

AGRICULTURAL INDICATORS SYSTEM (AIS)

FOOD SUFFICIENCY AND SECURITY

REPORT No. 2015-5



REPUBLIC OF THE PHILIPPINES
PHILIPPINE STATISTICS AUTHORITY

FOREWORD

The Agricultural Indicators System (AIS) is one of the statistical frameworks maintained by the Philippine Statistics Authority (PSA). AIS contains twelve (12) modules and these are updated and released annually. This is the fifth module entitled Food Sufficiency and Security. It provides information on self-sufficiency ratio, and import dependency ratio of selected major agricultural commodities and data on rice and corn stocks. The reference years are 2010 to 2014.

The AIS hopes to cover more agricultural development indicators to support the information needs of our data users. We encourage the readers to give their comments and suggestions on the improvement of the AIS, in general, and the report, in particular.

The PSA would like to acknowledge the National Food Authority (NFA) for providing the basic data on this module.

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October 2015

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FOOD SUFFICIENCY
AND SECURITY



Self-Sufficiency Ratio

Self-sufficiency ratio (SSR) shows the magnitude of production in relation to domestic utilization. It is the extent to which a country's supply of commodities is derived from its own domestic production. A ratio of less than 100 percent indicates inadequacy of food production to cope with the demand of the population; equal to 100 percent indicates that food production capacity of the sector is just enough to support the food needs of the population; ratio of greater than 100 percent indicates that domestic production is more than enough to support the domestic requirements. The higher the ratio, the greater the self-sufficiency.

In 2014, self-sufficiency ratio of rice declined to 92.04 percent from last year's ratio of 96.81 percent. Similarly, corn recorded a drop in SSR at 93.12 percent in 2014 compared to 2013's 95.57 percent. The decreases in the SSRs of rice and corn were attributed to the decline in the share of domestic production to the country's supply. There was an increase in the importation of both commodities. Sufficiency in production continued for coconut and sugarcane. For coffee, SSR went up to 57.85 percent in 2014 brought about by the upward share of local production while imports were going down.

Adequacy in production was continuously reported for fruits such as calamansi, papaya and pomelo. Continued self-sufficiency was observed for tomato, cabbage, eggplant and sweet potato. SSRs of garlic and peanut in 2014 abruptly declined to 23.27 percent and 30.60 percent, respectively. The decreasing share of domestic production pulled down the SSRs of garlic and peanut. Both crops recorded increasing and higher level of imports. Likewise, onion's SSR slightly went down to 96.01 percent. Mongo exhibited a gain in SSR to 53.18 percent in 2014. This was caused by the increased share of mongo production in the country's supply with the reduction in importation. Meanwhile, self-sufficiency was nearing to be achieved for cassava and potato with SSRs corresponding to 99.60 percent and 98.89 percent in 2014.

Except for chevon and chicken eggs, the production levels of all the livestock and poultry products were insufficient in 2014 as indicated by their declining SSRs. For pork, SSR was down to 89.32 percent while

chicken's SSR slid to 87.47 percent. Self-sufficiency was almost achieved for chevon and chicken eggs.

Self-sufficiency was still attained for the fishery products such as milkfish, tilapia, shrimps and prawns, crabs and oysters in 2014. Despite the decline in the SSR of crabs, it remained the highest at 123.47 percent in 2014. Roundscad exhibited a slight drop in SSR to 99.99 percent. SSR of tuna declined to 89.38 percent in 2014.

Import Dependency Ratio

Import dependency ratio (IDR) indicates the extent to which a country's supply of commodities came from imports. A high ratio implies greater dependency on importation.

The 2014 import dependency ratio (IDR) of rice went up to 7.97 percent from its 2013 record of 3.20 percent. In the same year, IDR of corn, likewise, increased to 6.89 percent from last year's ratio of 4.43 percent.

Dependency on importation was noted for coffee, garlic, peanut and mongo. IDRs of coffee and mongo dropped to 42.15 percent and 46.90 percent, respectively. Bigger increase in importation was recorded for garlic which resulted to higher gain in the 2014 IDR at 76.83 percent. IDR of peanut went up to 69.43 percent.

Importation was minimal for onion, cassava and potato with corresponding IDRs of 4.26 percent, 0.41 percent and 1.11 percent.

Relatively higher and increasing IDRs were exhibited by livestock products such as beef at 24.52 percent and carabeef at 28.04 percent in 2014. Pork's IDR rose to 10.69 percent. Dependency on imports was low for chevon. For poultry products, IDRs went up to 12.97 percent for chicken and 2.41 percent for duck.

Low IDRs were reported for milkfish, roundscad and crabs ranging from 0.03 percent to 0.15 percent. IDRs were 5.11 percent for shrimps and prawns and 14.05 percent for tuna. There was no recorded importation of tilapia in 2014.

Cereals Stocks

Information on supply condition is vital to be able to maintain food balance. The occurrence of typhoons and other calamities as well as volatile grains market structures necessitate the need to monitor stocks situation of the staple grains to ensure supply and demand equilibrium, access and price stability. Information on monthly stockholdings can guide policy makers on how much and whether to export or import rice or corn in the future.

In 2014, the biggest volume of rice stocks was reported in December at 3.03 million metric tons. Of this total rice stocks, about 51.7 percent were held by the households and 32.3 percent came from commercial warehouses. The remaining 16.0 percent were stocks coming from NFA. On the other hand, the lowest volume of rice stocks was noted in September with an inventory of 1.49 million metric tons. Household stocks comprised 40.1 percent. Stocks in NFA depositories and from commercial warehouses accounted for about 30 percent each.

The peak month of corn stocking in 2014 was reported in October at 0.41 million metric tons. The households kept the biggest proportion of the total corn stock at 69.2 percent. Commercial warehouses shared 30.3 percent while NFA held only 0.5 percent. In contrast, July had the lowest level of corn stock at 0.16 million metric tons. Commercial holdings had the biggest share in the volume of corn stock at 63.0 percent, followed by households at 33.4 percent. NFA contributed the least at 3.6 percent.

Table 1.
Self-sufficiency ratio (SSR) of selected agricultural commodities,
Philippines, 2010-2014
(in percent)

COMMODITY	2010	2011	2012	2013	2014P
Rice	81.27	93.91	91.89	96.81	92.04
Corn	98.64	99.06	98.18	95.57	93.12
Coconut	100.02	100.05	100.01	100.02	100.01
Sugarcane	100.00	100.00	100.00	100.00	100.00
Coffee	54.74	54.90	45.21	46.79	57.85
Calamansi	100.02	100.02	100.02	100.02	100.03
Papaya	100.85	101.90	101.89	103.69	102.47
Pomelo	100.00	100.00	100.00	100.00	100.09
Tomato	100.00	99.54	99.99	100.00	100.00
Garlic	28.26	28.74	48.17	71.92	23.27
Onion	97.90	107.70	90.62	96.36	96.01
Cabbage	100.00	100.00	100.00	100.00	100.00
Eggplant	100.00	100.00	100.00	100.00	100.00
Peanut	30.10	32.94	35.59	45.43	30.60
Mongo	47.10	57.60	50.21	49.08	53.18
Cassava	98.89	99.79	100.02	99.34	99.60
Sweet potato	100.00	100.00	100.00	100.00	100.00
Potato	95.21	93.65	95.00	96.43	98.89
Beef	79.55	80.14	79.79	79.71	75.49
Carabeef	68.24	72.67	73.38	78.21	71.96
Pork	91.54	92.08	93.30	91.74	89.32
Chevon	100.00	100.00	100.00	99.99	99.95
Chicken (dressed)	90.38	90.00	91.00	92.15	87.47
Duck (dressed)	99.28	99.48	97.65	99.35	97.59
Chicken egg	100.00	100.00	99.93	99.99	100.00
Milkfish	100.83	100.88	100.40	100.91	100.60
Roundscad	100.25	100.24	100.14	100.03	99.99
Tilapia	100.00	99.91	100.10	101.69	100.53
Tuna	101.26	95.99	95.33	96.96	89.38
Shrimps & Prawns	111.19	108.91	100.33	107.19	107.36
Crabs	107.94	109.99	115.45	145.78	123.47
Oysters	99.99	100.10	99.91	100.34	101.35

Table 2.
Import dependency ratio (IDR) of selected agricultural commodities,
Philippines, 2010-2014

COMMODITY	2010	2011	2012	2013	2014P
Rice	18.73	6.09	8.11	3.20	7.97
Corn	1.36	0.94	1.82	4.43	6.89
Coconut	-	-	-	-	-
Sugarcane	-	-	0.00	-	-
Coffee	45.30	45.10	54.79	53.42	42.15
Calamansi	-	-	-	-	-
Papaya	-	-	-	-	-
Pomelo	-	-	-	-	-
Tomato	-	0.46	0.01	-	0.00
Garlic	71.80	71.28	51.85	28.13	76.83
Onion	7.79	4.05	13.38	6.11	4.26
Cabbage	-	-	-	-	-
Eggplant	-	-	-	-	-
Peanut	69.90	67.26	64.41	54.57	69.43
Mongo	53.64	42.88	49.91	50.96	46.90
Cassava	1.15	0.26	0.00	0.67	0.41
Sweet potato	-	-	-	-	-
Potato	4.79	6.35	5.00	3.57	1.11
Beef	20.45	19.86	20.21	20.31	24.52
Carabeef	31.76	27.33	26.62	21.79	28.04
Pork	8.46	7.92	6.71	8.31	10.69
Chevon	-	-	0.00	0.01	0.05
Chicken (dressed)	10.20	10.97	9.51	8.37	12.97
Duck (dressed)	0.72	0.52	2.35	0.65	2.41
Chicken egg	-	-	0.07	0.01	-
Milkfish	0.01	0.04	0.19	0.11	0.03
Roundscad	0.09	0.02	0.01	0.07	0.07
Tilapia	-	0.09	0.00	0.01	0.00
Tuna	3.96	7.34	7.77	7.87	14.05
Shrimps & Prawns	3.30	3.66	4.61	4.58	5.11
Crabs	0.09	0.12	0.08	0.13	0.15
Oysters	0.01	0.06	0.15	0.02	0.00

0.00 indicates less than 0.001 percent

Table 3a.
Stocks of rice: Highest and lowest levels and percentage shares of households, commercial warehouses
and NFA, Philippines, 2010-2014

ITEM	2010	2011	2012	2013	2014
Month	December	January	November	May	December
Quantity ('000 MT)	3,908.0	3,424.3	2,784.6	2,614.4	3,031.5
Percent share					
Households	36.7	33.3	51.7	46.0	51.7
Commercial	17.9	16.1	28.1	30.6	32.3
NFA	45.4	50.6	20.2	23.4	16.0
Month	March	September	September	September	September
Quantity ('000 MT)	2,251.9	2,415.2	1,441.9	1,530.3	1,488.7
Percent share					
Households	39.9	22.5	36.7	35.0	40.1
Commercial	17.1	20.0	27.2	32.6	29.5
NFA	43.0	57.5	36.2	32.4	30.4

Table 3b.
Stocks of corn: Highest and lowest levels and percentage shares of households, commercial warehouses and NFA, Philippines, 2010-2014

ITEM	2010	2011	2012	2013	2014
Month	October	September	October	April	October
Quantity ('000 MT)	354.0	279.6	217.1	299.1	408.3
Percent share					
Households	67.1	63.3	57.8	40.1	69.2
Commercial	31.5	36.7	42.1	59.8	30.3
NFA	1.4	0.1	0.1	0.1	0.5
Month	July	March	February	July	July
Quantity ('000 MT)	109.1	145.3	129.8	123.2	161.75
Percent share					
Households	34.1	53.4	44.8	34.5	33.4
Commercial	53.6	46.4	55.1	62.9	63.0
NFA	12.3	0.2	0.1	2.6	3.6

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 Sufficiency and Security**
6. Food Consumption and Nutrition
7. Population and Labor Force
8. Redistribution of Land
9. Agricultural Exports and Imports
10. Gender-based Indicators of Labor and Employment in Agriculture
11. Economic Growth
12. Prices and Marketing of Agricultural Commodities
13. Inputs

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