

# Philippines - Census of Agriculture 2002

**National Statistics Office**

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## Overview

### Identification

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ID NUMBER  
PHL-NSO-CA2002-v2.1

### Version

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VERSION DESCRIPTION  
v2.1: PUF data, for internal use only

PRODUCTION DATE  
2005-04-29

### Overview

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#### ABSTRACT

The 2002 Census of Agriculture (CA 2002) is a large-scale government operation geared towards the collection and compilation of statistics in the agriculture sector of the country. The collected data will constitute the bases from which policymakers and planners will formulate plans for the country's development.

The following were the objectives of CA 2002:

1. To determine the structure and characteristics of agricultural holdings;
2. To determine the number and distribution of households and enterprises engaged in agriculture and to gather information on the operation of these households and enterprises;
3. To provide the basis for sampling frame for other statistical undertakings; and
4. To provide basic data for use in national as well as sub-national development planning.

Specifically, it aims to:

1. obtain comprehensive data on farm characteristics such as size, location, tenure status, irrigation system, crops planted, livestock/poultry raised, etc.;
2. determine the type and number of equipment, machineries and facilities used in the operation of agricultural activities whether owned or rented; and
3. provide benchmarks for the various statistical series which are designed to measure progress in agriculture.

Major findings include the following:

1. Central Visayas accounted for the highest number of farms but Bicol Region had the biggest farm area.
2. Almost all farms in the country were operated individually.
3. Most farms were owned by the agricultural operators.
4. More than half of the farms in the country were under temporary crops.
5. Palay remained as the major temporary crop in the country.
6. Coconut also remained as the dominant permanent crop.

7. Individual system irrigation was the most common in the country.
8. Number of hogs reared and tended increased by 1.1 million heads.
9. Raising of chicken was the prevalent poultry raising activity.
10. Ornamental and flower gardening (excluding orchid) was also common in the country.
11. Male operators dominated the agriculture sector.
12. Almost 80 percent of the household members engaged in agricultural activity were working in own agricultural holding.
13. Plow was the most common farm equipment in the country.

#### KIND OF DATA

Census/enumeration data [cen]

#### UNITS OF ANALYSIS

Households

Agricultural Operators

Agricultural Establishments

## Scope

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#### NOTES

- a. Holding Identification
- b. Characteristics of the Operator/Hired Manager
- c. Legal Status of the Holder
- d. Characteristics of the Holding
- e. Crops
- f. Livestock and Poultry
- g. Equipment, Machineries, Facilities and Other Farm Tools
- h. Selected Agricultural Activities
- i. Demographic Characteristics of Household Members

#### TOPICS

Topic	Vocabulary	URI
censuses [14.1]	CESSDA	<a href="http://www.nesstar.org/rdf/common">http://www.nesstar.org/rdf/common</a>

#### KEYWORDS

agriculture, agricultural operator, farm, holding

## Coverage

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#### GEOGRAPHIC COVERAGE

National

Regional

Provincial

## UNIVERSE

The census covered all households, agricultural operators, and agricultural establishments

## Producers and Sponsors

## PRIMARY INVESTIGATOR(S)

Name	Affiliation
National Statistics Office	National Economic and Development Authority

## OTHER PRODUCER(S)

Name	Affiliation	Role
Bureau of Agricultural Statistics	Department of Agriculture	Member, Task Force on 2002 CAF; served as trainer during field trainings; and acted as Census Area Supervisor during enumeration

## FUNDING

Name	Abbreviation	Role
Government of the Philippines	GOP	

## OTHER ACKNOWLEDGEMENTS

Name	Affiliation	Role
Department of Agriculture		Vice Chair, Task Force on 2002 CAF
Bureau of Fisheries and Aquatic Resources	Department of Agriculture	Member, Task Force on 2002 CAF
Department of Agrarian Reform		Member, Task Force on 2002 CAF
Department of Budget and Management		Member, Task Force on 2002 CAF
Department of Environment and Natural Resources		Member, Task Force on 2002 CAF
Department of Labor and Employment		Member, Task Force on 2002 CAF
National Economic and Development Authority		Member, Task Force on 2002 CAF
National Statistical Coordinating Board		Member, Task Force on 2002 CAF
Statistical Research and Training Center		Member, Task Force on 2002 CAF
University of the Philippines at Los Banos		Member, Task Force on 2002 CAF
Union of Local Authorities of the Philippines		Member, Task Force on 2002 CAF
Representative from Farmer's Group		Member, Task Force on 2002 CAF
Philippine Chamber of Commerce and Industries		Member, Task Force on 2002 CAF

## Metadata Production

## METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Ana Piad	ATP	NSO-HSD-CPOD	Documenter
Divina Gracia del Prado	DLDP	NSO-HSD	Reviewer

DATE OF METADATA PRODUCTION  
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DDI DOCUMENT VERSION  
Version 2.1 (January 28, 2009). Version 2.1 is a revision of Version 2.0 to include additional information, documents and other important references.

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PHL-NSO-CA2002-v2.1

# Sampling

## Sampling Procedure

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The CA 2002 adopted a one-stage stratified systematic sampling design where selection of sample barangays was done by city/municipality (by district for the National Capital Region or NCR) and by stratum. However, for the provinces of Laguna, Isabela, Bukidnon, and Batanes, a full sample-census was adopted.

### SAMPLING UNITS AND SAMPLING FRAME

Except for the cities/municipalities of the full-sample barangays, all cities/municipalities (6 districts for NCR) were treated as domains and the barangays as the ultimate sampling units. The six districts of NCR are as follows:

NCR I - Manila;  
 NCR II - Quezon City;  
 NCR III - San Juan, Cities of Mandaluyong, Marikina and Pasig;  
 NCR IV - Malabon, Navotas, Cities of Kalookan and Valenzuela;  
 NCR V - Pateros, Taguig and Makati City; and  
 NCR VI - Cities of Pasay, Las Piñas, Muntinlupa, Parañaque

The sampling frame was based on the list of barangays taken from the results of the 2000 Census of Population and Housing (Census 2000) as of June 2002.

### STRATIFICATION

In each domain, all barangays were grouped into three strata, as follows:

Stratum 1 - Barangays with the largest total farm area (TFA) in the municipality based on the 1991 Census of Agriculture and fisheries (CAF)  
 Stratum 2 - All other sample barangays of the 1991 CAF  
 Stratum 3 - All other barangays in the sampling frame

The 1991 sample barangays in each domain were ranked by descending values of TFA. The barangays with the largest TFA in 1991, referred to as the certainty barangays, were included in Stratum 1. In cases where the certainty barangay was split into two or more barangays as a result of the creation of a new barangay (as of June 2002 masterlist of barangays), the new barangay was also treated as a certainty barangay. Sample barangays of the 1991 CAF not included in Stratum 1 were assigned in Stratum 2. Barangays with no TFA because they were not samples during the 1991 CAF were arranged in ascending order of the total number of households based on Census 2000. These barangays were assigned in Stratum 3.

### SAMPLE SELECTION

All barangays in Stratum 1 were automatically taken as samples. Sample barangays in Strata 2 and 3 were systematically selected using a 25-percent sampling rate, except for NCR. The sampling rates for NCR were 50 percent and 10 percent for Stratum 2 and Stratum 3, respectively. In each sampled barangay, all households were covered.

All agricultural establishments identified in the 2002 List of Establishments, whether or not located in the sample barangays of CA 2002, and new agricultural establishments in the sample barangays during the enumeration of CA 2002, were enumerated.

### ALLOCATION OF SAMPLE BARANGAYS BY REGION

The allocation of sample barangays by region can be seen in the Technical Documents (I-2-1 Sample Barangays)

## Response Rate

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N/A

## Weighting

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Estimation procedure can be seen in the Technical Documents (I-2-2 Estimation).

# Questionnaires

## Overview

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CAF Form 1 (List of Households, Agricultural and Fishing Operators) - is a two-page form used to list all households in the enumeration areas (EAs) and to identify the members of the households engaged in agricultural and fishing activities.

CAF Form 2 (Agriculture Questionnaire) - is a four-page questionnaire used to record detailed information on the agricultural operation of household members who were engaged in raising of crops, livestock, poultry, mushroom, honeybee and other agricultural activities.

Refer to Technical Documents for samples of the questionnaires.

## Data Collection

### Data Collection Dates

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Start	End	Cycle
2003-03-03	2003-04-05	N/A

### Time Periods

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Start	End	Cycle
2002-01-01	2002-12-01	N/A

### Data Collection Mode

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Face-to-face [f2f]

### Data Collection Notes

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#### PRETEST

Eight pretests were done primarily to test correctness and clarity of questions. Refer to Pretest Reports in the Technical Documents.

#### PILOT CENSUS

Pilot census is a simulation of the actual census to determine problems that may arise during the actual census. Refer to Pilot Report in the Technical Documents.

#### NUMBER OF ENUMERATORS, TEAM SUPERVISORS, AND CENSUS AREA SUPERVISORS

A total of about 19,500 enumerators, 4,000 Team Supervisors and 1,700 Census Area Supervisors were hired. Refer to Workload Analysis in the Technical Documents.

#### COORDINATION

Different NSCB Resolutions were approved enjoining agencies to provide assistance to NSO and approving the composition and Terms of Reference of the census coordinating boards for the 2002 Census of Agriculture and Fisheries. Refer to NSCB Resolutions in the Technical Documents.

#### RECRUITMENT AND HIRING

The applicants underwent rigid selection procedures that included a test on handwriting, written examination and personal interview. Refer to Recruitment and Hiring in the Technical Documents.

#### TRAINING

The training program involved the training of all personnel utilized during the enumeration of the 2002 Census of Agriculture. The training was conducted in four levels, namely, Task Force or First Level, Second Level, Third Level and Fourth Level trainings.

##### Task Force:

Four classes, which were all held at the Central Office, were conducted for the Task Force training. Classes 1 and 2 were conducted on November 26 to 29, 2002 while Classes 3 and 4 were held on December 3 to 6, 2002.

Participants for this level were selected Central Office (CO) personnel, selected Provincial Statistics Officers (PSOs) and Regional Statisticians of the National Statistics Officer (NSO); and selected CO personnel of the Bureau of Agricultural Statistics (BAS). Trainers and resource persons for the training were selected staff of the Census Planning and Operations Division and personnel from BAS.

##### Second Level:

The second level training was conducted in the regional offices on December 10 to 13, 2002. This was participated in by the Regional Directors, rest of PSOs, Provincial Statisticians, and selected regional and provincial staff of NSO; and Regional Agricultural Statistics Officers of BAS. Trainers for this level were the participants of the Task Force training.

**Third Level:**

The third level training was conducted on February 10 to 14, 2003 mostly at the NSO Provincial Offices. It was attended by the District Statistics Officers, Statistical Coordination Officers, and selected provincial staff of the NSO; hired Census Area Supervisors; and Provincial Agricultural Statistics Officers, other provincial staff, and field personnel of BAS.

**Fourth Level:**

The fourth level training was conducted in two batches at designated district/municipal training centers. The first batch was held on February 17 to 21, 2003 while the second batch on February 24 to 28, 2003. Participants in this level were Team Supervisors and Enumerators.

## Questionnaires

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## Data Collectors

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Name	Abbreviation	Affiliation
National Statistics Office	NSO	National Economic and Development Authority

## Supervision

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Face to face interview was conducted by the Enumerators (ENs). One enumeration area was covered by one EN. The Team Supervisors (TSs) are responsible in supervising the ENs and the Census Area Supervisors (CASs) supervise the TSs. The ratios of EN to TS and TS to CAS are as follows:

Number of Enumerators(EN) Number of Team Supervisors (TS)

1-4 0 (Census Area Supervisor will act as TS)

5-9 1

10-14 2

15-19 3

20-24 4

25-29 5

Number of TS Number of CASs

1 0

2-7 1

8-14 2

15-21 3

22-28 4

29-35 5

# Data Processing

## Data Editing

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The accomplished census forms undergone several stages of data editing. These stages include the following:

1. Field editing which consisted of checking of consistency, correctness and completeness of entries while in the field.
2. Manual Processing of accomplished questionnaires at the Provincial Offices where the following were done:
  - a. Verification of geographic identification and completeness of forms
  - b. Checking for legibility of entries
  - c. Coding
3. Machine Processing which includes machine validation, consistency checking and completeness checking of entries.

## Other Processing

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Machine Processing where the following was done:

- a. Scanning of accomplished questionnaires at the Regional Offices which includes
  - i. Data entry and interpretation
  - ii. File preparation,
  - iii. Back up of data files
  - iv. Summarization of data according to predetermined table formats
- b. Post data capture processing at the Central Office which includes tabulation of results and creation of public use files (PUF).

## Data Appraisal

### **Estimates of Sampling Error**

In order to provide a basis for assessing the reliability or precision of CA estimates, the estimation of the magnitude of sampling error in the census data was undertaken by the NSO for the 2002 CA. The standard error (SE) and coefficient of variation (C.V.) were used as measures of sampling error.

Refer to Technical Documents.

### **Other forms of Data Appraisal**

N/A