Palay (Rice) Data Systems of the Philippines

Crops Statistics Division (CSD)
2015 Population = 101,562,300

Geography

Location:
Southeastern Asia, archipelago between the Philippine Sea and the West Philippine Sea, east of Vietnam

Area:
total: 300,000 square kilometers
land: 298,170 square kilometers
water: 1,830 square kilometers

Agricultural land area:
9.671 million hectares (2002 CAF)
arable land: 4.936 million hectares
permanent cropland: 4.225 million hectares
permanent meadows/pastures: 0.129 million hectares
forest land: 0.074 million hectares
other lands: 0.307 million hectares

Distribution of Agricultural Area by Type of Utilization

- Permanent Crops: 51%
- Permanent Cropland: 44%
- Forest and Woodland: 5%
- Arable: 32%
- Others: 2%

About 32 percent of the country's total land area were agricultural lands. Of this, 51% and 44% were arable and permanent croplands, respectively.
Main Components:

1. **Palay and Corn Production Survey (PCPS)**
   - Quarterly

2. **Monthly Palay and Corn Situation Reporting System (MPCSRS)**
   - monthly monitoring of palay and corn crop situation

3. **Palay and Corn Stocks Survey (PCSS1)**
   - monthly survey of palay/rice and corn stocks Inventory
Aims to generate estimates and forecasts on palay and corn production, area and yield, and other production-related statistics.
Palay and Corn Production Survey (PCPS)

Coverage:
- 81 provinces
- Sample farming households in all sample barangays

Domain: Province

Sampling Frame: CAF

Sampling Design: Two-Stage Stratified Replicated Sampling
- PSU – Barangay, selected using PPS
- SSU – Farm household, selected using systematic sampling

Sample Size: Palay - Barangays 1,288 Households 12,594
Palay and Corn Production Survey (PCPS)

Data Collection

**Frequency:** Quarterly  
(April, July, October, January)  
- First 10 days after reference quarter

**Method:** Personal interview of sample farming households by Statistical Researcher using pre-structured questionnaires and being supervised by PSA personnel.
Basic Information Collected:

- Production and area planted/harvested
- 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 for the next quarter
- Awareness of program interventions and availment
Output:

Estimates and forecasts on production, area harvested and yield per hectare for three quarters:

- final crop estimates for the immediate past quarter
- crop forecasts for the current quarter based on standing crop
- crop forecast for the succeeding quarter based on farmers’ planting intentions
## Illustration:

<table>
<thead>
<tr>
<th>Quarter</th>
<th>2016 Survey Round</th>
<th>2017 Survey Round</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan-Mar '16</td>
<td>4,150-SC</td>
<td>3,932-FE</td>
</tr>
<tr>
<td>Apr Jun '16</td>
<td>4,050-PI</td>
<td>3,727-SC</td>
</tr>
<tr>
<td>Jul-Sep '16</td>
<td>3,182-PI</td>
<td>_____-SC</td>
</tr>
<tr>
<td>Oct-Dec '16</td>
<td>_____-PI</td>
<td>_____-SC</td>
</tr>
<tr>
<td>Jan-Mar '17</td>
<td>_____-PI</td>
<td>_____-SC</td>
</tr>
<tr>
<td>Apr Jun '17</td>
<td>_____-PI</td>
<td>_____-SC</td>
</tr>
<tr>
<td>Jul-Sep '17</td>
<td>_____-PI</td>
<td>_____-SC</td>
</tr>
</tbody>
</table>

**PI** - Planting intentions  
**SC** - Standing crops  
**FE** - Final estimates
Data Processing

- Decentralized data processing
- Census and Survey Processing System (CSPro 4.1)

Manual editing and coding

Data encoding

Error listing/data verification

Generation of Output tables

Review of Output tables

Data Review and Validation
## Data Review and Validation

<table>
<thead>
<tr>
<th>Item</th>
<th>Provincial</th>
<th>Regional</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Schedule</strong></td>
<td>2 days after data processing at PSA Provincial Office (PO)</td>
<td>2 days after the provincial data review</td>
<td>1 to 2 days after the regional data review</td>
</tr>
<tr>
<td><strong>Presiding officer</strong></td>
<td>Provincial Statistics Officer (PSO)</td>
<td>RD</td>
<td>DNS(SSO)/ANS(ESSS, MAS)</td>
</tr>
<tr>
<td><strong>Presenter</strong></td>
<td>PO staff</td>
<td>PSOs</td>
<td>RSSOs</td>
</tr>
<tr>
<td><strong>Participant</strong></td>
<td>PO staff</td>
<td>RSSOS/PSOs</td>
<td>Technical staff</td>
</tr>
<tr>
<td><strong>Main activity</strong></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 Validation:**

- Weather Condition
- Availability of Irrigation Water
- Input Usage
- Supply/Demand
- Area/Crop Condition
- Information on Rice/Corn Program Implementation
Data Review Guidelines:

1. Acceptability of semester estimates
2. Damage reports
3. Check for any possible error in the compilation/encoding/computation (in case field reports could not explain changes in levels)
4. Check ratio of irrigated to rainfed for palay and white to yellow for corn
5. Output of the review process: Reviewed estimates, Narrative report
Major Output:

- **Memorandum for the National Statistician**
  - first week following survey month
  - available to public 45 days after the reference quarter

- **Situation and Outlook Bulletin**
  - latest production estimates
  - climate and rainfall
  - farm, wholesale and retail prices
  - fertilizer price
  - available to public 52 days after the reference quarter
Palay and corn outputs for January to March 2016 were lower than their 2015 levels by 9.97% and 19.07%, respectively. The negative growth was largely attributed to the adverse effects of the El Niño Phenomenon, damages in yield incurred by Typhoon “Nona” and flooding caused by the North East Monsoon rains. Forecasts on standing crops of both palay and corn indicate lower production in the second quarter of 2016. These may bring about reduction in outputs by 5.79% for palay and by 10.18% for corn. Palay and corn farmers’ planting intentions for the July-September 2016 harvest indicates substantial increases in output levels compared to their respective records in 2015.

**PALAY**

- **Palay** production for January-June 2016 may decline to 7.66 million MT, 7.98% below the 8.33 million MT output in 2015. Harvest area may cut down from 2.06 million to 1.93 million hectares, or by 6.27%. Yield per hectare may drop by 1.83% from 4.04 MT in 2015 to 3.96 MT in 2016.

- The January-March 2016 palay production at 3.92 million MT fell from the 2015 output of 4.37 million MT by 9.97%. Harvest area dropped to 1.06 million hectares from last year’s record of 1.15 million hectares. Yield per hectare lessened from 3.80 MT in 2015 to 3.64 MT in 2016 or by 4.31%.

- Substantial decrements in production were noted in Central Luzon, MIMAROPA, Cagayan Valley, Western Visayas and SOCCSKSARGEN.

  - Typhoon “Nona” affected palay production in Central Luzon and MIMAROPA aside from the drought in some provinces in these regions which caused crop damage resulting to decrement in harvest area and low yield.

  - Reduction of harvest area in Cagayan Valley was affected by flood in Cagayan province which was caused by the North East Monsoon rains.
Other Uses of the Production Estimates:

Input to the Food Security Committee (FSC)

- Supply-Use estimates
- probable stock position
- probable importation
Palay Production Survey (PPS) Questionnaire
C1. AREA, PRODUCTION, SEED AND IRRIGATION INFORMATION FOR THE FIRST QUARTER (JANUARY - MARCH 2016)

1. Did you harvest palay during the period January - March 2016? (Encircle code) 1 - Yes 0 - No (Go to block C2)

2. Type of ecosystem (Encircle code) 1 - Irrigated 2 - Rainfed 3 - Upland

3. Type of seed planted (Encircle code) 1 - Hybrid 2 - Inbred - Certified 3 - Farmers'/Good seeds 4 - Traditional/Native

4. Area harvested (ha)

5. Month harvested (Encircle code)

6. Total number of units

C2. FERTILIZER USAGE FOR THE FIRST QUARTER (JANUARY - MARCH 2016)

1. Did you apply fertilizer? (Indicate code) 1 - Yes 0 - No (Go to block C3)

2. Area applied with fertilizer (ha)

3. Type of fertilizer used

4. Other inorganic fertilizer applied

5. Total number of units applied

6. Weight per unit (kg)

7. Total number of units applied

8. Weight per unit (kg)

C3. PESTICIDE USAGE FOR THE FIRST QUARTER (JANUARY - MARCH 2016)

1. Did you apply pesticide? (Indicate code) 1 - Yes 0 - No (Go to block C4)

2. Area applied with pesticide (ha)

3. Type of pesticide used

4. Total number of units applied

5. Weight per unit (kg)

6. Total number of units applied

7. Weight per unit (kg)
### C3. Pesticide Usage for the First Quarter (Continued)

<table>
<thead>
<tr>
<th>Pesticide applied</th>
<th>Weight or volume per unit</th>
<th>Weight or volume per unit</th>
<th>Unit of measure</th>
<th>Classification</th>
<th>Classification</th>
<th>Total number of units applied</th>
<th>Total number of units applied</th>
<th>Area planted (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2a. Name of pesticide</td>
<td>3.2b. Classification (indicate code)</td>
<td>3.2c. Total number of units applied</td>
<td>3.2d. Unit of measure</td>
<td>3.2e. In kilogram (solid)</td>
<td>3.2f. In liter (liquid)</td>
<td>4.1a. Name of botanical extracts/spray</td>
<td>4.1b. Classification (indicate code)</td>
<td>4.1c. Total number of units applied</td>
</tr>
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</tbody>
</table>

### C4. Labor Inputs

1. During the first quarter, did you hire laborers whether paid in cash or in kind for your paddy farm operations? (Indicate code) 1 - Yes 0 - No

2. Type of ecosystem: (Indicate code)
   - Irrigated
   - Rainfed
   - Upland

3. Type of seed planted: (Indicate code)
   - Hybrid
   - Inbred/Registered
   - Farmers' Good Seeds
   - Traditional/Native

4. Month when crop will be harvested: (Indicate code)
   - April
   - May
   - June
   - July
   - August
   - September
   - October
   - November
   - December

5. Area to be harvested: (ha)

6. Area planted to paddy that will be harvested: (ha)

### E. Paddy Production Forecast (Continued)

<table>
<thead>
<tr>
<th>Quantity of dry paddy to be produced: (14% moisture content)</th>
<th>Unit of measure</th>
<th>Weight or volume per unit</th>
<th>Classification</th>
<th>Total number of units applied</th>
<th>Total number of units applied</th>
<th>Area planted (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Total number of units</td>
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<tr>
<td>7. Unit of measure</td>
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<tr>
<td>8. Weight per unit of measure (kg)</td>
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</tbody>
</table>

### F. Paddy Planting Intentions

1. Do you intend to plant paddy on your farm anytime from April - June 2016? (Indicate code) 1 - Yes 0 - No, (Go to block G)

2. Type of ecosystem: (Indicate code)
   - Irrigated
   - Rainfed
   - Upland

3. Month when crop will be planted: (Indicate code)
   - April
   - May
   - June
   - July
   - August
   - September
   - October

4. Area to be planted: (ha)

5. Month when crop will be harvested: (Indicate code)
   - April
   - May
   - June
   - July
   - August
   - September
   - October

### G. Respondent's Assessment of the Household Paddy Production

1. Was your farm's production in January - March 2016 larger than, smaller than, or about the same as your farm's paddy production in the same quarter of 2015? (Indicate code) 1 - Larger than in 2015 2 - Smaller than in 2015 3 - About the same, go to block H

2. What was/were the reason/s for the change in production? (Indicate code and explain further the reason/s)
   - 1 - Change in area
   - 2 - Weather effects
   - 3 - Pests and diseases
   - 4 - Seeds
   - 5 - Fertilizer
   - 6 - Irrigation services
   - 7 - Others (Specify)

### H. Farmer's Participation in Rice Program

2. Have you availed of any benefit from government program on rice? (Indicate code) 1 - Yes 0 - No, (Go to block I)

3. Which of the following program benefits and services have you availed? (Indicate code and provide details)
   - 1 - Seeds
   - 2 - Fertilizer and other inputs
   - 3 - Training on farming technology
   - 4 - Irrigation facilities
   - 5 - Post harvest facilities
   - 6 - Marketing assistance
   - 7 - Loans
   - 8 - Others (Specify)

4. Which of the availed benefits were/was used in your paddy production during the January - March 2016 harvest? (Check box/es)
   - 1 - Seeds
   - 2 - Fertilizer
   - 3 - Training
   - 4 - Irrigation
   - 5 - Post harvest
   - 6 - Marketing
   - 7 - Loans
   - 8 - Others (Specify)

### I. Data Collector, Supervisor, PSO and Encoder Identification

1. Name and signature of statistical researcher:

2. Name and signature of field supervisor:

3. Name and signature of PSO:

4. Name and signature of encoder:
Monthly Palay and Corn Situation Reporting System (MPCRS)

- Monitoring of crop situation, i.e., status of standing crop and actual plantings
- Basis of updating forecasts
Objective:
To provide updates on the status of palay standing crops at various growth stages and actual plantings of forecasts based on farmers’ planting intentions.

Sub-samples of PCPS
Sample Size
- Palay: 644 barangays / 6,042 households

Basic Information Collected:
• Updates on palay forecasts on standing crop and planting intentions
**Frequency:** First 5 days of the survey month

**Method:** Personal interview by Statistical Researchers

<table>
<thead>
<tr>
<th>PCPS Survey Rounds</th>
<th>MPCSRS Survey Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>February</td>
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<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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<td>July</td>
<td>August</td>
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<td>September</td>
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<tr>
<td>October</td>
<td>November</td>
</tr>
</tbody>
</table>
Data Processing

- Manual editing and coding
- Data encoding
- Error listing/data verification
- Generation of Output tables
- Review of Output tables

- Decentralized data processing
- Census and Survey Processing System (CSPro 4.1)
Outputs and Dissemination

- **Special Release of updates on Palay** – 15th day after the reference month; posted in PSA website.

- Report downloadable from PSA website (http://agstat.psa.gov.ph/); soft/hardcopy
MONTHLY PALAY AND CORN SITUATION REPORTING SYSTEM

A. SAMPLE IDENTIFICATION
1. Region: __________________________
2. Province: _______________________
3. Municipality: ____________________
5. Stratum: ________________________ (Last PCPS round)

B. UPDATE OF CURRENT QUARTER AREA AND PRODUCTION OF STANDING CROP / PLANTING INTENTIONS

<table>
<thead>
<tr>
<th>Line No.</th>
<th>Household Code (EA-HSN)</th>
<th>Complete Name of Sample Agricultural Operator (Last name, first name)</th>
<th>First Name of Respondent (Indicate Code)</th>
<th>** Types of Ecosystem</th>
<th>*** Major types/class of palay seed</th>
<th>AREA (Ha)</th>
<th>PRODUCTION (Sack of 50 kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>5</td>
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</tr>
</tbody>
</table>

** SAMPLE STATUS**
- 51 - Refused to be interviewed
- 54 - Resides in another barangay
- 55 - Unknown / Residence cannot be located

** TYPE OF ECOSYSTEM**
- 1 - Irrigated
- 2 - Rainfed
- 3 - Upland

** MAJOR TYPE OF PALAY SEED**
- 1 - Hybrid
- 2 - Improved / Certified
- 3 - Farmers' / Seed Seed

NOTE: Revised February 2015
### B. UPDATE OF CURRENT QUARTER'S AREA AND PRODUCTION OF STANDING CROP / PLANTING INTENTIONS

#### B.2. UPDATE ON CURRENT QUARTER’S PLANTING INTENTIONS

<table>
<thead>
<tr>
<th>Line No.</th>
<th>Household Code (EA-HSN)</th>
<th>Type/s of Ecosystem (Indicate code)</th>
<th>Actual Plantings by Stage of Crop Growth (Ha)</th>
<th>Total (Col.17+Col.18+Col.19)</th>
<th>Expected Month of Harvest</th>
<th>Reasons for Material Change in Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Vegetative</td>
<td>Reproductive</td>
<td>Maturing</td>
<td></td>
</tr>
<tr>
<td>(1)</td>
<td>(2)</td>
<td></td>
<td>(16)</td>
<td>(17)</td>
<td>(18)</td>
<td>(19)</td>
</tr>
</tbody>
</table>

### C. STATISTICAL RESEARCHER AND PSO IDENTIFICATION

Name and Signature of Statistical Researcher: ___________________________________________ Date: __________________________ Name and Signature of PSO: ___________________________________________ Date: __________________________
Objective:

Generate estimates on the current stock level of rice and palay in farming and non-farming households.
Stock inventory by sector

- Household
- Commercial
- National Food Authority (NFA) depositories

Philippine Statistics Authority (PSA)
**Data Collection**

*Frequency: Monthly*

*Method*
- Personal interview by Statistical Researchers
- Field operation: First 4 days of the reference month

*Sampling Size*
- 1,079 Barangays / 15,286 Households
  - Farming Households – 9,766
  - Non-farming Households – 5,520

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

- Manual editing and coding
- Data encoding
- Error listing/data verification
- Generation of Output tables
- Review of Output tables

Decentralized data processing
Census and Survey Processing System (CSPro 4.1)

Data Review and Validation
Special Release on Rice and Corn Stocks Inventory – 10th day after the reference month; posted in PSA website (includes NFA data on stock positions in commercial and NFA warehouses)

Data series downloadable from PSA website (http://agstat.psa.gov.ph/); soft/hardcopy

### REPORT ON RICE AND CORN STOCKS INVENTORY

#### RICE

- As of April 1, 2016, the total rice stock inventory was 3.36 million metric tons (Figure 1). This was 32.1 percent above the 2.54 million metric tons level in April 2015 and 25.6 percent higher than last month's inventory level of 2.67 million metric tons (Table 1).

- Year-on-year, rice stocks in commercial warehouses and NFA depositories grew by 25.5 percent and 133.5 percent, respectively. On the other hand, stocks in the households dropped by 2.8 percent from last year’s inventory of 1.26 million metric tons (Table 1).

- This month’s rice stocks in all sectors increased compared with their levels last month. Stocks in the households increased by 37.7 percent, in commercial warehouses by 42.4 percent, and in NFA depositories by 4.8 percent (Table 1).

- Of this month’s total rice stock inventory, 36.4 percent were with the households, 29.9 percent in commercial warehouses, and 33.7 percent were in NFA depositories. The latter comprised 87.2 percent of imported rice.

- The total rice inventory for this month would be adequate for 99 days. Stocks in the households would be enough for 36 days, those in NFA depositories for 33 days, and those in commercial warehouses for 30 days.

---

**Table 1. Percentage change in the inventory of rice stocks, Philippines, April 2016 and March 2016 and April 2015**

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>TOTAL STOCKS</td>
<td>3,359.1</td>
<td>2,674.2</td>
<td>2,542.7</td>
<td>25.6</td>
<td>32.1</td>
</tr>
<tr>
<td>Household</td>
<td>1,220.2</td>
<td>866.2</td>
<td>1,255.8</td>
<td>37.7 (2.9)</td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td>1,005.6</td>
<td>706.4</td>
<td>801.5</td>
<td>42.4 (25.5)</td>
<td></td>
</tr>
<tr>
<td>NFA</td>
<td>1,133.3</td>
<td>1,081.6</td>
<td>485.4</td>
<td>4.8 (133.5)</td>
<td></td>
</tr>
</tbody>
</table>
# Palay and Corn Stocks Survey

**Republic of the Philippines**
**Philippine Statistics Authority**
**Quezon City**

**Palay and Corn Stocks Survey (PCSS 1)**

**Provincial Office of Statistics**

**Province:**

**Municipality:**

**Barangay:**

**Household Classification:**
- [ ] Farming
- [ ] Non-Farming

**Month:** 1, 20

**Year:**

---

## A. Quantity of Palay/Rice Stocks in the House **As of 6:00 A.M.**

<table>
<thead>
<tr>
<th>LN</th>
<th>Name of Household Head</th>
<th>Name of Respondent</th>
<th>Relationship to Household Head</th>
<th>Palay</th>
<th>Rice</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td>Local Unit</td>
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<td>Number of Units</td>
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<td>Weight (kg)</td>
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<td>For Office Use Only (kg)</td>
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</tbody>
</table>

**Unit Used:**
- Palay: Example: Sack
- Rice: Example: Sack

**For Office Use Only:**
- Palay: (kg) col. (6 x 7)
- Rice: (kg) col. (10 x 11)

---

**Important:**
- Report the quantity of palay (e.g., in sacks) and rice (e.g., in sacks) in the house or another house or non-commercial granaries (Rice/Corn Food Mills).
- Do not include amounts that are stored in commercial warehouses.

**Relationship to Household Head:**
- Household Head
- Spouse
- Son/Daughter
- Other knowledgeable member of the household