

# Philippines - Survey of Food Demand for Agricultural Commodities 2008-2009

**Bureau of Agricultural Statistics**

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## Overview

### Identification

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#### ID NUMBER

PHL\_2008-2009\_SFDAC\_v01\_EN\_M\_v01\_A\_OCS

### Overview

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#### ABSTRACT

In 1995, the aftermath of the rice crisis compelled the Bureau of Agricultural Statistics (BAS), as tasked by DA in collaboration with the NFA, to conduct a food consumption survey to generate per capita consumption data for the estimation of the total food requirements of the country. The BAS again, as a special assignment from the Department of Agriculture (DA), conducted four (4) survey rounds on food consumption from 1999 to 2000 to examine the extent of rice substitution. Since then, the BAS has programmed the conduct of the food consumption survey every five (5) years. Lack of funds, however, has always constrained the Bureau from undertaking new rounds of this statistical inquiry.

Given the top priority concern of the DA of maintaining food security in the country, there is really the compelling need to generate updated information on the emerging food demand of Filipinos for agricultural commodities. Data on demand for food items can significantly assist in understanding consumer behavior particularly those relating to food substitution and shift in tastes and preferences. These data can thus be very important inputs for policy making especially of the DA. For the National Food Authority (NFA), data on food demand can serve as critical basis for its price stabilization and buffer stocking functions. With the availability of these new information sets, the NFA can be more properly guided in making decisions on the appropriate volume of rice importation and its timing as well as on its domestic procurement and market injection operations.

The above-cited potential applications of the results of this survey are the major reasons for its immediate implementation. The general objective of this statistical survey is to determine the Filipinos' current and emerging consumption patterns and habits with regard to rice, corn and other basic food items. Specifically, the survey aims to:

- determine the present average per capita consumption of rice, corn and other basic agricultural food items;
- determine the emerging consumption patterns as well as the purchasing patterns of the Filipino households;
- study the current shift in consumer's preference including substitution of rice with other food commodities;
- provide inputs for the construction of demand functions and estimation of elasticities of demand for agricultural commodities; and,
- analyze the relationship of demographic and socio-economic factors on the food consumption patterns.

#### KIND OF DATA

Sample survey data [ssd]

#### UNITS OF ANALYSIS

Households

### Scope

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#### NOTES

The scope of the survey includes:

- Household characteristics such as household size, sex and age of household members, highest educational attainment, main occupation, income and socio-economic classification;
- Household food consumption and buying patterns such as quantity of household food consumption, price per local unit of food purchased and household usual buying frequency;

- Number of eaters/consumers including household members and guests;
- Household eating habits such as eating inside and outside home, and members taking home food from outside or order food for delivery;
- Quantity of rice / corn leftovers, wastage and consumption by animals; and,
- Household that substitute any food in place of rice.

## Coverage

### GEOGRAPHIC COVERAGE

National Coverage.

### UNIVERSE

All households

## Producers and Sponsors

### PRIMARY INVESTIGATOR(S)

Name	Affiliation
Bureau of Agricultural Statistics	Department of Agriculture

### FUNDING

Name	Abbreviation	Role
Department of Agriculture	DA	Funding source

## Metadata Production

### METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Office of Chief Statistician	OCS	Food and Agriculture Organization	Metadata adapted for FAM
Eduardo B. Sanguyo	EBS	Bureau of Agricultural Statistics	Documentation of the study
Ana M. Eusebio	AME	Bureau of Agricultural Statistics	Reviewer
Maura S. Lizarondo	MSL	Bureau of Agricultural Statistics	Reviewer
Fe Vida N. Dy-Liacco	FVNDL	ADP Asia	Reviewer

### DDI DOCUMENT VERSION

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## Sampling

### Sampling Procedure

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The list of barangays counted in the 2007 Census of Population (POPCEN) serves as the sampling frame. Information on final population counts by barangay as of August 1, 2007 from the 2007 POPCEN has been released and is made part of the sampling frame. The 2007 POPCEN list is reconciled with the most updated geographic codes based on the Philippine Standard Geographic Classification (PSGC) as of March 31, 2008. Aside from the geographic codes and names of municipalities and barangays, the PSGC contains the urban-rural classification of the barangays as of 2000 and income classification of the cities and municipalities, which are equally important information needed in the development of the sampling frame. The income classifications of cities and municipalities are based on the Department of Finance Department Order No. 20-25 effective July 29, 2005.

The domain of the survey is the province, while for NCR, the domain is the whole region. The Cities of Zamboanga and Davao are considered as separate domains. For 80 Provinces and the Cities of Zamboanga and Davao, a two-stage sampling design is used with the barangay as the Primary Sampling Unit (PSU) and the household as the Secondary Sampling Unit (SSU). The barangays are first stratified according to their urban-rural classification, forming two strata: one for urban barangays and another for rural barangays. Thereafter, the total number of sample barangays in the province (=16) is allocated proportionately to the number of barangays in the stratum.

In the selection of the PSUs, the barangays are arrayed based on city/ municipality income class. Systematic sampling is then employed in drawing the samples. This is done to ensure that barangays in high and low-income cities/municipalities are represented in the sample. Income class is factored in the sampling process on the assumption that it is associated with urbanization, which is one of the determinants of food consumption patterns among households. Selection of SSUs within each PSU will be done during field data collection using systematic sampling through the right coverage technique, based on pre-assigned starting point (sp), random start (rs), and sampling interval (i).

For the National Capital Region (NCR), a two-stage sampling procedure is, likewise, used with the barangay as PSU and the household as SSU. Like in the provinces, stratification is done at the PSU level. However, urban-rural classification is not considered since all the barangays are urban. Instead, the barangays are stratified by district, with all the municipalities and cities represented.

In each city/municipality, two (2) sample barangays are selected systematically from an ordered list of barangays based on barangay total population. This is done to ensure that barangays from large and small barangays in terms of population are represented in the sample.

The same procedure to be used in identifying the sample households in the provinces will be followed in the NCR. However, the sampling interval for urban barangays will be  $i=10$ .

The target sample size nationwide was 13,880 households.

### Deviations from Sample Design

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Out of 1,388 barangays covered by the survey, only 1,362 were covered in the first survey round because the province of Batanes was not covered due to bad weather condition. There were also barangays which were not covered because of peace and order problem, particularly, in Mindanao areas.

### Response Rate

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The response rate for August 2008, November 2008, February 2009, and May 2009 survey rounds were 97 percent, 98 percent, 93 percent and 94 percent, respectively.

### Weighting

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Weights were calculated for each of the sample households. Sample weights for the household data were computed as products of the ratio of the number of sample households to the total number of households in the barangay and the ratio of the number of sample barangays to the total number of barangays in the province. The household weights were adjusted for non-response at the domain level. The household weight variable is called HHWEIGHT and is used with the household level data.

## Questionnaires

No content available

## Data Collection

### Data Collection Dates

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<b>Start</b>	<b>End</b>	<b>Cycle</b>
2008-08-12	2008-08-22	August survey round
2008-11-11	2008-11-22	November survey round
2009-05-12	2009-05-22	Third and fourth survey rounds

### Data Collection Mode

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Face-to-face paper [f2f]

## Data Processing

### Data Editing

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Data editing took place at a number of stages which included:

- a) Manual editing and coding at the Provincial Operations Centers (POCs)
- b) Running of the error listing program at the POCs after the data entry operation
- c) Running of the error listing program at the Central Office before the output tables generation.
- d) Identification of inconsistent and unreasonable data done by analysts.
- e) Data list of samples with respect to the variables of concern, then, comparing the encoded data with the questionnaires.
- f) Correction of errors, if there's any, and then regeneration of data tables.

The error listing program was developed using the Census Survey Program (CSPPro).

A CSPPro-based data processing system was developed which includes:

- a. data capture (data entry program)
- b. data editing or error listing program
- c. data tabulation or output generation program (which generates 22 data tables)

## Data Appraisal

### Estimates of Sampling Error

Provincial level estimates:  $\pm 9\%$  to  $\pm 6.2\%$

Regional level estimates:  $\pm 5\%$  to  $\pm 3\%$

National level estimates:  $\pm 3\%$  to  $\pm 2\%$

### Other forms of Data Appraisal

A series of data quality tables and graphs are available to review the quality of the data and include the following:

- Average household size and percentage distribution of household members by sex
- Average age and percentage distribution of household members by age group
- Percentage distribution of household members by highest educational attainment
- Percentage distribution of household members by main occupation
- Percentage distribution of households by socio-economic class
- Percentage distribution of households by income group
- Percentage of household by source of food eaten
- Percentage of households by buying frequency, by commodity
- Percentage of households by type of food eaten
- Percentage of household members who eat meal at home
- Percentage of household members who eat meal outside
- Percentage of household members by reason for eating outside
- Percentage of household members by type of meal taken home/ taken home free/ order for delivery
- Percentage of households that serve meal to guests
- Estimated per capita consumption (per commodity)
- Percentage of households by type of food eaten in place of rice during meals
- Percentage of households by main reason for rice substitution
- Average quantity of rice and corn leftovers that was spoiled/wasted
- Average quantity of rice and corn leftovers that was fed to animals
- Average quantity of rice and corn that purposely cooked for pets/animals
- Estimated per capita consumption by socio-economic class
- Estimated per capita consumption by income group
- Estimated per capita consumption by household size
- Estimated per capita consumption by ratio of working members to total household size