

Philippines - Palay Production Survey 2009

Bureau of Agricultural Statistics

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Overview

Identification

ID NUMBER

PHL_2009_PPS_v01_EN_M_v01_A_OCS

Overview

ABSTRACT

The Palay Production Survey is one of the two modules of the Palay and Corn Production Survey (PCPS), formerly known as the Rice and Corn Production Survey (RCPS).

The Palay Production Survey (PPS) 2009 was a quarterly survey conducted by the Bureau of Agricultural Statistics (BAS). It aimed to generate estimates on palay production, area and yield and other related information at the provincial level. It was conducted in four rounds, namely: January, April, July and October. Each round generated estimates for the immediate past quarter and forecasts for the next two quarters. Results of the survey served as inputs to planners and policy makers on matters concerning the rice industry.

KIND OF DATA

Sample survey data [ssd]

UNITS OF ANALYSIS

Households

Scope

NOTES

The scope of the Palay Production Survey includes:

- Production, area planted/harvested and yield by ecosystem and seed type
- Usage of seeds, fertilizer and pesticides
- Source of irrigation water and adequacy
- Monthly distribution of production and area harvested
- Farm household disposition of production
- Area with standing crop
- Planting intention for the quarter
- Farmers' awareness and participation in the Ginintuang Masaganang Ani (GMA) Rice program

Coverage

GEOGRAPHIC COVERAGE

National Coverage

UNIVERSE

Farming households in palay producing barangays.

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

| Name | Affiliation |
|-----------------------------------|---------------------------|
| Bureau of Agricultural Statistics | Department of Agriculture |

FUNDING

| Name | Abbreviation | Role |
|-----------------------------------|--------------|---------|
| Bureau of Agricultural Statistics | BAS | Funding |

Metadata Production

METADATA PRODUCED BY

| Name | Abbreviation | Affiliation | Role |
|------------------------------|--------------|-----------------------------------|----------------------------|
| Office of Chief Statistician | OCS | Food and Agriculture Organization | Metadata adapted for FAM |
| Jacinta U. Estrada | JUE | Bureau of Agricultural Statistics | Documentation of the study |
| Minda C. Mangabat | MCM | Bureau of Agricultural Statistics | Reviewer |
| Maura S. Lizarondo | MSL | Bureau of Agricultural Statistics | Reviewer |

DDI DOCUMENT VERSION

PHL_2009_PPS_v01_EN_M_v01_A_OCS_v01

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Sampling

Sampling Procedure

The sampling procedure used in the Palay Production Survey 2009 (PPS 2009) was first implemented in 1994. This was a replicated two-stage stratified sampling design with province as the domain, barangay as the primary sampling unit (PSU) and farming household as the secondary sampling unit (SSU).

The results of the 1991 Census of Agriculture and Fisheries (CAF 1991) served as sampling frame at the PSU and SSU levels. In the said census, the largest barangay in a municipality was taken with certainty while a 50 percent sampling rate was used for 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 one (these barangays were called 'certainty barangays') and another sub universe of barangays with probability of selection equal to 0.5. This characteristic of the CAF 1991 data was used in the selection of sample barangays for the PPS.

The barangays were arrayed in ascending order based on palay area then stratified such that the aggregate palay area of the barangays belonging to one stratum is more or less equal to the aggregate palay area of the barangays in any other stratum. Ten strata were formed for major palay producing provinces and five for minor producing provinces. In all these provinces, the last stratum consisted of the certainty barangays per CAF 1991 design.

For each stratum, four (4) sample barangays were drawn independently using probability proportional to size (PPS) sampling with the barangay's palay area as size measure. This resulted with four (4) independent sets of barangays (i.e., four replicates) for the province. Systematic sampling was used in drawing the sample farming households in each sample barangay.

For economic reasons, sample size per barangay was limited to a minimum of four (4) and a maximum of twenty-five (25). To correct for this limitation of the design, the use of household weights was instituted. A detailed discussion of weighting in the PPS is included in the survey's estimation procedure attached as a technical document.

In November 2007, an updating of the list of farming households in all palay sample barangays nationwide was done to address the problem of non-response due to transfer of residence, stoppage of farm operation, passing away of operator etc. Consequently, a new set of sample households was drawn.

Absent respondents such as refusals, not at home, unknown and transferred to another barangay were treated as missing and were replaced at the central office for the next quarter's survey. The replacement samples were taken from the list of replacements (farming households) for the barangay and were reflected in the list of sample households for the next round.

Response Rate

Response rate refers to the ratio of sample households who responded to the survey to the total number of sample households, expressed as a percentage. For Palay Production Survey (PPS), responding samples include farming households who are into palay farming (code 10), those who are into other agricultural activities or with no agricultural activities during the reference period (code 20).

The PPS 2009 response rates were as follows:

1. April 2009 Round - 91.54%
2. July 2009 Round - 90.93%
3. October 2009 Round - 94.21%
4. January 2010 Round - 92.76%

Weighting

Sample weights were applied to all variables at the household-level. These were determined as a function of the uniform raising factor for the province, denoted by R_k , and the adjusted household weights.

Rk was initially computed from the following characteristics: average total area planted to corn per stratum, average total area planted to corn per barangay, average number of farming households per barangay, average number of sample farming households per barangay and average number of sample barangays per stratum.

Sample size for the sample barangay was determined based on the following information: Rk, total number of farm households in the sample barangay, total corn area of the sample barangay, aggregate corn area in the stratum and number of sample barangays in the stratum.

For operational purposes, sample size per barangay was limited to a minimum of four (4) and a maximum of 25. To correct for this limitation, the use of a uniform sample weight for all sample households in the same sample barangay was instituted. Household weights were determined as a function of the computed sample size and the 'desired' sample size for the barangay, that is:

- a) 1.00 if the computed sample size was between 4 and 25,
- b) less than 1.00 if computed sample size was less than 4,
- c) more than 1.00 if computed sample size was more than 25, and
- d) based on computed sample size and number of farming households in the barangay if computed sample size was less than 25 and said sample size was greater than total number of farming households in the barangay.

Household weights were encoded together with other household level data. During table generation, weighting adjustment was done to correct for sampling unit non-response due to the following reasons:

- refusal of target respondent or any other knowledgeable household member to be interviewed
- sample barangay was not accessible during the survey period
- entire household was temporarily away during the survey operation
- sample household has transferred residence to another barangay
- sample household's residence could not be located / unknown in the sample barangay

Weighting adjustment was done for each sample barangay, whenever applicable. This was calculated by multiplying the original household weight by the reciprocal of the response rate. Response rate is the ratio of the number of sample households who responded to the survey (either corn household and non-corn household) to the total number of sample households in the barangay. Calculation of the final weight was done afterwards, by multiplying the adjusted weight by the uniform raising factor Rk.

Details of the above discussion except for weighting adjustment procedures, are contained in the document describing the Palay Production Survey (PPS) sampling methodology provided attached as a technical document.

Questionnaires

No content available

Data Collection

Data Collection Dates

| Start | End | Cycle |
|------------|------------|--------------------|
| 2009-04-01 | 2009-04-10 | April 2009 Round |
| 2009-07-01 | 2009-07-10 | July 2009 Round |
| 2009-10-01 | 2009-10-10 | October 2009 Round |
| 2009-12-01 | 2009-12-10 | January 2010 Round |

Data Collection Mode

Face-to-face paper [f2f]

Data Processing

Data Editing

Prior to data encoding, the accomplished survey returns were manually edited and coded. Manual editing was the checking of responses to the Palay Production Survey (PPS) questionnaire in terms of acceptability and validity. This activity was aimed at improving the quality of data collected by the CDCs. It involved the checking of data items based on criteria like completeness of data, consistency with other data items and data ranges. Coding was the assignment of alpha-numeric codes to questionnaire items to facilitate encoding.

Encoded data were subjected to computerized editing using a customized editing program. The editing program took into consideration the validation criteria such as validity, completeness and consistency with other data items. This activity was done to capture invalid entries that were overlooked during manual editing. An error listing was produced as output of the process. The errors reflected in said lists were verified vis-à-vis the questionnaires. The data files were updated based on the corrections made. Editing and updating were performed iteratively until a clean, error-free data file was generated.

Completeness check was done to compare the data file against a master file of barangays to check if the sample barangays have been completely surveyed or not. This activity was done after a clean, error-free data file was generated.

Data Appraisal

Other forms of Data Appraisal

To ensure the quality of its statistical services, the BAS has mainstreamed in its statistical system for generating production statistics, a quarterly data review and validation process. This is undertaken at the provincial, regional and national levels to incorporate the impact of events not captured in the survey.

The data review process starts at the data collection stage and continues up to the processing and tabulation of results. However, data examination is formalized during the provincial data review since it is at this stage where the data at the province-level is analyzed as a whole. The process involves analyzing the survey data in terms of completeness, consistency among variables, trend and concentration of the data and presence of extreme observations. Correction of spotted errors in the data is done afterwards. The output of the process is a clean data file used in the re-computation of survey estimates.

The estimates generated from the clean data set are thoroughly analyzed and validated with auxiliary information to incorporate the impact of information and events not captured by the survey. These information include results of the Monthly Palay and Corn Survey Report (MPCSR), historical data series, report on weather condition, area and crop condition, irrigation, levels of inputs usage, supply and demand, marketing of agricultural products, and information on rice and corn program implementation.