

Philippines - Corn Production Survey 2016

Philippine Statistics Authority (PSA)

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Overview

Identification

ID NUMBER

PHL_2016_CPS_v01_EN_M_v01_A_OCS

Overview

ABSTRACT

The Corn 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 Corn Production Survey (CPS) is a quarterly survey conducted by the Philippine Statistics Authority (PSA). It aims to generate estimates on corn production, area and yield and other related information at the provincial level. The four rounds are conducted in January, April, July and October. Each round generates estimates for the immediate past quarter and forecasts for the next two quarters. Results of the survey serve as inputs to planners and policy makers on matters concerning the corn industry.

KIND OF DATA

Sample survey data [ssd]

UNITS OF ANALYSIS

Households

Scope

NOTES

The scope of the Corn Production Survey includes:

- Production, area planted/harvested and yield by crop type and seed class
- 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

TOPICS

Topic	Vocabulary	URI
Agriculture, forestry, fisheries	Philippine Statistics Authority	
Methodology of data collection, processing, dissemination and analysis	Philippine Statistics Authority	

Coverage

GEOGRAPHIC COVERAGE

National Coverage

UNIVERSE

Farming households in the barangays.

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Philippine Statistics Authority (PSA)	National Economic and Development Authority (NEDA)

FUNDING

Name	Abbreviation	Role
Government of the Philippines	GOP	Full funding

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Office of the Chief Statistician	OCS	Food and Agriculture Organization	Metadata adapted for FAM
Crops Statistics Division	CSD	Philippine Statistics Authority	Documentation of the study

DDI DOCUMENT VERSION

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Sampling

Sampling Procedure

The sampling procedure used in the Corn Production Survey (CPS) 2016 was first implemented in 1994. This is 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) serve as sampling frame at the PSU and SSU levels. In the said census, the largest barangay in a municipality is taken with certainty while a 50 percent sampling rate is 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 are called 'certainty barangays') and another sub-universe of barangays with probability of selection equal to 0.5. This characteristic of the CAF 1991 data is used in the selection of sample barangays for the CPS.

The barangays are arrayed in ascending order based on corn area which are stratified such that the aggregate corn area of the barangays belonging to one stratum is more or less equal to the aggregate corn area of the barangays in any other stratum. Ten strata are formed for major corn 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 are drawn independently using Probability Proportional to Size (PPS) sampling with the barangay's corn area as size measure. This resulted with four (4) independent sets of barangays (i.e., four replicates) for the province. Systematic sampling is used in drawing the sample farming households in each sample barangay.

For economic reasons, sample size per barangay is 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 is instituted. A detailed discussion of weighting in the CPS 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 corn 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.

Respondents who refused to be interviewed, not home, unknown and transferred to another barangay are treated as missing and are replaced at the central office for the next quarter's survey. The replacement samples are taken from the list of replacements (farming households) for the barangay and are reflected in the list of sample households for the next round.

Response Rate

CPS 2016 registered response rates which averaged 74.28% across its quarterly surveys - April 2016 Round, July 2016 Round, October 2016 Round and January 2017 Round.

Weighting

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

R_k is 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 is determined based on the following information: R_k , total number of farm households in the sample barangay, total palay area of the sample barangay, aggregate palay area in the stratum and number of sample barangays in the stratum.

For operational purposes, sample size per barangay is 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 is instituted. Household weights are 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 is less than 25 and said sample size is 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 R_k .

Details of the above discussion on weighting adjustment procedures, are contained in the document describing the Corn Production Survey (CPS) sampling methodology provided as a Technical Document.

Questionnaires

No content available

Data Collection

Data Collection Dates

Start	End	Cycle
2016-04-01	2016-04-10	April 2016 Round
2016-07-01	2016-07-10	July 2016 Round
2016-10-01	2016-10-10	October 2016 Round
2016-12-01	2016-12-10	January 2017 Round

Data Collection Mode

Face-to-face paper [f2f]

Data Processing

Data Editing

Prior to data encoding, the accomplished survey returns are manually edited and coded. Manual editing is checking of responses to the Corn Production Survey (CPS) questionnaire in terms of acceptability and validity. This activity aims at improving the quality of data collected by the SRs. It involves the checking of data items based on criteria like completeness of data, consistency with other data items and data ranges. Coding is the assignment of alpha-numeric codes to questionnaire items to facilitate encoding.

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

Completeness check is 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 is done after a clean, error-free data file is generated.

Data Appraisal

No content available