item 3. Pesticide applied – This item will gather information on the different classifications and types of pesticide applied by the farmer on the harvested area. The questionnaire allotted 3 sub-items in case a farmer applied more than one (1) classification of pesticide.

Sub-item 3.1.a. Name of pesticide – Ask the name of pesticide applied in the harvested area. Example: Access Malathion

Sub-item 3.1.b. Classification – Ask the classification of pesticide applied in the harvested area and indicate code in the space provided. Classifications of pesticide are provided at the bottom of the questionnaire. They are as follows:

- Code 1 - **Insecticide** – refer to chemicals used to control insects;
- Code 2 - **Herbicide** – refer to chemicals used to control weeds;
- Code 3 - **Fungicide** – refer to chemicals used to control fungi;
- Code 4 - **Rodenticide** – refer to chemicals used to control rodents;
- Code 5 - **Molluscicide** – refer to chemicals used to control snails;
- Code 6 - **Nematocide** – refer to chemicals used to control worms; and
- Code 7 - **Others**, specify – include those not previously classified.

Referring to the 3.1.a. example earlier, under which is Access Malathion, code 1 will be indicated because it is a specific classification of insecticide.

Note: Refer to the Updated List of Pesticide Provided

Sub-item 3.1.c. Total number of units applied – Ask the respondent the number of units of specific classification of pesticide applied and indicate on the space provided.

Sub-item 3.1.d. Unit of measure – Ask for the unit of measure used in quantifying each classification of pesticide applied. Unit of measure may be bottle, pack, can, box, sachet, etc.

Sub-items 3.1.e–3.1.f. Weight or Volume per unit- These items refer to the weight in kilogram and the volume in liter of the unit of measure of inputs used. Weight in kilogram is for solid type pesticide which could be in granule/wettable powder form. Volume in liter is for liquid type of inputs. Indicate answer in the appropriate row.

Sub-items 3.2.a to 3.2.f and 3.3.a to 3.3.f – Pesticide applied – Filling up of these sub-items for the other classifications and types of pesticide applied is similar to that of sub-items 3.1.a to 3.1.f.

Item 4. Botanical extracts/spray applied – This refers to **organic pesticide** applied in the harvested area. As the term implies, they are extracted from selected plants which underwent some processing. Some of these plants are amarillo, jetropa, kakawate and neem tree.

Sub-items 4.1.a – 4.1.f – Filling up of information in these sub-items are similar to that of sub-items 3.1 to 3.3.

Sub-Block C4 – Labor Inputs

Item 1 – Ask the respondent whether he/she hired workers or not to perform corn operations whether paid in cash or in kind during the reference quarter. Indicate Code 1 for Yes. Otherwise, Code 0 for No.

Block D – Corn Production Disposition

This block deals with the breakdown of the sample household’s utilization of its **total production** during the reference quarter. The unit of measure to be used in this block must be the same as the one used in SUB-BLOCK C1.

Item 1 – Ask the respondent how the total production for the period JANUARY - MARCH 2016, was utilized or disposed. Enter quantity of disposition in local unit and in two (2) decimal places. The disposition items are:

Item 1.1 - sold;

Item 1.2 - used for household consumption;

Item 1.3 - share of landowner;

Item 1.4 - paid to farm laborers;

- Item 1.5** - used for seeds;
- Item 1.6** - used as payment of loans;
- Item 1.7** - used as payment for irrigation fee;
- Item 1.8** - used for feeds;
- Item 1.9** - post harvest wastage/losses; and
- Item 1.10** - given away.
- Item 1.11** - used as payment for rentals.

If disposition breakdown is given in percentage, compute for the equivalent quantity in local unit before entering the figure on the spaces provided using the formula:

Disposition (in loc. unit) = (% of Disposition) (Total Production for the Period)

As marginal note, the percentage breakdown given by the respondent may also be reflected on the questionnaire.

Note: Payment of loans refers to the part of production that was paid by the farmer to his/her creditor.

Wastage/losses refer to the quantity of wasted or lost that was incurred after the shelled/milled corn was put into sacks or any form of container. This may occur during drying, hauling and stocking.

Used as payment for rentals refers to payment in kind for machines and other rentals not elsewhere. Classified i.e. combined harvester including operator.

Block E – Corn Production Forecast (on standing crop)

This block intends to generate information on the standing crop as of March 31, 2016 and is EXPECTED to be harvested within the next five (5) months.

Item 1. Do you have any standing corn on your farm as of March 31, 2016? - Determine whether the sample household has standing corn on any of its parcel as of March 31, 2016 which is expected to be harvested within the next five (5) months. For a YES response encircle Code 1 and inquire for the succeeding items. Otherwise, encircle Code 0 and proceed to Block F, page 4.

Item 2. Type of Corn – Ask the respondent the type of corn of the standing crop. Encircle corresponding code (code 1 for white and code 2 for yellow) and accomplish the succeeding items column by column.

Item 3. Type of seed planted – Indicate the code of the major type/class of corn seed planted. Refer to the three pre-coded major types/classes of corn seeds at the bottom of the questionnaire.

Item 4. Month when crop will be harvested – Ask the month when the standing crop will be harvested and encircle code on the space provided.

Item 5. Area to be harvested – Ask the respondent about the expected area to be harvested. This may be less than or equal to the area planted. Indicate the response in hectare and in four (4) decimal places on the space provided.

Items 6 to 11. Quantity to be produced – This refers to the household's GROSS PRODUCTION to be harvested during the reference quarter, which may be in the form of shelled corn, ears of matured corn, and ears of green corn or a combination of these. **Shelled** corn is corn grains that have been removed from the cob with 14% moisture content. Specifically, determine from the respondent the following:

Item 6. Total number of units – Ask for the total quantity or GROSS volume of the reference quarter's shelled corn production's forecast that is expected to be produced. Indicate answer on the space provided in two (2) decimal places.

Item 7. Unit of measure – Ask for the unit of measure used in quantifying the crop to be harvested. Examples are sack, ganta, kerosene can, etc.

Item 8. Weight per unit of measure – Ask for the equivalent weight in kilogram of the unit of measure used in quantifying the expected production.

Item 9. Total number of ears – Ask for the number of corn on cobs that will be harvested as they reached full maturity or at hard-dough stage. Indicate the response on the space provided.

Item 10. Equivalent weight in shelled corn – Ask for the estimated equivalent weight in shelled corn the number of ears of matured corn to be harvested. Indicate response in kilograms in two (2) decimal places.

Item 11. Ears of green corn – This refers to the ears of young corn crop that will be harvested on or before they reach full maturity. They are either harvested at soft or hard-dough stage (for boiling or broiling).

Item 12. Month when crop was planted – Ask for the specific month when the crop that is expected to be harvested was planted and encircle code.

Item 13. Area planted to crop that will be harvested – Ask for the area planted to the crop that will be harvested. This should be in hectare and in four (4) decimal places.

Block F – Corn Planting Intentions

This block seeks to establish the two-quarter-ahead forecast on corn to be produced based on planting intention of the sample farmer. These are to include all corn crops in all types that are intended to be planted anytime during the succeeding quarter.

Item 1. Do you intend to plant corn on your farm anytime from April – June 2016? - Ask whether the sample household has any intention to plant corn on any of its parcels anytime within the current quarter. Encircle Code 1 for a YES response and inquire for the succeeding items. Otherwise, encircle Code 0 and Go to Block G.

Item 2. Type/s of corn grain to be planted – Inquire from the respondent the type/s of corn the household intends to plant during the reference period. Encircle the corresponding code/s for the type/s of corn.

Item 3. Month when crop will be planted – Ask the respondent on the month when the crop will be planted. Encircle month's code on the answer grid.

Item 4. Area to be planted – Ask the respondent about the area to be planted per type. Indicate area in hectare and in four (4) decimal places.

Item 5. Month when crop will be harvested – Ask the respondent about the expected month of harvested of the crop to be planted. Encircle month's code on the space provided.

Block G – Respondent's Assessment of the Household's Corn Production (For sample households that harvested corn during January-March 2016)

This block intends to establish comparison between the current quarter's productions against that of the same quarter of last year based on the respondent's viewpoint.

Item 1. Was your farm's production in January – March 2016 ... - Ask the respondent if his/her corn production during January – March 2016 was larger than, smaller than or about the same of his/her production in the same quarter of last year. Encircle appropriate code. If the response was larger or smaller than, ask for Item 2. If response was that it is the same, go to Block H.

Item 2. What was/were the reasons for the change in production – Ask the respondent of the major reason/s for the change in production. Encircle appropriate code/s and explain it further. The possible reasons are the following:

- | | |
|-----------------------------|------------------------------|
| Code 1 – Change in area | Code 5 – Fertilizer |
| Code 2 – Weather effects | Code 6 – Irrigation services |
| Code 3 – Pests and diseases | Code 7 – Others (specify) |
| Code 4 – Seeds | |

Block H – Farmers' Participation in Corn Program

This block aims to gather information on the farmers' awareness and participation in any government program on corn. It also seeks to find out the extent of their availment of the various services under the program.

Item 1. Are you aware of any program on corn? – Ask the respondent if he/she is aware of any government program on corn. Encircle Code 1 for YES. If NO, encircle Code 0 and end the interview.

Item 2. Have you availed of any benefit from government program on corn? – If the respondent has availed of any benefit from government program on corn, encircle Code 1. Otherwise, encircle Code 0 and end the interview.

Item 3. Which of the following program benefits and services have you availed of and used in your corn production during the January to March 2016 harvest?

- 1- Seeds;
- 2 - Fertilizer and other inputs;
- 3 - Training on farming technology;
- 4 - Irrigation facilities;
- 5 - Post harvest facilities;
- 6 - Marketing assistance;
- 7 – Loans;
- 8 – Others (Specify).

Determine from the respondent which of the above-listed program components/benefits/services he/she availed of and used in his/her corn production and marketing operation during the reference cropping. Encircle code and provide details for each particular program benefit and service. Include in “others” those not previously classified like tractors, IPM (Integrated Pest Management), FMR (Farm to Market Road) etc.

Block I – Statistical Researcher, Field Supervisor, PSO and Encoder Identification

Accomplish this Block after completing the interview. The CDC must signify accomplishment of his/her task by affixing his/her name, signature, and the date.

The Field Supervisor, PSO, and Encoder must also affix their names, signatures, and dates of accomplishing their respective tasks.

| C1. AREA, PRODUCTION, SEED AND IRRIGATION INFORMATION FOR THE FIRST QUARTER (Continued) | | | | White | Yellow |
|--|--|----------------------------------|--|-------|--------|
| 15. Area planted (ha) | | | | _____ | _____ |
| For Hybrid seed only | 16. Breeding method used ^{d/} (Indicate code) | | | | |
| 17. Name of the variety planted (Specify local or commercial name) | | | | | |
| Quantity of seeds used | 18. Total number of units | | | _____ | _____ |
| | 19. Unit of measure | | | | |
| | 20. Weight per unit of measure (kg) | | | _____ | _____ |
| Irrigation system (For irrigated corn) | 21. Type of irrigation facility ^{d/} (Indicate code) | | | | |
| | 22. Was the area actually irrigated? (Indicate code) 1 - Yes 0 - No, (Go to block C2) | | | | |
| | 23. Adequacy of irrigation water (Indicate code) 1 - Adequate 2 - Inadequate | | | | |
| C2. FERTILIZER USAGE FOR THE FIRST QUARTER (JANUARY - MARCH 2016) | | | | | |
| 1. Did you apply fertilizer? (Indicate code) 1 - Yes 0 - No (Go to block C3) | | | | | |
| 2. Area applied with fertilizer (ha) | | | | _____ | _____ |
| 3. Quantity of inorganic fertilizer in bag of 50 kg (Specify type and NPK composition) Ex: Urea (46-0-0) Complete (14-14-14) | 3.1 | NPK (___ ___ ___) | | _____ | _____ |
| | 3.2 | NPK (___ ___ ___) | | _____ | _____ |
| | 3.3 | NPK (___ ___ ___) | | _____ | _____ |
| | 3.4 | NPK (___ ___ ___) | | _____ | _____ |
| 4. Other Inorganic fertilizer applied | 4.1 Solid | a. Product name | | | |
| | | b. Fertilizer grade (NPK) | | | |
| | | c. Total number of units applied | | _____ | _____ |
| | | d. Weight per unit (kg) | | _____ | _____ |
| | 4.2 Liquid | a. Product name | | | |
| | | b. Fertilizer grade (NPK) | | | |
| | | c. Total number of units applied | | _____ | _____ |
| | | d. Volume per unit (liter) | | _____ | _____ |
| 5. Organic fertilizer applied | 5.1 Solid | a. Product name | | | |
| | | b. Fertilizer grade (NPK) | | | |
| | | c. Total number of units applied | | _____ | _____ |
| | | d. Weight per unit (kg) | | _____ | _____ |
| | 5.2 Liquid | a. Product name | | | |
| | | b. Fertilizer grade (NPK) | | | |
| | | c. Total number of units applied | | _____ | _____ |
| | | d. Volume per unit (liter) | | _____ | _____ |
| C3. PESTICIDE USAGE FOR THE FIRST QUARTER (JANUARY - MARCH 2016) | | | | | |
| 1. Did you apply pesticide? (Indicate code) 1 - Yes 0 - No (Go to block C4) | | | | | |
| 2. Area applied with pesticide (ha) | | | | _____ | _____ |
| 3. Pesticides applied | 3.1a. Name of pesticide | | | | |
| | 3.1b. Classification ^{e/} (Indicate code) | | | | |

^{c/} Breeding method of the hybrid seeds: 1 - Genetically modified 2 - Ordinary hybrid

^{d/} Type of Irrigation facility: 1 - NIS 2 - CIS-NIA 3 - CIS-LGU 4 - CIS-Private 5 - SWIP/SFR (Non-NIA) 6 - SWIP/SFR (NIA) 7 - Pump (Non-NIA)

^{e/} Classification of Pesticide: 1 - Insecticide 2 - Herbicide 3 - Fungicide 4 - Rodenticide 5 - Molluscicide 6 - Nematocide 7 - Others (Specify)

| C3. PESTICIDES USAGE FOR THE FIRST QUARTER (Continued) | | | White | Yellow | | | | |
|--|--|---------------------------|----------------------|-------------------|--------------------|----------------------|-------------------|--------------------|
| Pesticide applied | 3.1c. Total number of units applied | | _____ | _____ | | | | |
| | 3.1d. Unit of measure | | _____ | _____ | | | | |
| | Weight or volume per unit | 3.1e. In kilogram (Solid) | _____ | _____ | | | | |
| 3.1f. In liter (Liquid) | | _____ | _____ | | | | | |
| Pesticide applied | 3.2a. Name of pesticide | | _____ | _____ | | | | |
| | 3.2b. Classification ^{e/} (Indicate code) | | _____ | _____ | | | | |
| | 3.2c. Total number of units applied | | _____ | _____ | | | | |
| | 3.2d. Unit of measure | | _____ | _____ | | | | |
| | Weight or volume per unit | 3.2e. In kilogram (Solid) | _____ | _____ | | | | |
| 3.2f. In liter (Liquid) | | _____ | _____ | | | | | |
| Pesticide applied | 3.3a. Name of pesticide | | _____ | _____ | | | | |
| | 3.3b. Classification ^{e/} (Indicate code) | | _____ | _____ | | | | |
| | 3.3c. Total number of units applied | | _____ | _____ | | | | |
| | 3.3d. Unit of measure | | _____ | _____ | | | | |
| | Weight or volume per unit | 3.3e. In kilogram (Solid) | _____ | _____ | | | | |
| 3.3f. In liter (Liquid) | | _____ | _____ | | | | | |
| 4. Botanical extracts/spray applied (organic) | 4.1a. Name of botanical extracts/spray | | _____ | _____ | | | | |
| | 4.1b. Classification ^{e/} (Indicate code) | | _____ | _____ | | | | |
| | 4.1c. Total number of units applied | | _____ | _____ | | | | |
| | 4.1d. Unit of measure | | _____ | _____ | | | | |
| | Weight or volume per unit | 4.1e. In kilogram (Solid) | _____ | _____ | | | | |
| | | 4.1f. In liter (Liquid) | _____ | _____ | | | | |
| C4. LABOR INPUTS | | | | | | | | |
| 1. During the first quarter, did you hire laborers whether paid in cash or in kind for your corn farm operations? (Indicate code) 1 - Yes 0 - No | | | | | | | | |
| D. CORN PRODUCTION DISPOSITION | | | | | | | | |
| 1. Of your farm's total production for the period JANUARY - MARCH 2016, how many were/will be . . . | | | WHITE | | | YELLOW | | |
| | | | Shelled (local unit) | Matured Ears (LU) | Green Ears (piece) | Shelled (local unit) | Matured Ears (LU) | Green Ears (piece) |
| 1.01 | sold? | | _____ | _____ | | _____ | _____ | |
| 1.02 | used for household consumption? | | _____ | _____ | | _____ | _____ | |
| 1.03 | share of landowner? | | _____ | _____ | | _____ | _____ | |
| 1.04 | paid to farm laborers? | | _____ | _____ | | _____ | _____ | |
| 1.05 | used for seeds? | | _____ | _____ | | _____ | _____ | |
| 1.06 | used as payment for loans? | | _____ | _____ | | _____ | _____ | |
| 1.07 | used as payment for irrigation fee? | | _____ | _____ | | _____ | _____ | |
| 1.08 | used for feeds? | | _____ | _____ | | _____ | _____ | |
| 1.09 | post harvest wastage/losses? | | _____ | _____ | | _____ | _____ | |
| 1.10 | given away | | _____ | _____ | | _____ | _____ | |
| 1.11 | used as payment for rentals | | _____ | _____ | | _____ | _____ | |
| TOTAL | | | _____ | _____ | | _____ | _____ | |
| E. CORN PRODUCTION FORECAST (on standing crop) | | | | | | | | |
| 1. Do you have standing corn on your farm as of March 31, 2016? (Encircle code) 1 - Yes 0 - No, (Go to block F, page 4) | | | | | | | | |
| 2. Type of corn (Encircle code/s) | | | 1 - White | | | 2 - Yellow | | |
| 3. Type of seed planted ^{a/} (Indicate code) | | | | | | | | |

^{a/} Type of seed planted : 1 - Hybrid 2 - Modern OPV 3 - Native OPV

^{e/} Classification of Pesticide: 1 - Insecticide 2 - Herbicide 3 - Fungicide 4 - Rodenticide 5 - Molluscicide 6 - Nematocide 7 - Others (Specify)

| E. CORN PRODUCTION FORECAST (Continued) | | White | | | Yellow | | | |
|---|--|--|--------------------------|---------------------------------------|--------------------------|--------------------------------|--------------------------|----------------------|
| | | 4. Month when crop will be harvested (Encircle code) | 04 - Apr 07 - Jul | 05 - May 08 - Aug | 06 - Jun 09 - Sep | 04 - Apr 07 - Jul | 05 - May 08 - Aug | 06 - Jun 09 - Sep |
| 5. Area to be harvested (ha) | | _____ . _____ | | | _____ . _____ | | | |
| Quantity to be produced | Shelled corn (14% moisture content) | 6. Total number of units | _____ . _____ | | | _____ . _____ | | |
| | | 7. Unit of measure | _____ | | | _____ | | |
| | | 8. Weight per unit of measure (kg) | _____ . _____ | | | _____ . _____ | | |
| | Ears of matured corn | 9. Total number of units | _____ . _____ | | | _____ . _____ | | |
| | | 10. Unit of measure | _____ | | | _____ | | |
| | 11. Weight per unit in shelled corn (kg) | _____ . _____ | | | _____ . _____ | | | |
| Green corn | | 12. Total number of ears (piece) | _____ . _____ | | | _____ . _____ | | |
| 13. Month when crop was planted (Encircle code) | | 11 - Nov 12 - Dec 02 - Feb | 01 - Jan 03 - Mar | 11 - Nov 12 - Dec 02 - Feb | 01 - Jan 03 - Mar | | | |
| 14. Area planted to the crop that will be harvested (ha) | | _____ . _____ | | | _____ . _____ | | | |
| F. CORN PLANTING INTENTIONS | | | | | | | | |
| 1. Do you intend to plant corn on your farm anytime from April - June 2016? (Encircle code) | | 1 - Yes 0 - No, (Go to block G) | | | | | | |
| 2. Type/s of corn to be planted (Encircle code) | | 1 - White | | | 2 - Yellow | | | |
| 3. Month when crop will be planted (Encircle code) | | 04 - Apr | 05 - May | 06 - Jun | 04 - Apr | 05 - May | 06 - Jun | |
| 4. Area to be planted (ha) | | _____ . _____ | | | _____ . _____ | | | |
| 5. Month when crop will be harvested (Encircle code) | | 06 - Jun 09 - Sep | 07 - Jul 10 - Oct | 08 - Aug 11 - Nov | 06 - Jun 09 - Sep | 07 - Jul 10 - Oct | 08 - Aug 11 - Nov | |
| G. RESPONDENT'S ASSESSMENT OF THE HOUSEHOLD CORN PRODUCTION | | | | | | | | |
| (For sample households that harvested corn during JANUARY - MARCH 2016) | | | | | | | | |
| 1. Was your farm's production in January - March 2016 larger than, smaller than, or about the same as your farm's corn production in the same quarter of 2015? (Encircle code) 1 - Larger than in 2015 2 - Smaller than in 2015 3 - About the same, go to block H 4 - No harvest last year, go to block H | | | | | | | | |
| 2. What was/were the reason/s for the change in production? (Encircle code/s and explain further the reason/s) | | | | | | | | |
| 1 - Change in area _____ | | 5 - Fertilizer _____ | | 2 - Weather effects _____ | | 6 - Irrigation services _____ | | |
| 3 - Pests and diseases _____ | | 7 - Others (Specify) _____ | | 4 - Seeds _____ | | | | |
| H. FARMER'S PARTICIPATION IN CORN PROGRAM | | | | | | | | |
| 1. Are you aware of any government program on corn? (Encircle code) 1 - Yes 0 - No | | | | | | | | |
| 2. Have you availed of any benefit from any government program on corn? (Encircle code) 1 - Yes, go to item 3 0 - No, end interview | | | | | | | | |
| 3. Which of the following program benefits and services have you availed? (Encircle code/s and provide details) | | | | | | | | |
| 1 - Seeds _____ | | 5 - Post harvest facilities _____ | | 2 - Fertilizer and other inputs _____ | | 6 - Marketing assistance _____ | | |
| 3 - Training on farming technology _____ | | 7 - Loans _____ | | 4 - Irrigation facilities _____ | | 8 - Others (Specify) _____ | | |
| 4. Which of the availed benefits was/were used in your corn production during the January - March 2016 harvest? (Check box/es) | | | | | | | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| | | | | | | | 9 None | |
| I. STATISTICAL RESEARCHER, FIELD SUPERVISOR, PSO AND ENCODER IDENTIFICATION | | | | | | | | |
| 1. Name and Signature of Statistical Researcher : _____ | | Contact No. _____ | Date : _____ | | | | | |
| 2. Name and Signature of Field Supervisor : _____ | | Contact No. _____ | Date : _____ | | | | | |
| 3. Name and Signature of PSO : _____ | | Contact No. _____ | Date : _____ | | | | | |
| 4. Name and Signature of Encoder : _____ | | Contact No. _____ | Date : _____ | | | | | |



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