

# Philippines - Costs and Returns Survey of Palay Production by Seed Type and Class 2005

**Bureau of Agricultural Statistics**

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## Overview

### Identification

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#### ID NUMBER

PHL-BAS-CRSPSTC-2005-v2.0

### Version

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#### VERSION DESCRIPTION

v2.0 - Raw data edited at the Central Office, not anonymized dataset for internal use only.

#### PRODUCTION DATE

2006-05

#### NOTES

BAS follows the versioning of the dataset below:

-v0: Basic raw data, obtained from data entry (unedited).

-v1: Raw data edited at the POCs, not anonymized data set for internal use only.

-v2: Raw data edited at the Central office, not anonymized data set for internal use.

### Overview

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#### ABSTRACT

There has been an increasing demand for data on the costs and returns of palay production by seed classification. This information will help not only the farmers but also other agribusiness players who are interested to venture in palay production. Moreover, it guides planners and policy makers in the agriculture sector in the design and implementation of development programs and projects related to palay production.

The survey aimed to generate data on production costs and returns for palay by seed type and class, determine indicators of profitability such as gross and net returns, returns above cash costs, returns above variable costs etc, and determine the average usage of material and labor inputs and other socio-economic variables related to palay production.

#### KIND OF DATA

Sample survey data [ssd]

#### UNITS OF ANALYSIS

Palay farmers and palay farms with harvests during the reference period as the units of analysis.

### Scope

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#### NOTES

The survey focused on generating costs and returns structure of palay production by farm type and by seed type and class.

The scope of the survey included the following:

CHARACTERISTICS OF THE FARMERS such as age, palay farming experience and highest educational attainment.

FARM CHARACTERISTICS such as total farm area and palay area, number of croppings per year, type, class and variety of

palay seeds planted, source of seeds, type of palay farm, tenurial status, major source of irrigation, month and area planted and harvested.

FARM INVESTMENTS such as inventory of farm investments used, year and cost of acquisition, repairs and improvement cost and estimated life and usage in palay farm

MATERIAL INPUTS such as usage and cost of seeds, fertilizers, soil ameliorants, insecticides, herbicides/weedicides, fungicides, rodenticides and molluscicides.

LABOR INPUTS such as labor utilization (in terms of mandays) and labor cost by type of farming activity, by source of labor and by sex and food cost incurred

OTHER PRODUCTION COSTS such as cash and non-cash payments for land tax, land lease/rental, rental value of owned land, rentals of machine and animals, fuel and oil, transport costs of inputs, irrigation fee, interest payment on crop loans and other production costs.

PRODUCTION AND DISPOSITION such as volume of palay production and its disposition in terms of sold, harvesters' share, threshers' share, other laborers' share, landowners' share, lease/rental, for home consumption, given away, used/to be used for seeds and feeds, irrigation fee, wastage and other purposes.

PROBLEMS ENCOUNTERED such as problems affecting production and production losses

RECOMMENDATIONS FOR THE IMPROVEMENT OF PALAY PRODUCTION

OTHER INFORMATIONS ON HYBRID AND INBRED SEEDS USAGE such as years of planting hybrid seeds, variety used, area harvested, volume of production, reasons for shift from hybrid to inbred seeds

## Coverage

### GEOGRAPHIC COVERAGE

Three major palay producing provinces namely: Nueva Ecija, Leyte and Davao del Norte, each representing a major island in the country.

### GEOGRAPHIC UNIT

Barangay is the lowest level of geographic aggregation covered by the data

### UNIVERSE

The survey covered all palay farms with harvest during the reference period July 2004 to June 2005

## 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

### OTHER ACKNOWLEDGEMENTS

Name	Affiliation	Role
National Statistical Coordination Board		Survey Clearance

## Metadata Production

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### METADATA PRODUCED BY

<b>Name</b>	<b>Abbreviation</b>	<b>Affiliation</b>	<b>Role</b>
Maria Carol Duran	CGD	Bureau of Agricultural Statistics (BAS)	Documenter
Ana M. Eusebio	AME	Bureau of Agricultural Statistics (BAS)	Reviewer
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DATE OF METADATA PRODUCTION  
2010-03-19

DDI DOCUMENT VERSION  
Version 1.0 (March 2010)

DDI DOCUMENT ID  
DDI-PHL-BAS-CRSPSTC-2005-v1.0

# Sampling

## Sampling Procedure

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### Coverage

The survey covered 630 sample palay farmers broken down as follows:

Nueva Ecija - 240

Leyte - 270

Davao del Norte - 120

The domain of the study was the province, with the last completed normal cropping within July 2004 to June 2005 as the reference period. Farmers who harvested palay during the reference period were the target samples for the survey.

### Sample Size Allocation and Selection

A three-stage sampling design was employed with the municipality as the primary sampling unit, barangay as the secondary sampling unit and the palay farmer as the ultimate sampling unit. The procedures used in the sample selection were as follows:

1. In each province, information on palay physical area, total number of palay farmers, and coverage in the GMA-Rice Program by municipality were gathered from the concerned provincial operations centers (POC) with Office of the Provincial Agriculturist (OPAG), Municipal Agricultural Office (MAO) and the 1999 Barangay Screening Survey (BSS) as data sources.
2. The sample municipalities were drawn using probability proportional to size (PPS) based on physical area.
3. In the selected municipalities, barangay-level information were obtained using the key informant approach. These information included physical area of palay farms, coverage or non-coverage of the barangay in the GMA-Rice Program, number of beneficiaries of the GMA-Rice Program, percentage adoption by seed type/class, availability of irrigation facilities, anticipated field operational problems and indication whether the barangay was affected by any calamity during the reference period. Four seed classes/types were considered, namely: Hybrid, Inbred Modern Certified, Inbred Modern Farmer's Produce and Inbred Traditional
4. Based on the information obtained in (3), area used per seed type/class was derived. The barangays were arranged in descending order of area devoted to the seed type and class, then the sample barangays per seed group were identified. Sample sizes were determined such that the number of sample palay farmers per barangay was 10 and the number of sample barangays was equally allocated to the different seed groups in the province. This allocation was used since there was no sound basis on the true distribution of usage of each seed type and class in the province. However, adjustment in the distribution of samples was made depending on the actual situation in the province as verified during the data collection.
5. Independent sets of sample barangays were selected from each seed group based on the following criteria:
  - having higher palay physical area devoted to the seed type and class;
  - with minimal field operation problems; and
  - not damaged by any calamity throughout the reference period.
 This procedure implied that a barangay can be identified as sample in at least one seed group.
6. Selection of sample farmers was done during data collection using the snowball approach. This procedure entailed looking for the first potential sample farmer then searching for the rest based on referrals of the previous samples. This was done by first obtaining the names and addresses of palay farmers living in the barangay from the office of the barangay captain or any barangay key informant during the conduct of the survey. From this list, the enumerator selected any palay farmer as the first potential sample, or, if no list was available, information on one palay farmer as a potential sample will do. A set of screening questions was used by the enumerator for this purpose. Qualified sample farmers were interviewed using the CRS questionnaire and his name and address were written in the CRS List of Sample Palay Farmers.

## Deviations from Sample Design

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The targetted number of sample farmers for each province was followed. However, the distribution of farmers to be covered

per seed class/type was not met since no sample farmer using traditional seeds was enumerated. Only the three (3) seed classes /types such as hybrid, inbred modern certified and inbred modern farmers' produce were covered. Adjustment in the distribution of samples was made depending on the actual situation in the province as verified during the data collection.

## **Response Rate**

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Response rate of 100 percent

## **Weighting**

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Weighting is not applicable

# Questionnaires

## Overview

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The questionnaire was a structured questionnaire written in English. It was designed in tabular form and some in question type format. The data items/variables in the questionnaire were based on the previous questionnaires with some modifications and additions. This questionnaire focused on costs and returns structure of palay production by farm type further disaggregated by seed class/type covering the last completed normal cropping within the one year reference period (July 2004 to June 2005) and regardless of season.

The questionnaire was pre-tested and reviewed before its implementation.

The questionnaire consisted of 9 pages covering 12 blocks as follows:

A. GEOGRAPHIC INFORMATION includes the location of the sample farmer such as the name of the region, province, city/municipality, barangay and its classification.

B. SAMPLE IDENTIFICATION includes the name, age, farming experience and educational attainment of the sample farmer and name of respondent.

C. BASIC FARM CHARACTERISTICS such as total farm area and palay area, usual number of croppings per year, type and class and variety of palay seeds planted, source of seeds, type of palay farm, tenurial status, major source of irrigation, month and area planted and harvested.

D. FARM INVESTMENTS include inventory of farm investments used, year and cost of acquisition, repairs and improvement cost, estimated life and percent of use in palay farm

E. MATERIAL INPUTS such as usage and cost of seeds, fertilizers, soil ameliorants, insecticides, herbicides/weedicides, fungicides, rodenticides and molluscicides.

F. LABOR INPUTS such as labor utilization (in terms of mandays) and labor cost by type of farming activity, by source of labor and by sex and food cost incurred

G. OTHER PRODUCTION COSTS covers cash and non-cash payments for land tax, land lease/rental, rental value of owned land, rentals of machine and animals, fuel and oil, transport costs of inputs, irrigation fee, interest payment on crop loans and other production costs.

H. PRODUCTION AND DISPOSITION such as volume of palay production and its disposition in terms of sold, harvesters' share, threshers' share, other laborers' share, landowners' share, lease/rental, for home consumption, given away, used/to be used for seeds and for feeds, irrigation fee, wastage and other purposes.

I. PROBLEMS ENCOUNTERED such as problems affecting production and production losses

J. RECOMMENDATIONS FOR THE IMPROVEMENT OF PALAY PRODUCTION

K. OTHER INFORMATIONS ON HYBRID AND INBRED SEEDS USAGE include the years of planting hybrid seeds, variety used, area harvested, volume of production, reasons for shift from hybrid to inbred seeds

L. DATA COLLECTOR/EDITORS/PASO PARTICULARS contain the name of data collector, field supervisor, editor and PASO and CO editor and encoder.

The questionnaire is provided as External Resources

## Data Collection

### Data Collection Dates

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Start	End	Cycle
2005-09-07	2005-09-18	N/A

### Time Periods

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Start	End	Cycle
2004-07-01		last completed normal cropping

### Data Collection Mode

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Face-to-face [f2f]

### Data Collection Notes

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The questionnaire was pre-tested from July 28 to 29, 2005. Afterwards, the questionnaire was finalized and a manual of operations was prepared. Before the survey operations, training was undertaken to ensure uniformity in the understanding of concepts and procedures. The first level training involved selected BAS Central Office (CO) staff who became trainers of the next level training which was participated in by the BAS- Provincial Operations Center (POC) staff and the hired data collectors. Part of the field training included the conduct of mock interview and dry-run exercises. The BAS CO Staff who acted as the trainers supervised the initial data collection activity of the enumerators together with the POC staff. Upon return to the BAS Central Office, the BAS CO trainers prepared and submitted a travel report containing the activities done in the field (province) as well as the issues/problems encountered and their recommendations.

In the selection of qualified sample farmers, a set of screening questions was used by the enumerator before proceeding to the interview using the structured Costs and Returns Survey questionnaire. Prior to the conduct of data collection, courtesy call to the barangay officials was done to get permission for the conduct of the survey in the barangay and explain the purpose of such activity.

The interview was conducted in the local dialect of the province. Problems and issues encountered in field data collection were relayed to the BAS CO Staff or management for their concern. Immediate action was provided by the management.

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The questionnaire is provided as External Resources

## Data Collectors

Name	Abbreviation	Affiliation
Bureau of Agricultural Statistics	BAS	Department of Agriculture

## Supervision

During the survey operation, data collectors were closely supervised by the POC regular staff. As an immediate supervisor, they should see to it that the survey operation ran smoothly and within the target schedule. Part of the supervisor's work was the conduct of spot checking of the data collectors and back checking of their work to ensure that errors or incompleteness committed in the survey operation were corrected immediately.

The regular POC staff were also responsible for reviewing and editing the accomplished questionnaires. These were done to check the completeness, accuracy and consistency of the answers recorded in the questionnaire.

The Provincial Agricultural Statistics Officers (PASOs) and Assistant Provincial Agricultural Statistics Officers (APASOs) acted as overall supervisors in the provinces. They also conducted spot checking and backchecking, review of completed and edited questionnaires before submitting to the Central Office. A report on field data collection was prepared and sent by the POC to the Central Office.

The Regional Agricultural Statistics Officers (RASOs) were responsible for the monitoring and supervision of the survey operation in all the provinces within the region. The Statistical Operations Coordination Division (SOCD) at the Central Office monitored and coordinated the field operations.

## Data Processing

### Data Editing

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During and after data collection, the data collectors checked the completeness, consistency and acceptability of the information collected. The questionnaires were edited manually at the Provincial Operations Center based on the established CRS field office editing guidelines prepared by the Central Office.

The edited questionnaires were again checked at the Central Office. Further editing and coding were done using the CRS central office editing and coding guidelines. A training on this aspect was conducted. After data encoding at the Central Office, these passed through computerized editing program which checked the consistencies of the encoded data and validation of entries. The criteria used was the same with that in the manual editing. An error list was produced to capture errors overlooked during manual editing. This was undertaken to ensure the accuracy of data entry. Unreasonable answers were reviewed and verified against the questionnaire.

The Field Office Editing Guidelines contained in the Manual of Operation and Central Office Editing and Coding Guidelines are provided as External Resources.

### Other Processing

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Central processing of survey returns was done. IMPS Integrated Microcomputer Processing System was the software used for data entry and generation of output tables

## Data Appraisal

### **Estimates of Sampling Error**

Sampling error is not applicable

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

A project team was organized to review and analyze the result of the survey. The acceptability of data was assessed, compared and validated with the result of the 2002 Costs and Returns of Palay Production and other related studies on input usage, labor utilization, production cost and return structure of palay by seed class and by farm type.