Rice Production and Stocks Survey in the Philippines

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Statistical Surveys that Generate Rice Production and Stocks–Related Statistics

- Palay and Corn Production Survey (PCPS)
- Monthly Palay and Corn Situation Reporting System (MPCSRS)
- Palay and Corn Stocks Survey (PCSS)
Objective

➢ To generate estimates and forecasts on palay (paddy) production, area and yield, and other production-related statistics that serve as inputs to policy and planning, program implementers, and all other stakeholders in the rice industry.
Coverage
- 81 Provinces
- Sample farming households in all sample barangays (villages)

Domain
- Province

Sampling Design

Frame
- Census of Agriculture (CA) 1991 results

Design
- 2-stage stratified replicated sampling
- Primary sampling unit (PSU) – barangay (village) selected through probability proportional to size sampling
- Secondary sampling unit (SSU) – household selected systematically
Palay (Paddy) Production Survey (PPS)

Design ...
- Number of strata/province (domain) – 10 for major producing provinces, 5 for minor producing provinces
- Number of replicates – originally 4, now reduced to 2 for budgetary considerations

Sample Size
- PPS: 12,594 sample households,
  1,288 sample barangays (villages)

Data Collection

Frequency
- Quarterly (April, July, October, January)

Method
- Personal (face to face) interview of sample farming households by contractual data collectors using structured questionnaire
Palay (Paddy) Production Survey (PPS)

Data Collection...

Information Collected
- Production, area planted/harvested and yield
- Monthly distribution of production and area harvested
- Production disposition/utilization
- Source of irrigation water
- Usage of seeds, fertilizer and pesticides
- Area with standing crop
- Planting intentions indicator
- Awareness and availment of program interventions

Data Processing

Decentralized
- Provincial Operations Centers (POCs) undertake processing of results

Processing System
- Census and Survey Processing System (CSPro 4.1)
Stages

- Manual editing – checking of entries, completeness and consistency checks with other data items in the questionnaire
- Coding – assigning of alpha numeric codes to data items to facilitate data entry
- Data encoding
- Computerized editing – to capture invalid entries; error listing

Generation of output tables

**Major Outputs**

- Final crop estimate for the immediate past quarter
- Crop forecasts for the current quarter based on standing crop
- Crop forecasts for the succeeding quarter based on farmers’ planting intentions
### Palay (Paddy) Production Survey (PPS)

#### Data Review and Analysis

<table>
<thead>
<tr>
<th>Item</th>
<th>Provincial</th>
<th>Regional</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schedule</td>
<td>2 days after data processing at BAS POC</td>
<td>2 days after the provincial data review</td>
<td>1 to 2 days after the regional data review</td>
</tr>
<tr>
<td>Presiding officer</td>
<td>PASO</td>
<td>RASO</td>
<td>Director/Asst. Director</td>
</tr>
<tr>
<td>Presenter</td>
<td>POC staff</td>
<td>PASOs</td>
<td>RASOs</td>
</tr>
<tr>
<td>Participant</td>
<td>POC staff</td>
<td>PASOs</td>
<td>SOCD chief, tech. staff</td>
</tr>
<tr>
<td>Main activity</td>
<td>Review of municipal estimates</td>
<td>Review of provincial estimates</td>
<td>Review of regional estimates</td>
</tr>
</tbody>
</table>

#### Auxiliary Information Used in Data Review

- Weather condition
- Irrigation
- Input usage
- Area/Crop Condition
- Supply/Demand
- Marketing of NFA
- Rice/Corn Program Implementation
Data Output And Release

**Memorandum to the DA Secretary**
- Available not later than 45 days after the reference quarter

**Situation and Outlook Bulletin**
- Latest production estimates
- Climate and rainfall
- Farm, wholesale and retail prices
- Fertilizer price
- Released 45 days after the reference quarter

**Quarterly Seasonally Adjusted Rice Production and Prices**
- Released 45 days after the reference quarter

**Other Data Output**
- Monthly distribution of production and harvest area
- Production by seed type
- Fertilizer usage by grade
- Pesticide usage
- Seed use
- Production utilization/disposition
Other Uses of the Production Estimates

Input to the Inter-Agency Committee (IAC) on Rice and White Corn of the DA

- supply-use estimates
- probable stock position
- probable importation

Monthly Palay and Corn Situation Reporting System (MPCSRS)

- Monitoring of crop situation, i.e., status of standing crop and actual plantings
- Basis of updating forecasts
- “Mini-PCPS” (coverage: sub-sample of PCPS)
MPCSRS

- Conducted monthly except in PCPS survey months

<table>
<thead>
<tr>
<th>PCPS Survey Rounds</th>
<th>MPCSRS Survey Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>February</td>
</tr>
<tr>
<td></td>
<td>March</td>
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<tr>
<td>April</td>
<td>May</td>
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<td>June</td>
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<tr>
<td>July</td>
<td>August</td>
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<td></td>
<td>September</td>
</tr>
<tr>
<td>October</td>
<td>November</td>
</tr>
</tbody>
</table>
Good Practices

Management of Sampling Units

- Monitoring of sample status and outcome of the interview
- Documentation of response rates
- Updating of the list of agricultural households

Good Practices

Data Collection

- Conduct of training/orientation prior to the implementation of data collection
  - Mock interview
  - Dry run exercise
- Conduct of spot-checking and back-checking activities by the operation center and Central Office staff
Good Practices

Data Processing

- Manual editing prior to data encoding to check completeness of entries and consistency with other data items in the questionnaire
- Computerized editing to capture invalid entries

Data Review and Analysis

- Three levels of data review
  - Provincial level
  - Regional level
  - National level

Data Dissemination

- Subscription to the existing policies regarding the release of statistical reports
Palay Stocks Survey

Why Monitor Rice Stocks Situation?

- National food security
- Production policies
- Possible import requirement and timing of importation
Stocks Inventory by Sector

1. Household
   - Bureau of Agricultural Statistics
2. Commercial
3. NFA depositories
   - National Food Authority

Household Stocks

Sampling Design

Frame
- Palay and Corn Production Survey (PCPS) frame

Sampling Unit
- Replicate 1 barangays (villages)
- Primary Sampling Unit (PSU) – Barangays (villages): 1,079
- Secondary Sampling Unit (SSU) – 15,286
  Farming Households – 9,766
  Non-farming Households – 5,520
Household Stocks

Data Collection

*Frequency:* Monthly

*Method*
- Personal interview by Provincial Operations Center (POC) staff
- Field operation: First 4 days of the reference month

*Information Collected*
- Palay/rice household stocks as of 6:00 AM of the first day of the reference month.

Household Stocks

Data Processing

- Decentralized at the Provincial Operations Center (POC)
- Results are generated using an Excel-based processing system developed by the Cereals Statistics Section (CSS)
Data Review And Analysis

- Provincial estimates are summarized using the prescribed format and submitted to the Central Office (CO) for review and consolidation.

At the Cereals Statistics Section

- Review the consistency of reasons for the changes in the level of stocks reported.

Household Stocks

Data Review And Analysis

- Check consistency of the current level of estimates with the trends in production, prices, importation and data series on monthly stock inventory of households, commercial and NFA.

- Calculate the implied per capita consumption if within the range of previous data on per capita.
Household Stocks

Data Output And Release

- Memorandum to the (DA) Secretary – 10th day after the reference month; posted in BAS website (includes NFA data on stock positions in commercial and NFA warehouses)

- Data series downloadable from BAS website (http://countrystat.bas.gov.ph/); soft/hardcopy

Good Practices

- Pre-survey orientation
- Conduct of spot-checking and back-checking
- Checking for completeness and consistency of the data
- Data review and analysis of the survey results
- Adherence to policies on the release of statistical reports
WHAT IS COMMERCIAL STOCK SURVEY (CSS)?

Commercial Stock Survey (CSS) - a monitoring system adopted by the government, thru the NFA, designed to obtain estimates of the total commercial stock inventory (CSI) for rice being held by the private sector (grains businessmen).

The CSI is one of the components in determining the total rice stock inventory of the country. The other components are the household and the government stocks.
OBJECTIVE OF THE CSS

- To determine the rice stock inventory being held by the private sector. The data and information generated would serve as one vital input to the government’s policy decision making relative to the nation’s food security.

SCOPE AND COVERAGE

Masterlist of NFA Registered Grains Businessmen
(93,399)

About 11,706 pre-determined sample respondents in all provinces nationwide
## SAMPLING DESIGN & SAMPLING RATES

### STRATIFIED SYSTEMATIC SAMPLING

<table>
<thead>
<tr>
<th>First Level Stratification</th>
<th>Second Level Stratification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retailers (R)</td>
<td>Big (B)</td>
</tr>
<tr>
<td>Wholesalers (W)</td>
<td>Medium (M)</td>
</tr>
<tr>
<td>Combined Retailers/Wholesalers (C R/W)</td>
<td>Small (S)</td>
</tr>
<tr>
<td>Warehousemen (Wh)</td>
<td></td>
</tr>
</tbody>
</table>

R = 15%
W = 25%
C R/W = 25%
Wh (B) = 100%
(S & M) 50%

Except for warehousemen, the set sampling rates shown above for each major stratum shall equally apply to the given sub-stratum of big, medium and small.

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### DATA COLLECTION PROCEDURES

- **Monthly Survey:** Every last two (2) days of the current month and the first two (2) days of the succeeding month
- **Reference Period:** first (1st) day of the succeeding month (ending stock inventory of the current month)
- **Method:** Personal interview by the enumerators & the Agency’s field survey personnel
Republic of the Philippines
NATIONAL FOOD AUTHORITY

COMMERCIAL STOCK SURVEY QUESTIONNAIRE

I. SAMPLE IDENTIFICATION
A. Respondent's Name: __________________________
B. Signature: __________________________
C. Name of Establishment: _________________________________________
D. Province/City: __________________________
E. Major Stratum: __________________________
F. Sub-Stratum: __________________________
G. Control No.: __________________________
H. Name of Respondent's Interviewer: __________________________
I. Relation to Sample Respondent: __________________________

II. ENUMERATORS IDENTIFICATION
A. Printed Name & Signature of Investigator: __________________________
B. Date of Interview: __________________________
C. Printed Name & Signature of Enumerator: __________________________
D. Date of Interview: __________________________

III. PROVINCIAL SUPERVISOR/EDITOR'S IDENTIFICATION
A. Printed Name of CSS Provincial Officer: __________________________
B. Signature: __________________________
C. Date Edited: __________________________

IV. STOCKS AS OF ____________, 2013.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>VOLUME (in 50 kg bag)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PALAY</td>
<td></td>
</tr>
<tr>
<td>RICE</td>
<td></td>
</tr>
<tr>
<td>CORN GRITS</td>
<td></td>
</tr>
<tr>
<td>CORN GRAINS</td>
<td></td>
</tr>
<tr>
<td>OTHERS (SPECIFY)</td>
<td></td>
</tr>
</tbody>
</table>

V. SALES AND PURCHASES FROM (MONTH) TO LAST DAY OF THE MONTH, 2013.

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>INFLOW (PURCHASES)</th>
<th>OUTFLOW (SALES)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SOURCE VOLUME (in bags of 50 kg)</td>
<td>DESTINATION VOLUME (in bags of 50 kg)</td>
</tr>
<tr>
<td>PALAY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RICE</td>
<td></td>
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<tr>
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<td></td>
</tr>
<tr>
<td>CORN GRAINS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTHERS (SPECIFY)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

VI. PURCHASED STOCKS IN TRANSIT AS OF ____________, 2013.

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>PURCHASES (INFLOW)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SOURCE VOLUME (in bags of 50 kg)</td>
</tr>
<tr>
<td>PALAY</td>
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</tr>
<tr>
<td>OTHERS (SPECIFY)</td>
<td></td>
</tr>
</tbody>
</table>

DATA PROCESSING

Schedule | Activity
--- | ---
Every 3rd to 4th working day of the month | Collation and summarization of gathered data by the provincial office
On or before 8th working day of the month | Preparation and submission of the final report by the NFA-provincial office to NFA-Head Office
Eighth (8th) day up to 18th day of each month | Consolidation/Processing at Head Office of all final reports submitted by provincial offices nationwide.
Nineteenth (19th) day up to the twenty first (21st) day of the month | Preparation, finalization and submission of the CSS Final Report to the NFA Management.
### ESTIMATION PROCEDURES

**Estimation of the Total Stocks (TS) for Rice**

**Formula:**

\[
TS \text{ Rice} = \text{Average Stocks Per Sub-stratum} \times \text{Total No. of Population}
\]

<table>
<thead>
<tr>
<th>Sub-Stratum</th>
<th>Average Stock</th>
<th>Total Population</th>
<th>Estimated Total Stocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. RETAILER</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Big</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Medium</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>c) Small</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. WHOLESAVERS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Big</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Medium</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>c) Small</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. WHOLESALER / RETAILER COMBINED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Big</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Medium</td>
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<td></td>
<td></td>
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<tr>
<td>c) Small</td>
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<tr>
<td>4. WAREHOUSEMEN</td>
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<td></td>
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</tr>
<tr>
<td>a) Big</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Small</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### GOOD PRACTICES

- **Conduct of CSS by Enumerators**
  - Cooperation of Grains Businessmen in the provision of stock inventory data to survey enumerators. Respondents affix their signatures in the duly accomplished CSS Questionnaires to attest to the veracity of information provided.
  - Timely submission by the enumerators of Accomplished CSS Questionnaires to NFA field office.

- **Review/editing of accomplished survey questionnaire** is done by the NFA field personnel to ensure accuracy and completeness of data/information gathered.

- **At the Head Office, data/information submitted by Provincial Offices are further reviewed/screened for some possible lapses.**
IDENTIFIED GAPS

- Some businessmen-respondents do not provide factual figures on their stocks.
  
  Apprehensive of possible implications to payment of fees and charges to the government.

- Geographical setting hinders data gathering especially during the rainy season.
  
  Some of the respondents are located in very far-flung areas.

- Constant re-hiring of new enumerators affects continuity of working knowledge on the CSS.
  
  Accuracy and reliability of data suffer since these new enumerators are not yet familiar with the CSS.

AREAS FOR IMPROVEMENT

- Close linkage and harmonious relationships need to be established with the respondents to convince them to provide honest to goodness data on their stocks.
  
  Constant and persuasive meetings and information campaign on the importance of the data derived from CSS to the industry and the whole country.

- Ample logistical support must be provided to the CSS and the devising of a back-up plan in case other areas covered by the CSS could not be accessed.

- Additional transportation allowance should be given to enumerators to encourage them working continuously for the CSS.
• Regular Conduct of Field Assessment/Validation
  To check if field offices religiously follow the statistical methodology relative to the conduct of CSS.

• Periodic Review of the Existing CSS Implementing Guidelines.
  To determine the need to modify or alter some provisions to attune to the need of changing times with the end in view of further improving the CSS.

End of Presentation
SEASONALLY ADJUSTED RICE PRODUCTION AND PRICES
JULY - SEPTEMBER 2013

PRODUCTION

The seasonally adjusted total rice production in the first quarter of 2013 was 12.7 million metric tons. This was less than the second quarter of 2012 rice production of 13.4 million metric tons. However, there is a significant increase in the production of rice in the second quarter of 2013 compared to the first quarter of 2012.

Prices

For the second quarter of 2013, the average price of rice was lower than the first quarter of 2013. This is due to the increase in the production of rice in the second quarter of 2013.

RICE AND CORN STOCKS INVENTORY
As of November 1, 2013

The total rice stocks as of November 1, 2013, were 6.8 million metric tons. This is lower than the total rice stocks of 7.3 million metric tons as of November 1, 2012. However, the rice stocks are still sufficient to meet the country's rice requirements.

The total corn stocks as of November 1, 2013, were 2.5 million metric tons. This is slightly lower than the total corn stocks of 2.6 million metric tons as of November 1, 2012. However, the corn stocks are still sufficient to meet the country's corn requirements.