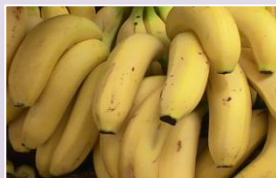


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REPORT No. 2010-03

FOOD SUFFICIENCY AND SECURITY



SEPTEMBER 2010



Republic of the Philippines
Department of Agriculture

BUREAU OF AGRICULTURAL STATISTICS

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FOOD
SUFFICIENCY
and **S**ECURITY

FOREWORD

This is the fourth module of the report entitled “*Development Indicators for the Philippine Agriculture 2010*”, which is published annually by the Bureau of Agricultural Statistics (BAS) under the Agricultural Indicators System (AIS). The fourth module is entitled Food Sufficiency and Security which presents indicators on self-sufficiency ratio and import dependency ratio of selected agricultural commodities and data on rice and corn stocks. The reference years are 2005 to 2009.

Continuous review and improvement of the AIS are being undertaken by BAS to meet the demand for statistics and indicators of its clients and other agriculture stakeholders. It welcomes suggestions and comments from readers on how this report can be further improved.

The BAS would like to thank the National Statistics Office (NSO) and National Food Authority (NFA) for providing the basic data on this module.


ROMEO S. RECIDÉ
Director

Quezon City, Philippines
September 2010

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TABLE OF CONTENTS

FOREWORD	i
LIST OF TABLES	iii
FOOD SUFFICIENCY AND SECURITY	
Table 1.01	Self-sufficiency ratio (SSR) of selected agricultural commodities, Philippines, 2005-2009 4
Table 1.02	Import dependency ratio (IDR) of selected agricultural commodities, Philippines, 2005-2009 6
Table 1.03a	Stocks of rice: highest and lowest levels and percentage shares of households, commercial warehouses and NFA, Philippines, 2005-2009 8
Table 1.03b	Stocks of corn: highest and lowest levels and percentage shares of households, commercial warehouses and NFA, Philippines, 2005-2009 9

Self-Sufficiency Ratio

Self-sufficiency ratio (SSR) measures the extent to which a country relies on its own production to meet the needs of the local populace.

In 2009, self-sufficiency ratio (SSR) of rice went up to 85.83 percent or 3.93 percentage points higher than the previous year's ratio. In contrast, SSR of corn declined by 3.82 percentage points to 95.88 percent in 2009. Continued self-sufficiency was reported for coconut and sugarcane. Coffee production was more inadequate in 2009 and its SSR decreased to 68.74 percent or by 4.13 percentage points.



The country was consistently self-sufficient in banana, pineapple, mango, calamansi, pomelo and papaya. Banana still maintained higher SSR despite its drop to 122.64 percent in 2009 from the previous year's 133.76 percent. Likewise, pineapple recorded a decline in SSR at 110.26 percent. For vegetables and rootcrops, adequacy in production was noted for tomato, cabbage, eggplant, cassava and sweet potato. Self-sufficiency ratios were lower for garlic, peanut and mungo at 23.89 percent, 47.46 percent and 46.22 percent, respectively. Onion exhibited an improved SSR at 97.34 percent in 2009 compared to previous year's 68.45 percent. Self-sufficiency ratio of potato was 98.55 percent.



Among livestock products, insufficiency in beef and carabeef production continued, however, their corresponding SSRs rose to 82.02 percent and 68.40 percent in 2009. SSR of pork was continuously declining over the years, from 2005 to 2009. It went down to 94.91 percent in 2009. The local production of chevon was not enough in 2009 compared to the past four (4) years. In the case of chicken, SSR went down further to 93.56 percent. Self-sufficiency was nearly achieved for chicken eggs and duck.



Self-sufficiency in fishery products such as milkfish, roundscad, tilapia, shrimps and prawns and crabs was sustained in 2009. In that year, tuna production became inadequate and its SSR fell to 89.85 percent or by 9.31 percentage points. On the other hand, oyster had an estimated SSR of 99.93 percent (Table 1.01).



Import Dependency Ratio

Import dependency ratio indicates the extent of dependency on importation in relation to domestic consumption. A high ratio implies greater dependency on importation.



Import dependency ratio (IDR) of rice in 2009 was 14.17 percent or 3.94 percentage points lower than last year's record. The country's IDR for corn went up to 4.13 percent in 2009 from the previous year's 0.33 percent. Coffee imports increased and IDR moved up to 31.26 percent in 2009. Likewise, heavy dependence on importation was continuously recorded for garlic, peanut and mongo. In 2009, IDR of peanut went up to 52.54 percent while IDRs of garlic and mongo dropped to 76.11 percent and 53.80 percent, respectively. In the case of onion, lower volume of importation was noted in 2009, thus, IDR dropped from 35.18 percent in 2008 to 7.70 percent in 2009. The country's dependence on potato imports dropped to 1.45 percent in 2009.

Imports of beef and carabeef declined in 2009 and they recorded declining IDRs which corresponded to 17.98 percent and 31.70 percent. The country's reliance on importation was estimated at 5.09 percent



for pork and 6.95 percent for chicken. Ratios of less than 1.00 percent were recorded for chevon, duck and chicken eggs. This was similarly observed in most of the fishery products. Tuna exhibited increasing dependency on imports and in 2009, IDR was computed at 13.86 percent (Table 1.02).

Cereals Stocks



It is important to monitor the stocks situation of the staple grains to ensure food security. Information on monthly stockholdings can guide policy makers on how much and when to resort to exportation or importation.

In 2009, the peak month of rice stocking was recorded in November with about 2.96 million metric tons of rice. Of this volume, about 45.6 percent were held by the households, 38.7 percent were at the NFA depositories while 15.7 percent were at commercial warehouses. In contrast, the lowest volume of rice stocks at 2.17 million metric tons was noted in March. Households shared 45.9 percent of these stocks and NFA contributed 37.6 percent. The remaining 16.5 percent were kept at commercial warehouses (Table 1.03a).

The biggest volume of corn stocks in 2009 was reported in September at 0.39 million metric tons. Commercial warehouses held the biggest share of 44.4 percent in the total inventory of corn stocks. Households contributed 39.8 percent and NFA shared 15.8 percent. In the same year, the leanest month was March with 0.14 million metric tons of corn stocks of which 53.8 percent were at the commercial warehouses and 46.2 percent were with the households (Table 1.03b).

Table 1.01
Self-sufficiency ratio (SSR) of selected agricultural commodities,
Philippines, 2005-2009

COMMODITY	2005	2006	2007	2008R	2009P
Rice	83.98	85.38	85.47	81.90	85.83
Corn	98.67	95.21	97.79	99.70	95.88
Coconut	100.02	100.01	100.01	100.01	100.01
Sugarcane	100.00	100.00	100.00	100.00	100.00
Coffee	67.79	84.86	68.73	72.87	68.74
Banana	147.36	151.56	141.62	133.76	122.64
Pineapple	113.36	116.68	115.88	115.21	110.26
Mango	103.28	102.93	102.64	102.41	102.71
Calamansi	100.00	100.00	100.00	100.01	100.02
Papaya	101.98	102.36	102.53	101.60	101.32
Pomelo	100.00	100.00	100.00	100.00	100.00
Tomato	100.00	100.00	100.00	100.00	100.00
Garlic	39.55	25.56	18.23	17.11	23.89
Onion	90.06	61.31	106.36	68.45	97.34
Cabbage	100.26	100.00	100.00	100.00	100.00
Eggplant	100.00	100.00	100.00	100.00	100.00
Peanut	44.27	36.46	62.15	65.48	47.46
Mongo	46.68	45.80	46.78	43.98	46.22
Cassava	100.03	99.85	100.05	100.04	100.05
Sweet potato	100.00	100.00	100.00	100.00	100.00
Potato	86.90	89.97	95.75	95.69	98.55
Beef	84.86	83.25	79.91	78.72	82.02
Carabeef	54.58	58.27	63.95	61.43	68.40
Pork	97.83	97.78	96.87	95.08	94.91
Chevon	100.00	100.00	100.00	100.00	99.97
Chicken (<i>dressed</i>)	96.50	95.20	95.55	95.25	93.56
Duck (<i>dressed</i>)	99.63	99.41	99.88	99.43	99.42
Chicken egg	99.84	99.97	99.93	99.93	99.62

Table 1.01 ...*(Continued)*

COMMODITY	2005	2006	2007	2008R	2009P
Milkfish	100.21	100.35	100.43	100.47	100.67
Roundscad	100.07	100.04	100.26	100.07	100.11
Tilapia	100.00	100.00	100.01	100.09	100.00
Tuna	93.20	97.66	98.69	99.16	89.85
Shrimps & Prawns	132.37	133.57	120.73	114.01	113.22
Crabs	100.17	99.83	104.19	103.72	107.16
Oysters	100.00	100.00	100.02	99.94	99.93

Table 1.02
Import dependency ratio (IDR) of selected agricultural commodities,
Philippines, 2005-2009

COMMODITY	2005	2006	2007	2008R	2009P
Rice	16.02	14.62	14.53	18.11	14.17
Corn	1.33	4.81	2.21	0.33	4.13
Coconut	-	-	-	-	-
Sugarcane	-	-	-	-	-
Coffee	32.28	15.36	31.29	27.16	31.26
Banana	-	-	-	-	-
Pineapple	-	-	-	-	0.00
Mango	-	-	-	-	-
Calamansi	-	-	-	-	-
Papaya	-	-	-	-	-
Pomelo	-	-	-	-	-
Tomato	-	-	-	-	-
Garlic	78.19	82.26	81.78	82.93	76.11
Onion	32.62	49.49	2.20	35.18	7.70
Cabbage	0.00	-	-	-	-
Eggplant	-	-	-	-	-
Peanut	58.33	63.66	38.30	35.10	52.54
Mongo	53.58	54.24	53.43	56.04	53.80
Cassava	-	0.18	-	-	-
Sweet potato	-	-	-	-	-
Potato	13.10	10.03	4.25	4.31	1.45
Beef	15.14	16.75	20.12	21.28	17.98
Carabeef	45.42	41.73	36.05	38.57	31.70
Pork	2.17	2.22	3.14	4.92	5.09
Chevon	-	-	-	-	0.03
Chicken (<i>dressed</i>)	4.06	4.86	4.91	5.13	6.95
Duck (<i>dressed</i>)	0.37	0.59	0.12	0.57	0.58
Chicken egg	0.16	0.03	0.07	0.07	0.39

Table 1.02 ...*(Continued)*

COMMODITY	2005	2006	2007	2008R	2009P
Milkfish	0.00	0.02	0.01	0.00	0.07
Roundscad	0.03	0.07	0.01	0.22	0.22
Tilapia	-	-	0.01	0.01	0.00
Tuna	9.20	5.82	5.21	5.40	13.86
Shrimps & Prawns	3.26	3.33	3.81	3.09	2.57
Crabs	0.10	0.30	0.11	0.06	0.03
Oysters	-	-	-	0.06	0.07

Table 1.03a**Stocks of rice: Highest and lowest levels and percentage shares of households, commercial warehouses and NFA, Philippines, 2005-2009**

ITEM	2005	2006	2007	2008	2009
HIGHEST STOCKS LEVELS					
Month	December	December	December	December	November
Quantity ('000 MT)	2,406.2	2,580.4	2,291.5	2,954.1	2,958.6
Percent share					
Households	61.7	61.5	64.6	50.2	45.6
Commercial	20.1	17.3	19.9	17.4	15.7
NFA	18.2	21.2	15.5	32.4	38.7
LOWEST STOCKS LEVELS					
Month	September	September	September	March	March
Quantity ('000 MT)	1,308.0	1,649.5	1,131.8	1,688.7	2,167.7
Percent share					
Households	44.1	36.8	52.4	58.8	45.9
Commercial	19.5	19.4	20.3	24.3	16.5
NFA	36.4	43.8	27.3	16.9	37.6

Table 1.03b

Stocks of corn: Highest and lowest levels and percentage shares of households, commercial warehouses and NFA, Philippines, 2005-2009

ITEM	2005	2006	2007	2008	2009
HIGHEST STOCKS LEVELS					
Month	October	October	October	October	September
Quantity ('000 MT)	433.6	376.6	330.4	345.2	390.8
Percent share					
Households	59.9	81.9	68.4	55.7	39.8
Commercial	40.0	18.1	31.6	44.1	44.4
NFA	0.1	0.0	0.0	0.2	15.8
LOWEST STOCKS LEVELS					
Month	June	July	July	August	March
Quantity ('000 MT)	182.1	121.3	96.2	171.6	139.2
Percent share					
Households	34.1	47.2	54.5	40.7	46.2
Commercial	65.4	52.8	45.5	58.9	53.8
NFA	0.5	0.0	0.0	0.4	0.0

Modules of the Agricultural Indicators System

1. Agricultural Structures and Resources
 2. Agricultural Credit
 3. Output and Productivity
 4. Agricultural Exports and Imports
 5. **Food Self-sufficiency and Security**
 6. Population and Labor Force
 7. Food Consumption and Nutrition
 8. Gender-based Indicators of Labor and Employment in Agriculture
 9. Redistribution of Land
 10. Economic Growth
 11. Prices and Marketing of Agricultural Commodities
 12. Inputs
-

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