PALAY PRODUCTION SURVEY (PPS)

MANUAL of OPERATIONS

Republic of the Philippines
PHILIPPINE STATISTICS AUTHORITY

April 2016

1. HISTORICAL BACKGROUND

Over the years, the Philippine Statistics Authority at Quezon Avenue (PSA-QA) which was formerly known as the 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 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 Palay Production Survey (PPS) 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 palay area, production and yield to serve as inputs for policy and programs on rice.

2. SAMPLING METHODOLOGY

2.1. Sampling Frame

The 1991 Census of Agriculture and Fisheries (CAF) provides the basis for the sampling frame for the PPS. 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 subuniverses: a subuniverse of barangays with probability of selection equal to 1.0 and another subuniverse 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 Palay 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 (PPS) 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 palay. 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 palay 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 palay farm area in the province, this aggregate area was doubled for provinces with half-listed strata. Using the estimated area to devoted to palay as the estimated size of the barangay, a PPS sample of four (4) independent barangays were selected from each stratum. Each sample barangay represents the ith replicate sample for that stratum.[1]

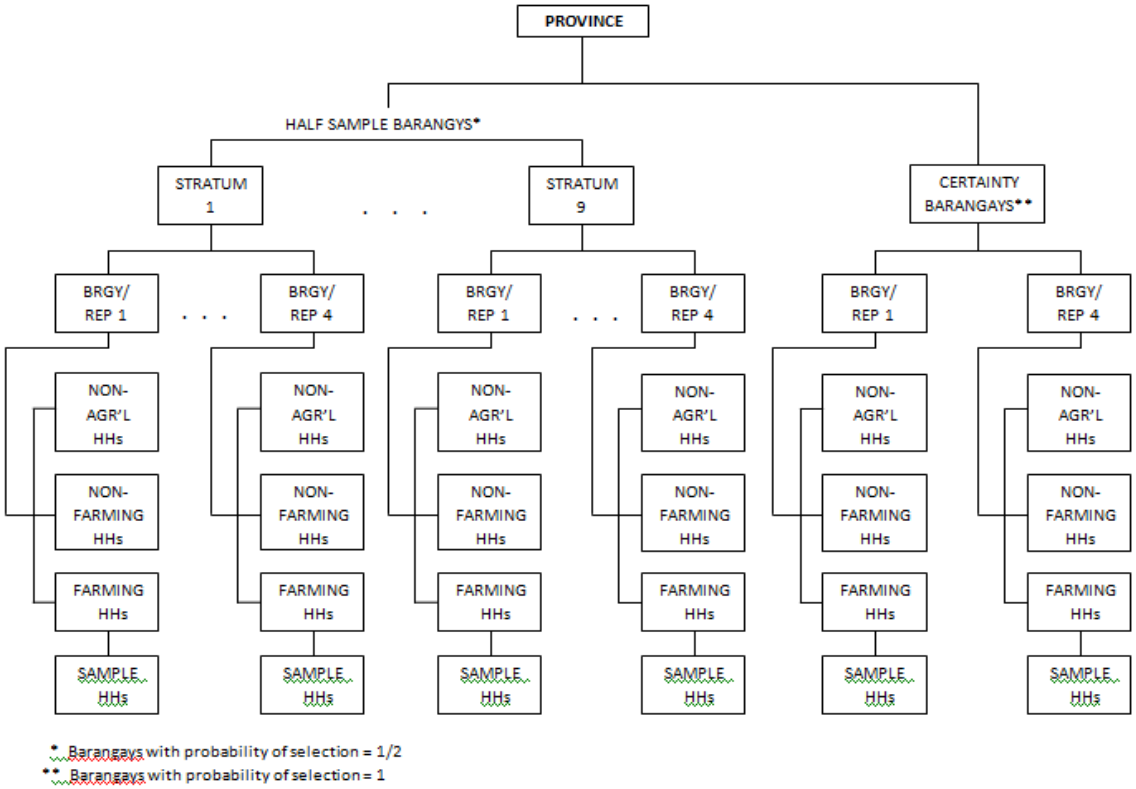

Figure 1. Schematic Diagram of the sampling Design for the Palay Production Survey

[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 ith sample barangay in the hth stratum;
N_{khi} = total number of farming households in the ith sample barangay in the hth stratum
R_k = uniform raising (expansion) factor used for the kth province
b_h = number of sample barangays in the hth stratum (=4)
P_{khi} = palay area of the ith sample barangay in the hth stratum
P_{kh} = aggregate palay area in the hth 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 kth province used in determining n_{khi} is:

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

where:

$\bar{b}_k$ = average number of sample barangays per stratum (=4)
$\bar{P}_{k.}$ = average total area planted to palay per stratum, or

$$= \frac{\textit{total palay area planted to all strata in the } k^{th} \textit{ province}}{\textit{total number of strata in the } k^{th} \textit{ province}}$$

$\bar{P}_{k..}$ = average total area planted to palay per barangay
$\bar{N}_{k..}$ = average number of farming households per barangay
$\bar{n}_{k..}$ = 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 ith barangay, W_{khi}, was computed as follows:

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

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

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

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

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

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

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

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,

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

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 kth province is given by

$$x'_k = \sum_{h=1}^{H_k} x'_h$$

where H_k is the total number of strata in the kth 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 regional estimates (for the whole country).

3. INSTRUCTION IN ACCOMPLISHING THE QUESTIONNAIRE

3.1 The Palay Production Survey Questionnaire

The Palay Production Survey (PPS) April 2016 Round questionnaire intends to obtain information on palay area, production, disposition, ecosystem, irrigation, usage of fertilizer and pesticide, area and production forecasts based on standing crop and planting intentions, assessment of farms' palay production and farmers' participation in the rice program of the government.

Shown below are the different blocks and their corresponding pages in the Palay Production Survey (PPS) April 2016 Round questionnaire:

Block	Location in the Questionnaire
Block A – Sample Identification	Page 1
Block B – Sample Particulars	Page 1
Block C – Information on Palay Harvested	Page 1
C1 – Area, Production, Seed and Irrigation Information for the First Quarter (January to March 2016)	Page 1-2
C2 – Fertilizer Usage for the First Quarter (Jan. to March 2016)	Page 2
C3 – Pesticide Usage for the First Quarter (Jan. to March 2016)	Page 2-3
C4 – Labor Inputs	Page 3
Block D – Palay Production Disposition (All Ecosystems) (January to March 2016)	Page 3
Block E – Palay Production Forecast (On Standing Crop)	Page 3-4
Block F – Palay Planting Intentions (April to June 2016)	Page 4
Block G – Respondent's Assessment of the Household Palay Production	Page 4
Block H – Farmer's Participation in Rice 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.

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 palay household, non-palay 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
Palay household	The sample household operates an agricultural land, whole or part of which is palay area within the nine-month period, or the land is temporarily in-fallow but the respondent declares that it is devoted to palay production. Specifically, any of the following conditions must be satisfied: a. Household harvested palay during the reference quarter (January to March 2016). b. Household has standing palay crop in the farm. c. Household intends to plant palay within the succeeding quarter. d. The land is temporarily in-fallow but the respondent declares that it is devoted to palay 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-palay household	Household operates an agricultural land which is not intended for/devoted to palay production, i.e., zero palay production, no standing palay 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 item 3 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
Cases 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 palay household, or non-palay 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 biggest agricultural area to replace the listed operator.	Ask if palay household, or non-palay 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 palay 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 palay 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 palay area – Get the TOTAL PHYSICAL AREA of the palay farm operated by the sample household within the province and those located in other parts of the country. This includes palay areas acquired by the sample household as of the date of interview, and those palay 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 palay 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 Palay Harvested

This portion of the questionnaire gathers detailed information on palay 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 palay production, harvest area by type of ecosystem, class and quantity of seeds used, planting method and irrigation system during the period January to March 2016.

Item 1. Did you harvest palay during the period January - March 2016? – Ask the respondent if he/she harvested palay 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 ecosystem – Encircle the code/s of ecosystem where the farmer harvested his/her palay. Three columns are allotted assuming that a farmer operates farms of more than one type of ecosystem. This holds true up to Block C4 (Labor Inputs).

Three pre-coded types of ecosystems are provided:

Code 1 – **Irrigated. A**rea with irrigation facilities supplying water through artificial means like gravity, force/power, pump, etc. Irrigated area become rainfed only, when the irrigation system is no longer operational for the past two (2) years and beyond repair and there is no plan of irrigating the farm.

Code 2 – **Rainfed.** The area holds standing water but solely dependent on rainfall for its water supply. It may have dikes that retain rainwater.

Code 3 – **Upland.** Farm land which has no amenities to hold for standing water. It is usually located along elevated lands, along rivers, between hills, hillsides, etc. Though crops planted in this type of ecosystem are drought-resistant and do not require standing water for their normal growth, irrigation by flushing is sometimes practiced to improve the crops' performance especially during the long dry spell.

Encircle code 1 for irrigated type of farm, code 2 for rainfed and code 3 for upland. If a certain farmer operates farms of more than one (1) type of ecosystem, see to it that the information gathered are indicated under each appropriate column. **Thus, it is advised to gather all the required information, from SUB-BLOCK C.1.3 up to Block C4 of the questionnaire for the first type of ecosystem before proceeding to the next type of ecosystem.**

Item 3. Type of seed planted – Indicate the code of the major type/class of palay seed planted. Four pre-coded major types/classes of palay seeds are provided at the bottom of the questionnaire. They are as follows:

Code 1 – **Hybrid**

A **hybrid** palay variety is the product of cross pollination or the transfer of pollen from the anther of one palay plant to the stigma of another palay plant. Thus, two palay plants are needed to produce its seeds, one serving as the female parent and the other, as male parent. Also called an F1, a hybrid variety exhibits better performance than its parents. Seeds harvested from the F1 hybrid are not recommended for planting in the following season owing to expected reduction in the quality and quantity of the yield. Examples of hybrid varieties are NSIC 2009 Rc218SR (Mabango 3), NSIC 2009 Rc220SR (Japonica), NSIC 2010 Rc224 (Tubigan 19), NSIC 2010 Rc226 (Tubigan 20), NSIC 2010 Rc228H (Mestiso 24), NSIC 2010 Rc230H (Mestiso 25), NSIC 2010 Rc232H (Mestiso 26), NSIC 2010 Rc234H (Mestiso 27), and NSIC 2010 Rc236H (Mestiso 28)

Code 2 – **Inbred-certified**

An **inbred palay variety** is the product of self-pollination or the transfer of pollen from the anther to the stigma of the same flower. Thus, only one palay plant is needed to produce its seeds. Seeds harvested from an inbred variety can still be used for the next planting season without much reduction in the quality and quantity of the yield, provided rouging was regularly done. All IR, NSIC Rc, and traditional varieties are inbred, except NSIC Rc26H (Magat), NSIC Rc72H (Mestizo 1), and NSIC Rc 76H (Panay).

Certified seeds are those produced from the planting of registered seeds by selected farmer-cooperators throughout the country in accordance with the prescribed rules and regulations. This class of seeds passed the standard quality and purity set forth by the seed certifying agency.

Code 3 – **Farmers'/Good seeds**

Farmers'/Good seeds refer to seeds produced from varieties not yet approved by the National Seed Industry Council (NSIC) but meet the prescribed standards set by the certifying agency. It can also be any class of seeds that do not conform to the corresponding standards set by the certifying agency.

Code 4 – **Traditional/Native**

Traditional/Native seeds refer to the indigenous varieties. However, this variety does not refer to the traditional varieties as identified by some localities.

Item 4. Area harvested – This refers to the total area harvested to palay during the reference quarter. It may be less than or equal to the total area planted to palay.

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 (irrigated/rainfed/upland) 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 10. If the answer is no, meaning there was a DECREASE in area, determine the ACTUAL area of palay 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 BAS 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.

Item 5. Month harvested – Ask for the month when the crop was harvested for each type of ecosystem. 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.

Items 6 to 8. Quantity of dry palay produced – This refers to the household's GROSS PRODUCTION in dry weight during the reference quarter. **Dry weight** refers to the weight of palay with about 14% moisture content and ready for storing.

Item 6. Total number of units – Determine from the respondent the total or gross volume of palay produced in dry weight during the reference quarter and indicate it in two (2) decimal places on the space provided. If the respondent finds difficulty in determining the gross production from fresh weight into dry weight, consider the responses of the sample households within the barangay to come up with the conversion factor.

Item 7. 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 8. Weight per unit of measure - Ask for the equivalent dry weight in kilogram of palay 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.

Item 9. 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 10. 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 palay 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 supervisor. Try to confirm from the respondent if he finds the result within the acceptable range.

Item 11. Name of the variety planted – Ask the respondent about the variety of palay planted. Specify the local or commercial name and indicate on the space provided.

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

Item 12. Method of crop establishment – Ask the respondent on the method how the crop was established. There are two pre-coded methods provided in the questionnaire which are transplanting and direct seeding. If both methods were used, apply the major-portion concept.

Code 1 – **Transplanting method** (Lipat-tanim) – This is a method of crop establishment wherein germinated seeds are broadcasted on seedbed. They are being transplanted as young seedlings of 5 to 30 days old, either at random or in straight rows on paddies.

Code 2 – **Direct seeding** – This could either be in dry seeding or wet seeding method. In dry seeding, seeds are drilled either along furrows or contours in the field, while in wet seeding (Sabog-tanim), germinated seeds are broadcasted uniformly to the prepared paddies.

Items 13 to 15. Quantity of seeds used – These items are intended to determine the amount of seeds transplanted/direct seeded corresponding to the harvested crop.

Item 13. 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 14. Unit of measure – This refers to the unit of measure used in quantifying the volume of seeds transplanted/directly seeded.

Item 15. Weight per unit of measure – Ask for the average weight per unit of measure of seeds used in kilogram. Entries must be in two (2) decimal places. Farmers who bought seeds tend to identify the type and weight of seeds used through **Tagging.** It is a system in classifying the seeds using various colors by the seed dealers. Examples are:

Foundation seeds - Red tag - 40 kilograms
Registered seeds - Green tag - 40 kilograms
Certified seeds - Blue tag - 40 kilograms
Hybrid seeds - 15-20 kilograms

Items 16 to 18. Irrigation system – These items solicit information on irrigation for type 1 ecosystem (irrigated) only and should be SKIPPED if the harvested crop is either rainfed or upland.

Item 16. Type of irrigation facility – Ask for the major type of irrigation facility that covers the palay 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 17. 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 18 and go to C2.

Item 18. 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 **N**itrogen, **P**hosphorus and **P**otassium. 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** contents 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. 5 0;
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. 5 0;
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 Green Leaves organic fertilizer (1.31-3.75-0.94) and Biohero organic fertilizer (1.31-3.0-3.0). 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 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 palay operations whether paid in cash or in kind during the reference quarter. Indicate Code 1 for Yes. Otherwise, Code 0 for No.

Block D – Palay Production Disposition (for all ecosystem)

This block deals with the breakdown of the sample household's utilization of its **total production for all ecosystem** 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 7.

Item 1 – Ask the respondent how the total production for the period JANUARY – MARCH 2015, was utilized or disposed. Enter quantity of disposition in local unit and in two (2) decimal places. The disposition items are:

Item 1.01 – sold;
Item 1.02 – used for household consumption;
Item 1.03 – share of landowner;
Item 1.04 – paid to farm laborers;
Item 1.05 – used for seeds;
Item 1.06 – used as payment of loans;
Item 1.07 – used as payment for irrigation fee;
Item 1.08 – used for feeds;
Item 1.09 – 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 figures 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 refers to the quantity wasted or lost that was incurred after the threshed palay 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. rental of combined harvester including operator

Block E – Palay 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 palay on your farm as of March 31, 2016? - Determine whether the sample household has standing palay 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 Ecosystem – Ask the respondent the type of ecosystem of the standing crop. The sample household may have standing palay in more than one ecosystem. Encircle corresponding code if irrigated, rainfed or upland and accomplish the succeeding items column by column.

Item 3. Type of seed planted – Indicate the code of the major type/class of palay seed. Refer to the four pre-coded major types/classes of palay 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 6-8. Quantity of dry palay to be produced – These items intend to determine the quantity of palay in dry equivalent (14% moisture content) to be produced. Specifically, determine from the respondent the following:

Item 6. Total number of units – Ask for the total quantity of palay 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, 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. 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 10. 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 – Palay Planting Intentions

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

Item 1. Do you intend to plant palay on your farm anytime from April – June 2016? - Ask whether the sample household has any intention to plant palay 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 of ecosystem – Inquire from the respondent the type of ecosystem of the farm where the household intends to plant during the reference period. Encircle the corresponding code/s for the type/s of ecosystem.

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 ecosystem. 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 Palay Production (For sample households that harvested palay during January-March 2016)

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

Item 1. Was your farm's production in January to March 2016… - Ask the respondent if his/her palay production during January to 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 2 – Weather effects
Code 3 – Pests and diseases
Code 4 – Seeds
Code 5 – Fertilizer
Code 6 – Irrigation services
Code 7 – Others (specify)

Block H – Farmers' Participation in Rice Program

This block aims to gather information on the farmers' awareness and participation in any government program on rice. 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 rice? – Ask the respondent if he/she is aware of any government program on rice. 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 rice? – If the respondent has availed of any benefit from government program on rice, **e**ncircle 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 palay 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 palay 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 Statistical Researcher (SR) 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.

CSD Form 1a

Republic of the Philippines
PHILIPPINE STATISTICS AUTHORITY
Quezon City

Approval No: _____
Expires on: _____

CONFIDENTIALITY
All information contained on this form is held strictly confidential.

PALAY AND CORN PRODUCTION SURVEY

PALAY PRODUCTION SURVEY

APRIL 2016 ROUND

A. SAMPLE IDENTIFICATION

1. Region _____
2. Province _____
3. Municipality _____
4. Barangay _____
5. Stratum . . . . . .
6. Replicate . . . . . .
7. Household weight _____ . ___ ___ ___ ___ ___ ___
8. Household code (EA - HSN) ____ ____ – ____ ____ ____

B. SAMPLE PARTICULARS

1. Name of agricultural operator *(Complete name)* _____ *(Last name)* _____ *(First name)* _____ *(M.I.)*

2. Sample status *(Encircle code)*
   - 10 - Palay household
   - 20 - Non-palay household *(Ask items 3 to 5 then end interview)*
   - 30 - Non-agricultural household *(Ask item 3 then end interview)*

NOTE: This portion is 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 *(Encircle code)*
- 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)*
- 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

5. Total agricultural area *(ha)* _____ . ___ ___ ___ ___

6. Total palay area *(ha)* _____ . __ __ __ __

C. INFORMATION ON PALAY HARVESTED

C1. AREA, PRODUCTION, SEED AND IRRIGATION INFORMATION FOR THE FIRST QUARTER (JANUARY - MARCH 2016)

1. Did you harvest palay during the period January - March 2016? *(Encircle code)* 1 - Yes 0 - No, *(Go to block E, page 3)*

		1 - Irrigated	2 - Rainfed	3 - Upland
2. Type of ecosystem *(Encircle code/s)*				
3. Type of seed planted[a/] *(Indicate code)*				
4. Area harvested *(ha)*		_____ . __ __ __	_____ . __ __ __	_____ . __ __ __
5. Month harvested *(Encircle code)*		01 - Jan 02 - Feb 03 - Mar	01 - Jan 02 - Feb 03 - Mar	01 - Jan 02 - Feb 03 - Mar
Quantity of dry palay produced *(14% moisture content)*	6. Total number of units	_____ . ____ ____	_____ . ____ ____	_____ . ____ ____
	7. Unit of measure			
	8. Weight per unit of measure *(kg)*	_____ . ____ ____	_____ . ____ ____	_____ . ____ ____
9. Month planted *(Encircle code)*		08 - Aug 09 - Sep 10 - Oct 11 - Nov 12 - Dec	08 - Aug 09 - Sep 10 - Oct 11 - Nov 12 - Dec	08 - Aug 09 - Sep 10 - Oct 11 - Nov 12 - Dec
10. Area planted *(ha)*		_____ . __ __ __	_____ . __ __ __	_____ . __ __ __
11. Name of the variety planted *(Specify local or commercial name)*				
12. Method of crop establishment *(Encircle code)*		1 - Transplanting 2 - Direct seeding	1 - Transplanting 2 - Direct seeding	1 - Transplanting 2 - Direct seeding

[a/] *Type of seed planted : 1 - Hybrid 2 - Inbred - Certified 3 - Farmers'/Good seeds 4 - Traditional/Native*

C1. AREA, PRODUCTION, SEED AND IRRIGATION INFORMATION FOR THE FIRST QUARTER *(Continued)*

		Irrigated	Rainfed	Upland
Quantity of seeds used	13. Total number of units	_____ . ___ ___	_____ . ___ ___	_____ . ___ ___
	14. Unit of measure			
	15. Weight per unit of measure *(kg)*	_____ . ___ ___	_____ . ___ ___	_____ . ___ ___
Irrigation system	16. Type of irrigation facility[b/] *(Indicate code)*			
	17. Was the area actually irrigated? *(Encircle code)*	1 - Yes 0 - No *(Go to block C2)*		
	18. Adequacy of irrigation water *(Encircle code)*	1 - Adequate 2 - Inadequate		

C2. FERTILIZER USAGE FOR THE FIRST QUARTER (JANUARY - MARCH 2016)

			Irrigated	Rainfed	Upland
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)

			Irrigated	Rainfed	Upland
1. Did you apply pesticide? *(Indicate code)* 1 - Yes 0 - No *(Go to block C4)*					
2. Area applied with pesticide *(ha)*			_____ . ___ ___	_____ . ___ ___	_____ . ___ ___
3. Pesticide applied	3.1a. Name of pesticide				
	3.1b. Classification[c/] *(Indicate code)*		_____	_____	_____
	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)*	_____ . ___ ___	_____ . ___ ___	_____ . ___ ___

[b/] *Type of Irrigation facility: 01 - NIS 02 - CIS-NIA 03 - CIS-LGU 04 - CIS-Private 05 - SWIP/SFR (Non-NIA) 06 - SWIP/SFR (NIA) 07 - Pump (Non-NIA) 08 - Pump (NIA) 09 - SDD 10 - Others (Specify)*

[c/] *Pesticide Classification: 1 - Insecticide 2 - Herbicide 3 - Fungicide 4 - Rodenticide 5 - Molluscicide 6 - Nematocide 7 - Others (Specify)*

C3. PESTICIDE USAGE FOR THE FIRST QUARTER *(Continued)*

			Irrigated	Rainfed	Upland
Pesticide applied	3.2a. Name of pesticide				
	3.2b. Classification[c/] *(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[c/] *(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[c/] *(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 palay farm operations? *(Indicate code)* 1 - Yes 0 - No			

D. PALAY PRODUCTION DISPOSITION

1. Of your farm's total production *(in local unit)* for the period JANUARY - MARCH 2016, how many were/will be . . .			
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. PALAY PRODUCTION FORECAST *(on standing crop)*

1. Do you have standing palay on your farm as of March 31, 2016? *(Encircle code)* 1 - Yes 0 - No, *(Go to block F, page 4)*			
2. Type of ecosystem *(Encircle code/s)*	1 - Irrigated	2 - Rainfed	3 - Upland
3. Type of seed planted[a/] *(Indicate code)*			
4. Month when crop will be harvested *(Encircle code)*	04 - Apr 05 - May 06 - Jun 07 - Jul 08 - Aug	04 - Apr 05 - May 06 - Jun 07 - Jul 08 - Aug	04 - Apr 05 - May 06 - Jun 07 - Jul 08 - Aug
5. Area to be harvested *(ha)*	____ . ___ ___	____ . ___ ___	____ . ___ ___

[a/] *Type of seed planted : 1 - Hybrid 2 - Inbred - Certified 3 - Farmers'/Good seeds 4 - Traditional/Native*

[c/] *Pesticide Classification: 1 - Insecticide 2 - Herbicide 3 - Fungicide 4 - Rodenticide 5 - Molluscicide 6 - Nematocide 7 - Others (Specify)*

E. PALAY PRODUCTION FORECAST *(Continued)*

		Irrigated	Rainfed	Upland
Quantity of dry palay to be produced *(14% moisture content)*	6. Total number of units	_____ . ____	_____ . ____	_____ . ____
	7. Unit of measure			
	8. Weight per unit of measure *(kg)*	_____ . ____	_____ . ____	_____ . ____
9. Month when crop was planted *(Encircle code)*		12 - Dec 01 - Jan 02 - Feb 03 - Mar	12 - Dec 01 - Jan 02 - Feb 03 - Mar	12 - Dec 01 - Jan 02 - Feb 03 - Mar
10. Area planted to crop that will be harvested *(ha)*		_____ . ____	_____ . ____	_____ . ____

F. PALAY PLANTING INTENTIONS

1. Do you intend to plant palay on your farm anytime from April - June 2016? *(Encircle code)* 1-Yes 0-No, *(Go to block G)*

	Irrigated	Rainfed	Upland
2. Type of ecosystem *(Encircle code)*	1 - Irrigated	2 - Rainfed	3 - Upland
3. Month when crop will be planted *(Encircle code)*	04 - Apr 05 - May 06 - Jun	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 07 - Jul 08 - Aug 09 - Sep 10 - Oct	06 - Jun 07 - Jul 08 - Aug 09 - Sep 10 - Oct	06 - Jun 07 - Jul 08 - Aug 09 - Sep 10 - Oct

G. RESPONDENT'S ASSESSMENT OF THE HOUSEHOLD PALAY PRODUCTION

(For sample households that harvested palay 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 palay 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 _____

2 - Weather effects _____

3 - Pests and diseases _____

4 - Seeds _____

5 - Fertilizer _____

6 - Irrigation services _____

7 - Others *(Specify)* _____

H. FARMER'S PARTICIPATION IN RICE PROGRAM

1. Are you aware of any government program on rice? *(Encircle code)* 1 - Yes 0 - No
2. Have you availed of any benefit from government program on rice? *(Encircle code)* 1 - Yes 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 palay production during the January - March 2016 harvest? *(Check box/es)*

[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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