Rice and Corn Stocks in the Philippines

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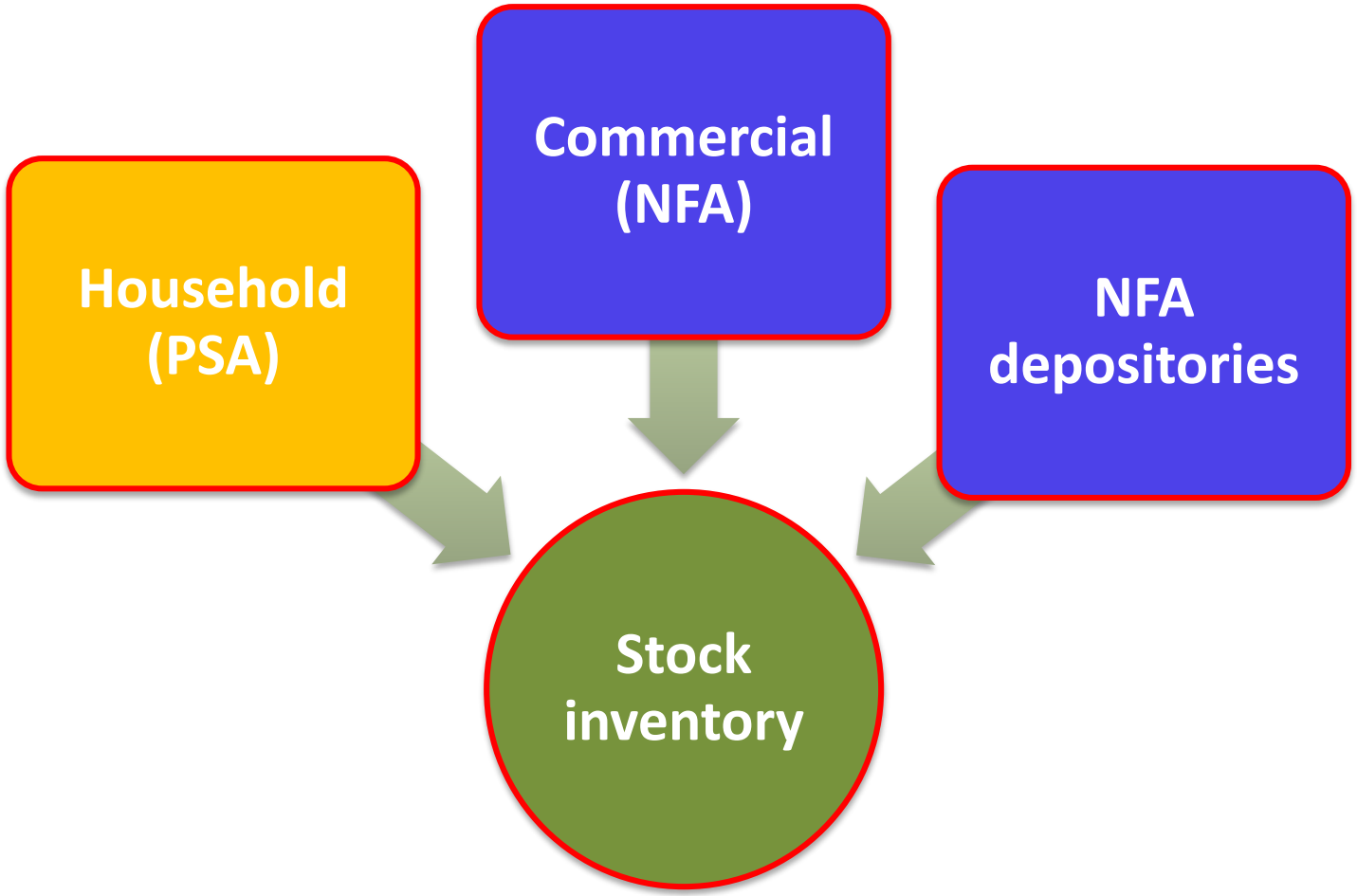
Why Monitor Rice and Corn Stocks Situation?

1. National food security
2. Production policies
3. Possible import requirement and timing of importation

Stocks Inventory by Sector



Palay and Corn Stocks Survey (PCSS1)

Objectives

- to generate estimate of current stock of rice and corn in farming and non-farming households;
- to serve as input in the analysis of the seasonal trends and variations in the supply of rice and corn;
- to serve as input for forecasting future supply, demand and prices of palay and corn; and
- to assist policy-makers in the formulation, implementation and administration of agricultural economic programs

Concept and Definition

Type of Corn

1. **White - corn that is used primarily for human consumption**

2. **Yellow - corn that is generally used as feed grain (includes all types of corn other than white).**

Ears of matured corn - Corn in the cob that are harvested as they reach full maturity or at hard dough stage.

Ears of green corn - Young corn in the cob that are harvested on or before they reach full maturity. They are either at soft or hard dough stage (for boiling or broiling).

Shelled corn - Corn grains that have been removed from the cob.

Corn Grits - Milled corn grains where the outer covering and germs have been removed.

Household Stocks

Household (HH) classification:

1. Farming household

- refers to any household in which a member operates an agricultural land, either solely or jointly with other members, and the aggregate area operated by the operator-members of such household qualified to be called a farm.

2. Non-farming household

- refers to household with no agricultural area or activity and is chosen through the right coverage approach.

Sampling Design

Sampling Design

Two-stage stratified replicated sampling

Sub-sample of Palay and Corn Production Survey

Sampling Unit

One Replicate barangay (village)

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

Secondary Sampling Unit (SSU) – Households : 15, 286

Farming Households: 9,766

Non-farming Household : 5,520

Estimation Procedure

The estimate of the total stock in the province is simply obtained by:

a. Get the average stock by household-

dividing the total stock(by type) by the number of responding households under the farming and non-farming.

b. Multiply the average stock by the total number of farming and non-farming households (expansion factor).

c. Multiply the estimated palay stock to 65% to get the rice equivalent.

d. Divide the estimated corn grits stock by 68 % to get the corn grain equivalent.

e. Add the estimated stocks held by the farming and non-farming households.

Data Collection

Frequency

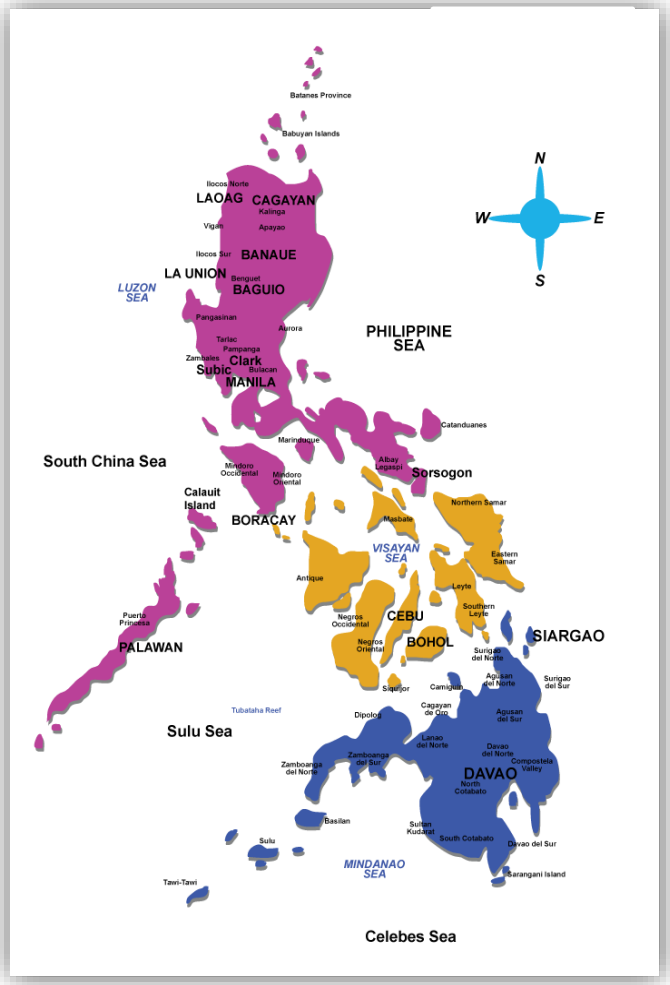
- Monthly

Method

- Personal interview by Statistical Researcher
- 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.



Republic of the Philippines
Philippine Statistics Authority

Household Stocks

Survey Form

Republic of the Philippines
PHILIPPINE STATISTICS AUTHORITY
Quezon City

PSA Approval No:

PCSS FORM 1A
Sheet No. _____ of _____ Sheets
for this classification of household

PALAY AND CORN STOCKS SURVEY
(PCSS 1)

_____ 1, 20 _____
(Month) Year

PROVINCE : _____
MUNICIPALITY : _____
BARANGAY : _____

HOUSEHOLD CLASSIFICATION: ☐ Farming ☐ Non-Farming

A. QUANTITY OF PALAY/RICE STOCKS IN THE HOUSE *AS OF 6:00 A.M.* "

LN	NAME OF HOUSEHOLD HEAD	NAME OF RESPONDENT	RELATIONSHIP TO HOUSEHOLD HEAD (enter code)	PALAY				RICE			
				IN LOCAL UNIT			FOR OFFICE USE ONLY (kg) col. (6 x 7)	IN LOCAL UNIT			FOR OFFICE USE ONLY (kg) col. (10 x 11)
				UNIT USED Example : Sack	NUMBER OF UNITS	WEIGHT (in kg) OF ONE UNIT		UNIT USED Example : Sack	NUMBER OF UNITS	WEIGHT (in kg) OF ONE UNIT	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1						____	____			____	____
2						____	____			____	____
3						____	____			____	____
4						____	____			____	____
5						____	____			____	____
6						____	____			____	____
7						____	____			____	____
8						____	____			____	____
9						____	____			____	____
10						____	____			____	____
11	..... BGY. TOTAL THIS HH CLASSIFICATION 50						____				____

IMPORTANT:

" Report the quantity of palay, (etc.) which is owned by the household and stored in the house or another house or non-commercial granaries (Rice/Corn Feed Mills)

DO NOT INCLUDE owned stocks which are stored in commercial warehouses

RELATIONSHIP TO HOUSEHOLD HEAD: *(column 4)*

1. Household Head
2. Spouse
3. Son/Daughter
4. Other knowledgeable member of the Household

Household Stocks

PCSS FORM 1A

B. QUANTITY OF SHELLED CORN/CORN GRITS STOCKS IN THE HOUSE *AS OF 6:00 A.M.*

LN	NAME OF HOUSEHOLD HEAD	CORN GRAIN**								CORN GRITS							
		YELLOW				WHITE				YELLOW				WHITE			
		IN LOCAL UNIT			OFFICE USE ONLY (kg) col. (4 x 5)	IN LOCAL UNIT			OFFICE USE ONLY (kg) col. (8 x 9)	IN LOCAL UNIT			OFFICE USE ONLY (kg) col. (12 x 13)	IN LOCAL UNIT			OFFICE USE ONLY (kg) col. (16 x 17)
		UNIT USED Example: Sack	NUMBER OF UNITS	WEIGHT (in kg) OF ONE UNIT		UNIT USED Example: Sack	NUMBER OF UNITS	WEIGHT (in kg) OF ONE UNIT		UNIT USED Example: Sack	NUMBER OF UNITS	WEIGHT (in kg) OF ONE UNIT		UNIT USED Example: Sack	NUMBER OF UNITS	WEIGHT (in kg) OF ONE UNIT	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11	PGY. TOTAL THIS HH CLASSIFICATION SB																

** Include ears of matured corn in shelled corn equivalent

CORN GRAIN - Ears of Matured Corn X .071

Enumerated by: _____
Date of Enumeration: _____

Edited by: _____
Date Edited: _____

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 6.1)

Data Review and Validation

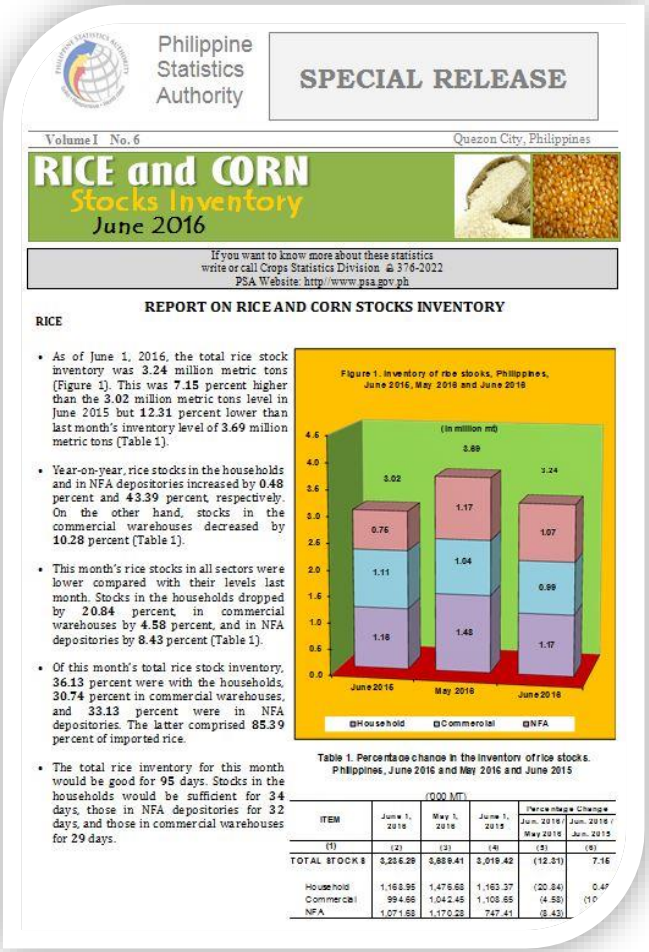
Review

- **Check the consistency of reasons for the changes in the level of stocks reported**

Validation

- **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**

Output and Dissemination



Philippine Statistics Authority

SPECIAL RELEASE

Volume I No. 6 Quezon City, Philippines

RICE and CORN Stocks Inventory June 2016

If you want to know more about these statistics write or call Crops Statistics Division ☎ 376-2022
PSA Website: http://www.psa.gov.ph

REPORT ON RICE AND CORN STOCKS INVENTORY

RICE

- As of June 1, 2016, the total rice stock inventory was 3.24 million metric tons (Figure 1). This was 7.15 percent higher than the 3.02 million metric tons level in June 2015 but 12.31 percent lower than last month's inventory level of 3.69 million metric tons (Table 1).
- Year-on-year, rice stocks in the households and in NFA depositories increased by 0.48 percent and 43.39 percent, respectively. On the other hand, stocks in the commercial warehouses decreased by 10.28 percent (Table 1).
- This month's rice stocks in all sectors were lower compared with their levels last month. Stocks in the households dropped by 20.84 percent, in commercial warehouses by 4.58 percent, and in NFA depositories by 8.43 percent (Table 1).
- Of this month's total rice stock inventory, 36.13 percent were with the households, 30.74 percent in commercial warehouses, and 33.13 percent were in NFA depositories. The latter comprised 85.39 percent of imported rice.
- The total rice inventory for this month would be good for 95 days. Stocks in the households would be sufficient for 34 days, those in NFA depositories for 32 days, and those in commercial warehouses for 29 days.

Figure 1. Inventory of rice stocks, Philippines, June 2016, May 2016 and June 2016

Table 1. Percentage change in the inventory of rice stocks, Philippines, June 2016 and May 2016 and June 2015

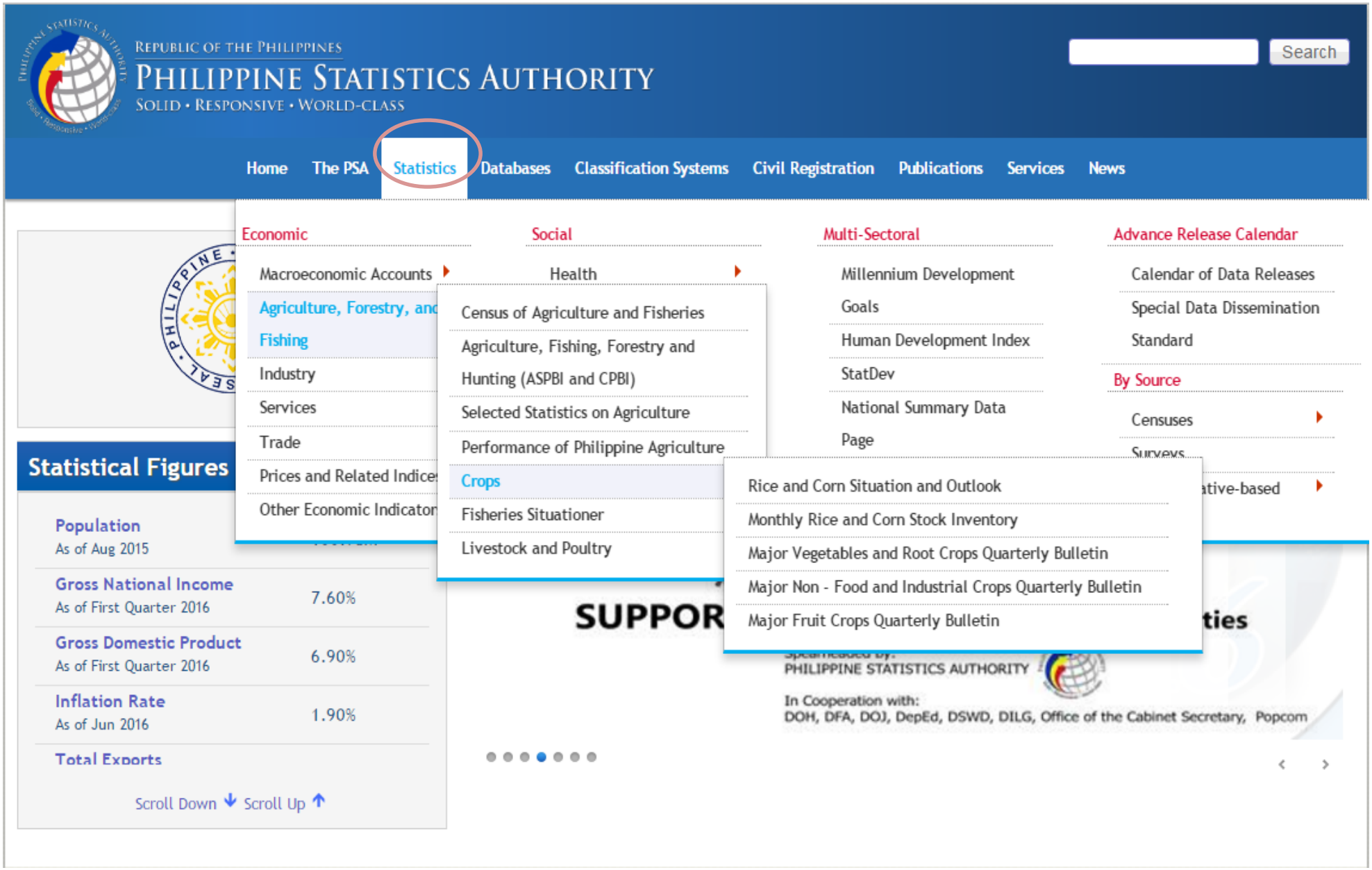
(000 MT)

ITEM	June 1, 2016	May 1, 2016	June 1, 2015	Percentage Change: Jun. 2016 / May 2016	Percentage Change: Jun. 2016 / Jun. 2015
(1)	(2)	(3)	(4)	(5)	(6)
TOTAL STOCKS	3,236.29	3,869.41	3,019.42	(12.31)	7.16
Household	1,168.95	1,476.68	1,163.37	(20.84)	0.47
Commercial	994.66	1,042.45	1,108.65	(4.58)	(10
NFA	1,071.68	1,170.28	747.41	(8.43)	

Special Release

Rice and Corn Stocks Inventory

- ***Released 10th day after the reference month***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Fisheries Situationer
Livestock and Poultry
Rice and Corn Situation and Outlook
Monthly Rice and Corn Stock Inventory
Major Vegetables and Root Crops Quarterly Bulletin
Major Non - Food and Industrial Crops Quarterly Bulletin
Major Fruit Crops Quarterly Bulletin
Multi-Sectoral
Millennium Development Goals
Human Development Index
StatDev
National Summary Data Page
Advance Release Calendar
Calendar of Data Releases
Special Data Dissemination Standard
By Source
Censuses
Surveys
Statistical Figures
Population
As of Aug 2015
Gross National Income
As of First Quarter 2016
7.60%
Gross Domestic Product
As of First Quarter 2016
6.90%
Inflation Rate
As of Jun 2016
1.90%
Total Exports
Scroll Down
Scroll Up
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In Cooperation with:
DOH, DFA, DOJ, DepEd, DSWD, DILG, Office of the Cabinet Secretary, Popcom

Good Practices

Management of Sampling Units

- Monitoring of samples status and outcome of the interview
- Documentation of response rate
- Updating of the list of agricultural households

Household Stocks

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 Provincial Office and Central Office staff

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

Household Stocks

Data Review and Analysis

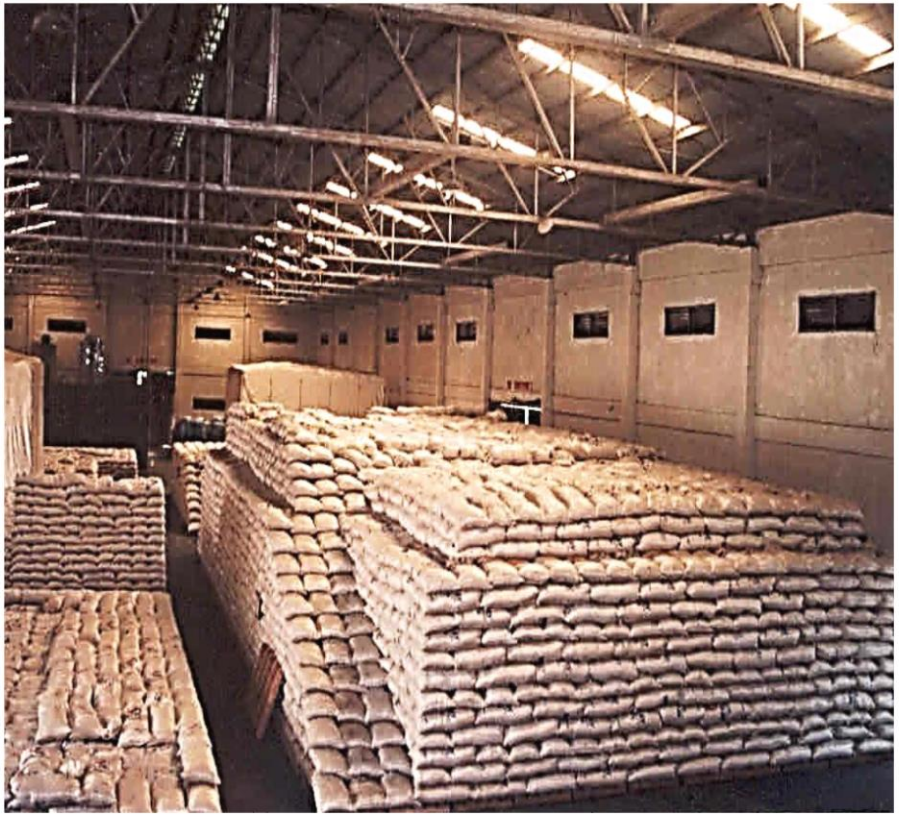
Three levels of data review:

- **Provincial level**
- **Regional level**
- **National level**

Data Dissemination

- **Subscription to the existing policies regarding the release of statistical reports.**

Commercial Stock Survey (CSS)



What is Commercial Stock Survey (CSS)?

- ***Commercial Stock Survey (CSS)*** **-** monitoring system adopted by National Food Authority (NFA) to generate estimates on ***commercial rice, corn and 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

- To determine the apparent grains stock inventory for rice and corn 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.

Sampling Design

Stratified Systematic Sampling

1st Level Stratification

- Retailers (R)
- Wholesaler (W)
- Combined Retailers/Wholesaler (C R/W)
- Warehousemen (Wh)

2nd Level Stratification

- Big
- Medium
- Small

Sampling Rate

- R = 15%
- W = 25%
- C R/W = 25 %
- Wh = 100%

Masterlist of NFA Registered Grains Businessmen

(93,399)

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

Data Collection

Frequency

- Monthly

Method

- Personal interview by the enumerators & the Agency's field survey personnel (Provincial Enforcement & Investigation Officers)
- Every last two (2) working days of the current month and the first two (2) working days of the succeeding month

Information Collected

- Ending stock inventory of the current month

Survey Form

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 _____

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, _____

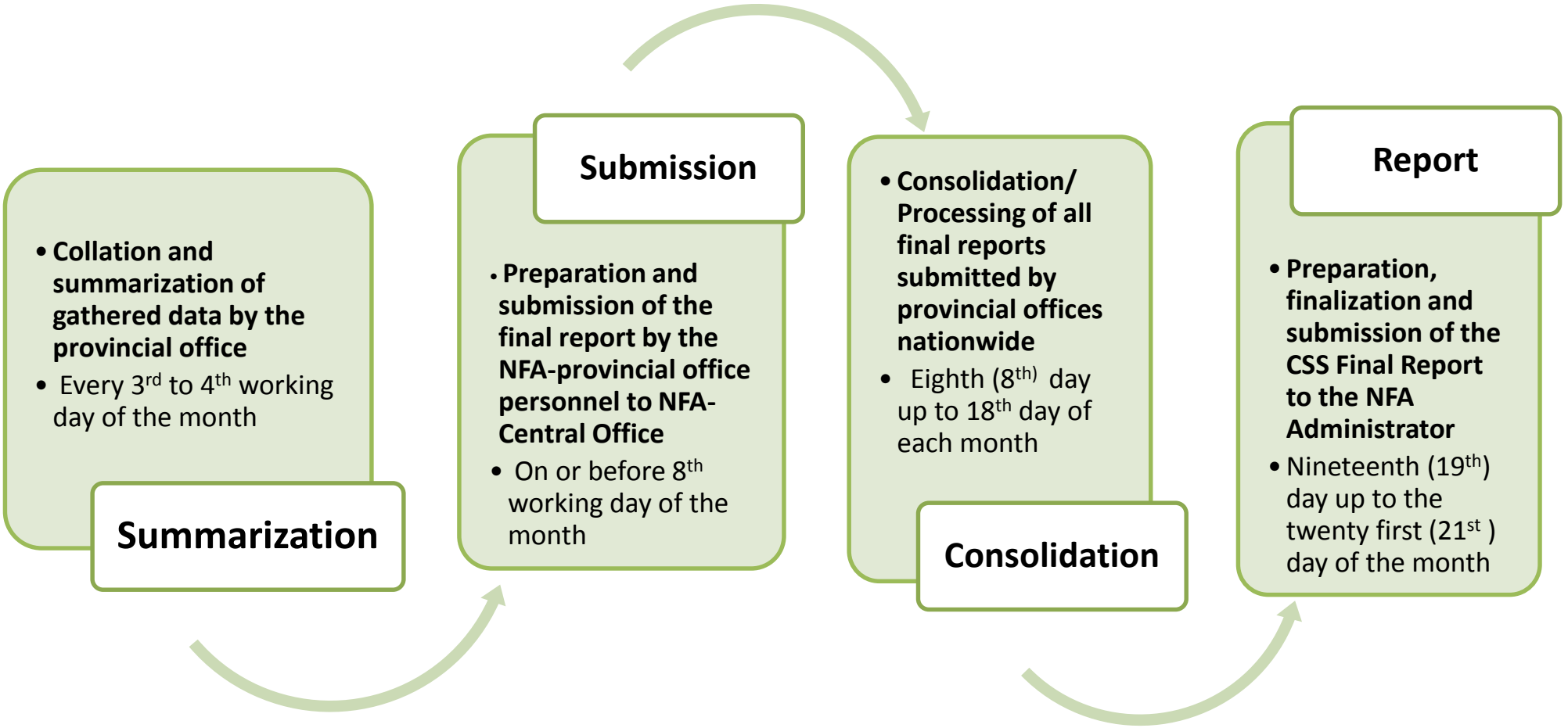
ITEMS	INFLOW (PURCHASES)		OUTFLOW (SALES)	
	SOURCE	VOLUME(in bags of 50 kg)	DESTINATION	VOLUME (in bags of 50 kg)
PALAY				
RICE				
CORN GRITS				
CORN GRAINS				
OTHERS				
SPECIFY				

VI. PURCHASED STOCKS IN TRANSIT AS OF _____

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

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

Data Processing



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.**

Identified Data Gaps

- **List of grains businessmen contained in the Masterlist of NFA Registered Grains Businessmen not updated in some areas.**

Lack of manpower to generate the Masterlist

- **Irregular conduct of field validation to verify and ensure the quality and accuracy of data collected.**

Budgetary constraint

- **Complaints from enumerators on the high transportation cost incurred in the conduct of survey, thereby discouraging them to continue working for CSS.**

Accuracy and reliability of data suffer due to constant re-hiring of enumerators

Areas for Improvement

NFA Masterlist of Registered Grains Businessman

- Requires regular updating due to the possible changes in their line of activity, capitalization, etc.

CSS Assessment/Validation

- Review, revisit and validate if field offices adopt the set of statistical methodology as indicated in CSS Implementing Guidelines

Review of the Existing CSS Implementing Guidelines

- Determine the need to modify some provisions to further improve the conduct of survey

Commercial Stocks

NFA –Grains Businessmen Relationships

- Strengthen further linkage to attain a more realistic and factual data.

Budgetary Requirement

- Provision of transportation allowance for hired enumerators that will encourage them to continue working for CSS.

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