



PHILIPPINE STATISTICS AUTHORITY

# Rice Stocks Survey in the Philippines

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Philippine Statistics Authority

2<sup>nd</sup> Joint Workshop on Rice Data for  
Thailand and the Philippines  
Manila, Philippines  
December 3-4, 2014

Ben-Lor Building, 1184 Quezon Ave.,  
Quezon City, Philippines  
T: 632 371 20 50

agstat.psa.gov.ph

# Why Monitor Rice Stocks Situation?

1

National food security

2

Production policies

3

Possible import requirement  
and timing of importation



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# Stocks Inventory by Sector

1. Household



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2. Commercial



National Food Authority

3. NFA depositories



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# Household Stocks

# Sampling Design

## Frame

Palay and Corn  
Production  
(PCPS) Survey  
frame

## Sampling Unit

Primary Sampling  
Unit (PSU) –  
Barangays  
(villages): 1,079

Secondary Sampling Unit (SSU) –  
15,286

Farming  
Households –  
9,766

Non-farming  
Households –  
5,520



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# 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.



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



# Household Stocks

## 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

## Memorandum to the National Statistician (NS)

- 10<sup>th</sup> day after the reference month; posted in BAS website (includes NFA data on stock positions in commercial and NFA warehouses)

## Data Output and Release

**PHILIPPINE STATISTICS AUTHORITY**  
**RICE AND CORN STOCKS INVENTORY**  
**SEPTEMBER 1, 2014**

**PRESS RELEASE**

**RICE**

The total rice stock inventory as of September 1, 2014 was 1.49 million metric tons, the net 13.5 percent lower than the monthly inventory of 1.72 million metric tons and 2.7 percent below the 1.53 million metric tons recorded in September 2013.

Month-to-month, rice stocks in NFA depositories, with 96.8 percent imported rice, increased by 2.4 percent. However, rice stock levels in households and in commercial warehouses decreased by 14.8 percent and 21.2 percent, respectively.

Year-over-year, rice stocks held by households grew by 11.5 percent. On the other hand, registered stocks in commercial warehouses and in NFA depositories dropped by 11.9 percent and 8.8 percent.

The total rice inventory for this month would be good for 44 days. Stocks in the households would be sufficient for 18 days, in commercial warehouses for 33 days, and in NFA depositories for 13 days.

**CORN**

As of September 1, 2014, the total corn stock inventory was 288.8 thousand metric tons. This was 9.2 percent higher than last month's level of 264.7 thousand metric tons, and 4.7 percent above last year's level of 275.8 thousand metric tons.

Compared with last month, corn stock levels in the households increased by 87.5 percent. On the other hand, stocks in commercial warehouses and in NFA depositories dropped by 23.8 percent and 44.3 percent, respectively.

Compared with last year, stock levels in commercial warehouses increased by 53.6 percent. However, stocks in the households and in NFA depositories declined by 17.2 percent and 69.5 percent, respectively.

Around 49.5 percent of this month's total corn stock inventory were with the commercial warehouses, 49.4 percent were with the households, and 1.1 percent were with the NFA depositories.

**Figure 1. Inventory of rice stocks, Philippines, September 2014 and August 2014 and September 2013**

ITEM	September 1, 2014	August 1, 2014	September 1, 2013
TOTAL STOCKS (M)	1.49	1.72	1.53
Household	0.46	0.53	0.46
Commercial	0.77	0.81	0.81
NFA	0.26	0.38	0.26

**Figure 2. Inventory of corn stocks, Philippines, September 2014, August 2014 and September 2013**

ITEM	September 1, 2014	August 1, 2014	September 1, 2013
TOTAL STOCKS (K)	288.8	264.7	275.8
Household	143.0	149.0	143.0
Commercial	142.8	115.7	131.8
NFA	3.0	0.0	1.0

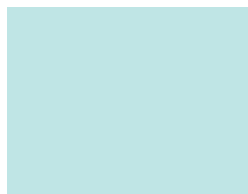
**Table 1. Percentage change in the inventory of rice stocks, Philippines, September 2014 and August 2014 and September 2013**

ITEM	September 1, 2014	August 1, 2014	September 1, 2013
TOTAL STOCKS (%)	86.6	100.0	86.5
Household	28.5	30.8	26.8
Commercial	51.0	47.1	52.2
NFA	17.5	22.1	11.0

**Table 2. Percentage change in the inventory of corn stocks, Philippines, September 2014 and August 2014 and September 2013**

ITEM	September 1, 2014	August 1, 2014	September 1, 2013
TOTAL STOCKS (%)	109.2	100.0	100.0
Household	53.8	56.3	51.8
Commercial	53.6	43.7	47.8
NFA	1.1	0.0	0.4

\* Stocks for stocks for rice and corn are in '000 metric tons and in '000 metric tons, respectively.



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# Household Stocks

## Data Output and Release

### Memorandum to the Secretary of Agriculture

- 10<sup>th</sup> day after the reference month; posted in BAS website (includes NFA data on stock positions in commercial and NFA warehouses)

PHILIPPINE STATISTICS AUTHORITY (BUREAU OF AGRICULTURAL STATISTICS)

PSA 100-14  
CI 1408-334  
August 8, 2014

**MEMORANDUM**

**FOR :** SECRETARY PROCESO J. ALCALA  
Department of Agriculture (DA)

**THRU :** DR. SEGFREDO R. SERRANO  
Undersecretary for Policy and Planning, DA

**FROM :** ROMEO S. BELUDE  
Director, Bureau of Agricultural Statistics (BAS)

**SUBJECT :** JULY 1, 2014 RICE AND CORN STOCKS INVENTORY

Attached is the report on the preliminary estimates of the country's rice and corn stocks inventory as of July 1, 2014.

For your information and reference.

**RICE AND CORN STOCKS INVENTORY As of September 1, 2014**

**RICE**

- As of September 1, 2014, the total rice stock inventory was 1.49 million metric tons (Figure 1). This was 3.5 percent lower than the one-month inventory of 1.52 million metric tons and 2.7 percent below the 1.53 million metric tons recorded in September 2013 (Table 1).
- Month-over-month, rice stocks in NFA depositories, which -84.6 percent comprised rice, increased by 2.4 percent. However, rice stock levels in households and in commercial warehouses - decreased by 14.8 percent and 34.2 percent, respectively.
- Year-over-year, rice stocks held by households grew by 3.5 percent. On the other hand, respective stocks in commercial warehouses and in NFA depositories dropped by 11.9 percent and 8.8 percent.
- Around 48.8 percent of this month's total rice stock inventory were with the households, 29.5 percent in commercial warehouses and 20.4 percent in NFA depositories.
- The total rice inventory for this month could be used for 44 days. Stocks in the households would be sufficient for 89 days, in commercial warehouses for 22 days, and in NFA depositories for 13 days.

**Figure 1. Inventory of rice stocks, Philippines, August 2014 and September 2014**

ITEM	September 1, 2014	August 1, 2014	September 1, 2013
TOTAL STOCKS (%)	100	100	100
Household	33.5	33.5	33.5
Commercial	20.4	20.4	20.4
NFA	20.4	20.4	20.4

**CORN**

- The total corn stock inventory as of September 1, 2014, was 288.8 thousand metric tons (Figure 2). This was 9.3 percent higher than the month's level of 264.3 thousand metric tons and 4.7 percent above last year's record of 267.9 thousand metric tons (Table 2).
- Compared with last month, corn stock levels in the households increased by 87.5 percent. On the other hand, stocks in commercial warehouses and in NFA depositories dropped by 21.8 percent and 41.3 percent, respectively.
- Compared with last year, stock levels in commercial warehouses increased by 33.6 percent. However, stocks in the households and in NFA depositories declined by 17.2 percent and 69.5 percent, respectively.
- Around 40.5 percent of this month's total corn stock inventory were with the commercial warehouses, 49.4 percent were with the households and 1.1 percent were with the NFA depositories.

**Figure 2. Inventory of corn stocks, Philippines, September 2014, August 2014 and September 2013**

**Table 2. Percentage change in the inventory of corn stocks, Philippines, August 2014 and August 2014 and September 2014**

ITEM	September 1, 2014	August 1, 2014	September 1, 2013
TOTAL STOCKS (%)	100	100	100
Household	49.4	49.4	49.4
Commercial	40.5	40.5	40.5
NFA	1.1	1.1	1.1

1. Includes corn stocks with the National Bookstore and public libraries and can result in stockout.

# Household Stocks

Data series downloadable from CountrySTAT website <http://countrystat.psa.gov.ph/>



3 Click  
Rice and Corn:  
Monthly Total Stock  
Inventory by Sector

2 Click  
Production



## Data Output and Release

### Rice and Corn: Monthly Total Stock Inventory by Year, Sector and Month

	July	August	September
<b>2014</b>			
Rice: Total Stock	2,025.01	1,721.78	1,488.72
Rice: Household Stock	879.58	700.23	596.64
Rice: Commercial Stock	689.22	579.48	439.27
Rice: NFA Stock	456.21	442.08	452.81

Corn Stock - Excludes corn stock held by commercial livestock and poultry producers and corn mixed in feed stock  
 Rice: Revised NFA and Commercial stocks data for January 2009; Corn: Revised NFA and Commercial stocks data for 2009  
 Rice: Revised NFA stock data for August 2009  
 Rice and Corn: Revised data for NFA and Commercial stocks for September 2009  
 Rice: Household stock data adjusted for 2003  
 Rice: Monthly estimates of commercial stocks inventory adjusted for undercoverage based on the April 1991 updated  
 Rice: Revised NFA stock data for 2001-2002  
 Corn: Total stock does not include stocks held by commercial livestock and poultry producers and corn mixed in feed stock  
 Corn: NFA stock for April and June 1993 is less than 1 metric ton  
 Corn: Revised NFA stock data for June 2011  
 Corn and Rice: Revised NFA stock data for January 2012  
 Rice: Revised Commercial stock data for August 2012  
 Corn: Revised NFA and Commercial stocks data for August 2012  
 Corn: Revised Household stock data for November 2012

**Latest update:**  
2014-10-07 09:00

**Source:**  
Philippine Statistics Authority (PSA)

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# Household Stocks

Metadata downloadable from

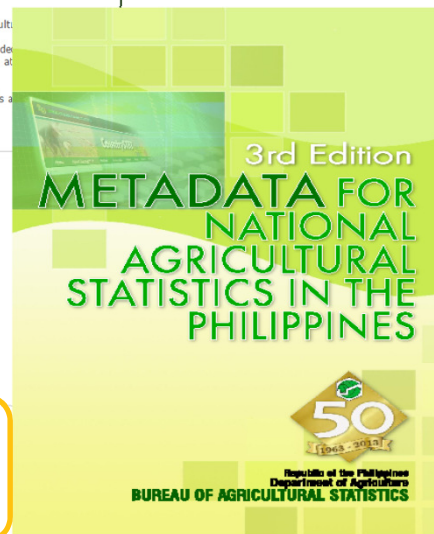
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# Data Output and Release

METADATA FOR NATIONAL AGRICULTURAL STATISTICS IN THE PHILIPPINES  
THIRD EDITION

## Palay and Corn Households Stocks

### Data Processing

Similarly with the PCPS, the processing of returns of the Palay and Corn Stock Survey (PCSS1) is decentralized. In the Operations Centers, this processing is a combination of manual and Excel-based processing systems developed at the Cereals Statistics Section. The provincial estimates are summarized using the prescribed format and forwarded to the Central Office for review and consolidation.

### Estimation and/or Compilation Procedure

The provincial estimate is given as follows:

$$\hat{P}_p = \sum_{k=1}^n \left[ \left( \frac{\sum_{j=1}^n y_{jk}^i}{n_j} \right) N_j \right]$$

where:

$\hat{P}_p$  - estimated total stock in the province for  $j^{\text{th}}$  type of cereal during the specified period

$y_{jk}$  - observation from the  $k^{\text{th}}$  sample in the  $j^{\text{th}}$  category (farming or non-farming) for the  $j^{\text{th}}$  type of cereal

$n_j$  - number of responding households samples for in the  $j^{\text{th}}$  category

$N_j$  - total number of households in the  $j^{\text{th}}$  category

The estimate of the total stock in the province is generated as follows:

- for each type of cereal, multiply the average stock held by the reporting households by the total number of households under the farming and non-farming category; and then
- for each type of cereal, add the estimated stock held by the farming and non-farming households.

The expansion factor of the PCSS1 is based on the 1991 CAF number of farming and non-farming households which is updated in July every year using the mid-year population projections.



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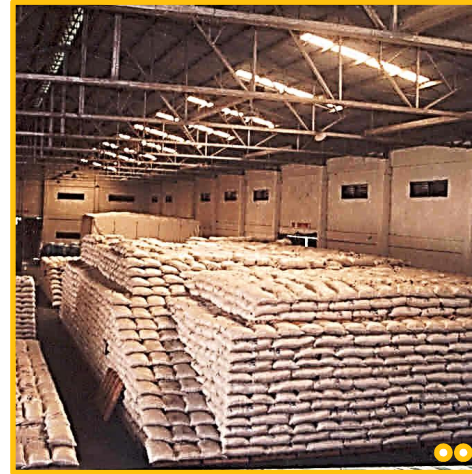
# Good Practices

- **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**



# The Philippine Commercial Stocks Survey

National Food Authority  
(NFA)



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# Commercial Stocks Survey (CSS)

## What is Commercial Stocks Survey?

**Commercial Stock Survey (CSS)** - monitoring system adopted by NFA to generate estimates on **commercial rice stocks inventory** held by the commercial sector at the national, regional & provincial level.

Recognized as an official government statistics effective January 1980 by the National Economic and Development Authority (NEDA).



# Objectives of CSS

To determine the apparent grains stock inventory for rice held by the commercial sector, which would serve as inputs vital to policy and decision-making in the government.

To obtain from NFA registered grains businessmen a realistic and reliable statistics being used as one of the indicators for food security purposes in the country.





# Scope and Coverage

Masterlist of NFA  
Registered Grains  
Businessmen  
(93,399)

About 11,706 pre-  
determined sample  
respondents in 88  
provinces nationwide



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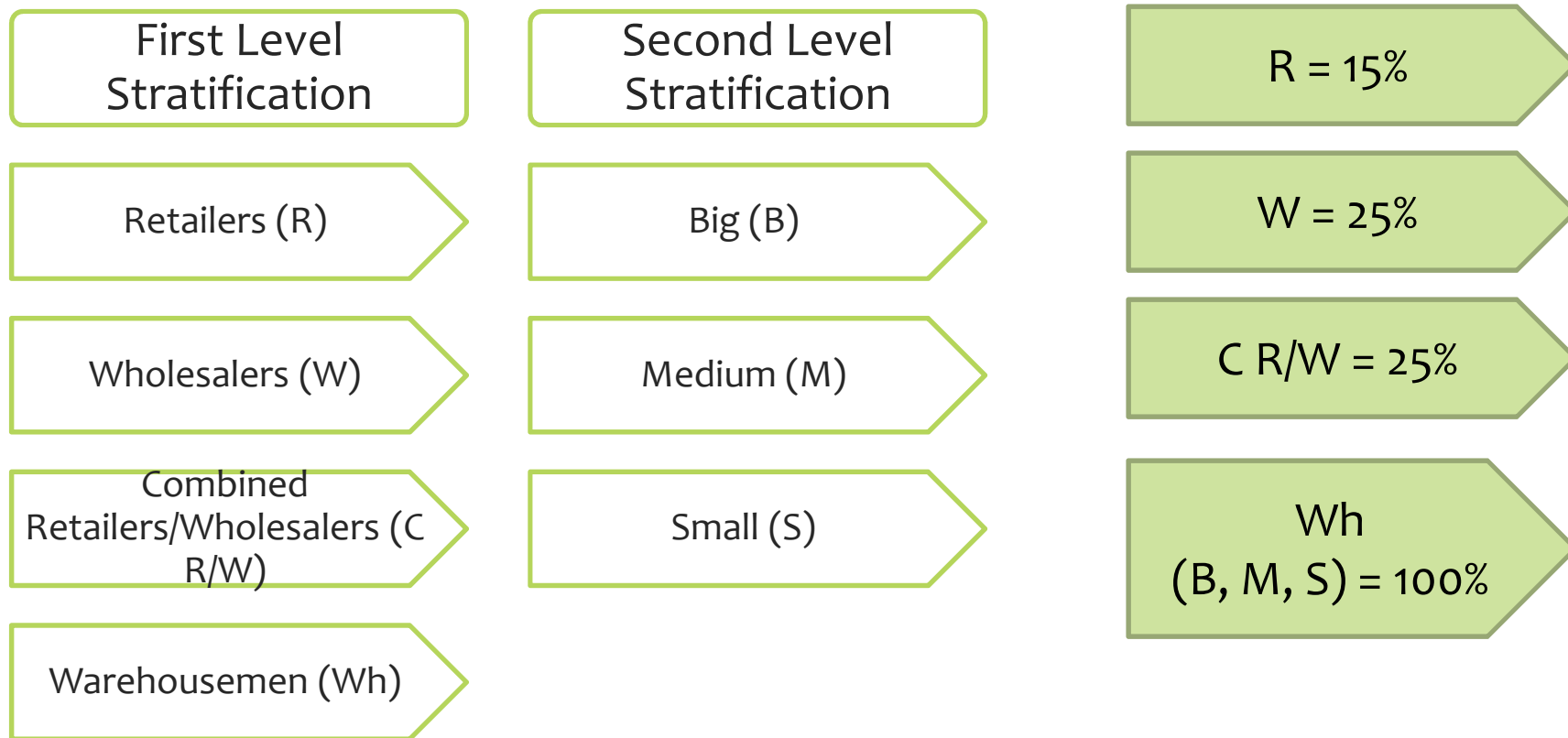
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# Sampling Design and Sampling Rates

## Stratified Systematic Sampling

Method of which the elements of the population are stratified/sub-divide so that every element will have the chance to be selected.



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) working days of the current month and the first two (2) working days of the succeeding month

## Reference Period

First (1<sup>st</sup>) day of the succeeding month (ending stock inventory of the current month)

## Method

Personal interview by the enumerators and the Agency's field survey personnel (Provincial Enforcement and Investigation Officers)

**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 Respondents Interviewed: \_\_\_\_\_  
 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 \_\_\_\_\_, 2010.**

ITEM	VOLUME (in 50 kg bag)
PALAY	
RICE	
CORN GRITS	
CORN GRAINS	
OTHERS	
(SPECIFY)	

**V. SALES AND PURCHASES FROM (MONTH) TO (LAST DAY OF THE MONTH, \_\_ 2010.**

ITEMS	INFLOW (PURCHASES)		OUTFLOW (SALES)	
	SOURCE	VOLUME (in bags of 50 kg)	DESTINATION	VOLUME (in bags of 50 kg)
PALAY				
RICE				
CORN GRITS				
CORN GRAINS				
OTHERS				
SPECIFY				

**VI. PURCHASED STOCKS IN TRANSIT AS OF \_\_\_\_\_, 2010.**

ITEM	PURCHASES (INFLOW)	
	SOURCE	VOLUME
PALAY		
RICE		
CORN GRITS		
CORN GRAINS		
OTHERS		
SPECIFY		

Ref. /n: 2010 REVISED CSS MANUAL (Feb. 24, 2011)



# Data Processing

## Schedule

Every 3<sup>rd</sup> to 4<sup>th</sup> working day of the month

On or before the 8<sup>th</sup> working day of the month

Eighth (8<sup>th</sup>) day up to 18<sup>th</sup> day of each month

Nineteenth (19<sup>th</sup>) day up to the twenty first (21<sup>st</sup>) day of the month

## Activity

Collation and summarization of gathered data by the provincial office

Preparation and submission of the final report by the NFA-provincial office personnel to NFA-Central Office

Consolidation/Processing of all final reports submitted by provincial offices nationwide.

Preparation, finalization and submission of the CSS Final Report to the NFA Administrator



# Estimation Procedures

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

Sub-Stratum	Average Stock	Total Population	Estimated Total Stocks
<b>1. RETAILER</b>			
a) Big			
b) Medium			
c) Small			
<b>2. WHOLESALERS</b>			
a) Big			
b) Medium			
c) Small			
<b>3. WHOLESALER / RETAILER COMBINED</b>			
a) Big			
b) Medium			
c) Small			
<b>4. WAREHOUSEMEN</b>			
a) Big			
c) Small			

### Formula

$$\begin{array}{r}
 \text{Average Stocks Per} \\
 \text{Sub-Stratum} \\
 \times \\
 \text{Total No. of} \\
 \text{Population} \\
 \hline
 \text{TS Rice}
 \end{array}$$



# Good Practices

- **Religious conduct of CSS by enumerators**
- **Respondents affix their signatures in the duly accomplished CSS Questionnaires**
- **Timely submission of Accomplished CSS Questionnaires**
- **Cooperation from grains businessmen-respondents in the provision of stock inventory data to enumerators/NFA delegated survey personnel**



# End of Presentation



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