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FOREWORD

The Agricultural Indicators System (AIS) is one of the statistical indicator frameworks maintained by the Philippine Statistics Authority (PSA). It contains eight modules which are updated and released annually. These modular reports provide measures for assessing socio-economic changes in the agriculture sector, characterizing the agrarian structure of the economy, and situating agriculture in the national economy.

This is the sixth module entitled Food Availability and Sufficiency. It provides information on per capita production, per capita net food disposable, and per capita supply of calories, protein, and fats of selected agricultural commodities. Further, this module is supplemented with statistics on self-sufficiency ratio and import dependency ratio of selected agricultural commodities, and data on rice and corn stocks. The reference years are 2016 to 2020.

The AIS aims 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 this report, in particular.

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Quezon City, Philippines
November 2021

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TECHNICAL NOTES

1. The report highlights a five-year data series on indicators relating to Food Availability and Sufficiency for selected agricultural commodities.

2. Indicators on Food Availability are the following: indices of per capita production, per capita net food disposable (NFD), and per capita supply of calories, protein, and fats of selected agricultural commodities. For Food Sufficiency, indicators presented in the report are the following: Self-sufficiency ratio (SSR) of selected agricultural commodities, Import dependency ratio (IDR) of selected agricultural commodities, stocks of rice and corn: highest and lowest levels and percentage shares of households, commercial warehouses, and National Food Authority (NFA), and total stocks of rice and corn by month.

3. The basic data is sourced from the Supply Utilization Accounts (SUA) for Selected Agricultural Commodities compiled by the PSA. The SUA provides a framework for physical accounting of agricultural commodities in their “raw/primary” forms.

4. Data on rice and corn stocks are generated from the Palay and Corn Stocks Survey and Commercial Stocks Survey of the PSA, while Government stocks are obtained from the NFA.

   Concepts and Definitions

   Per capita production – refers to the volume of production of a particular commodity available for each member of the population. Per capita production is derived by dividing the volume of production of a specific commodity by the number of population.

$$Per\ capita\ production = \frac{volume\ of\ production\ (by\ commodity)}{population}$$

   Annual per capita production index – provides information on the change in the per capita production of the commodity in a given year compared to a base year. It measures the capacity of the country’s agriculture sector to produce food commodities in pace with the growth of the population.

$$Annual\ per\ capita\ production\ index = \frac{\begin{matrix} annual\ per\ capita \\ production \\ in\ a\ given\ year \end{matrix}}{\begin{matrix} annual\ per\ capita \\ production \\ in\ the\ base\ year \end{matrix}} \times 100\%$$

   Net Food Disposable (NFD) - refers to the volume of food commodity available in its original (unprocessed) form for human consumption. NFD is the remaining balance after all the "use" parameters are taken into account. The net food disposable in per capita per year and in per capita per day are expressed in kilograms and grams, respectively.

Per Capita Net Food Disposable – refers to the food commodity available in its original (unprocessed) form for each member of the population.

$$\begin{matrix} Daily\ per\ capita \\ net\ food\ disposable\ index \end{matrix} = \frac{\begin{matrix} daily\ per\ capita\ net \\ food\ disposable \\ in\ a\ given\ year \end{matrix}}{\begin{matrix} daily\ per\ capita\ net \\ food\ disposable \\ in\ the\ base\ year \end{matrix}} \times 100\%$$

Daily per capita net food disposable index – indicates the movement of food available for consumption of each member of the population in a given year relative to a base year. The data on daily per capita net food disposable in the SUA is expressed in grams.

Daily per capita supply of calories, protein and fat – reflects the nutrient content of the different food intake measured on per capita per day basis. This indicator will show what food items contribute the highest content of calories, protein and fats.

This is derived by:

Daily per capita supply = Daily Per Capita NFD x Nutritive Factor Rate

The Nutritive Factor Rate is sourced from the Philippine Food Composition Tables of the Food and Nutrition Research Institute.

Self-sufficiency ratio (SSR) – shows the magnitude of production in relation to domestic utilization. It indicates the extent to which a country relies on its own production resources, i.e. the higher the ratio the greater the self-sufficiency. 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.

$$SSR = \frac{production}{production + import - export} \times 100\%$$

Import dependency ratio (IDR) – indicates how much of the available domestic food supply comes from imports. The complement of this ratio to 100 would represent that part of the domestic food supply that has been produced in the country itself. The higher ratio implies greater dependency on importation.

$$IDR = \frac{import}{production + import - export} \times 100\%$$

Stock – supply stored for future use. The country's rice and corn stocks inventory are generated from three sectors, namely: household, commercial, and government stocks (National Food Authority).

Percentage shares of households, commercial warehouses and NFA – indicate the biggest/least source of rice and corn stocks in a given period.

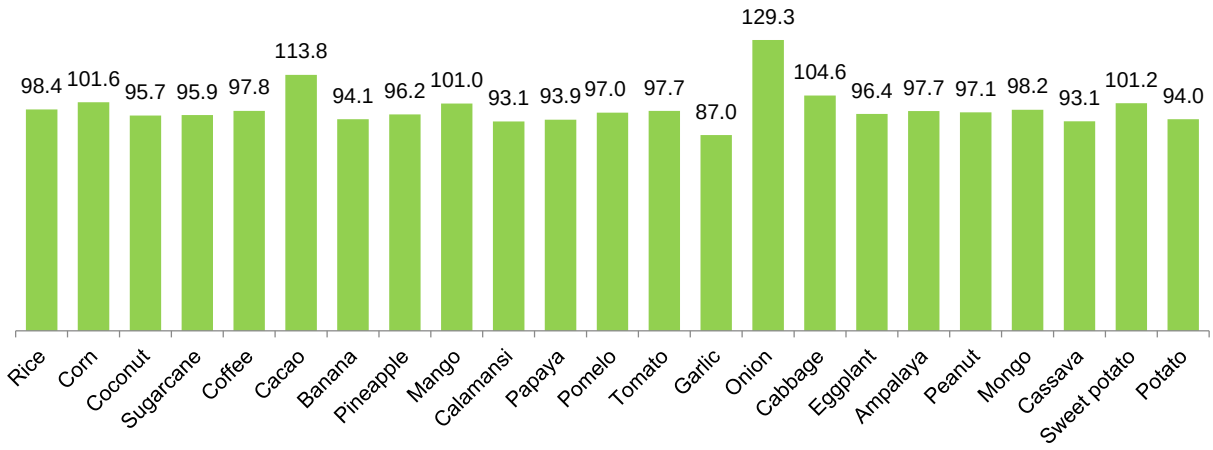
$$\%\ Share\ of\ stocks\ by\ sector\ to\ total\ stocks\ = \frac{stocks\ by\ sector}{total\ stocks}\ \times 100\%$$

FOOD AVAILABILITY AND SUFFICIENCY

Per Capita Production

Per capita production refers to the volume of production of a particular commodity available for each member of the population. Annual per capita production index provides information on the change in the per capita production of the commodity in a given year compared to a base year. It measures the capacity of the country's agriculture sector to produce food commodities in pace with the growth of the population.

Figure 1. Annual per capita production index of selected agricultural commodities, Philippines, 2020
2018=100
(in percent)

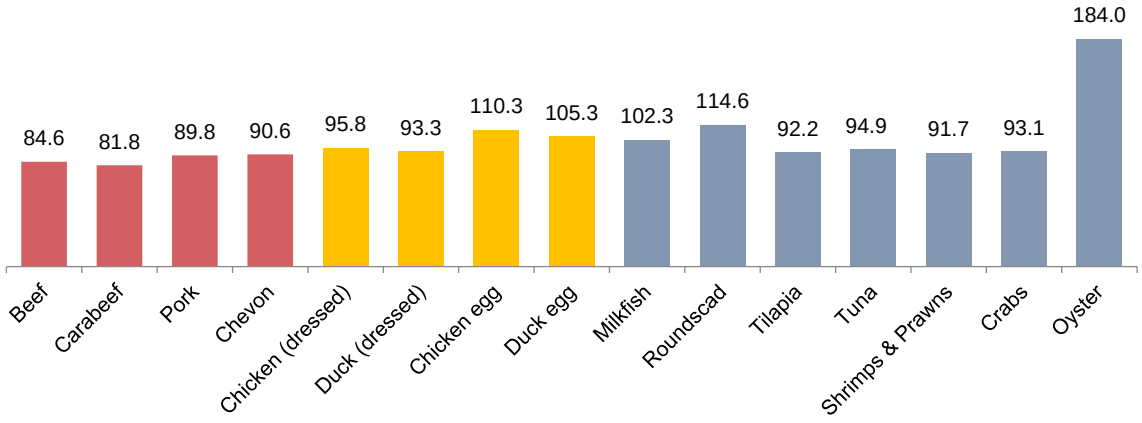


The annual per capita production of rice in 2020 increased to 116.01 kilograms but remained below the 2018 record. This was equivalent to production index of 98.4 percent which means that the 2020 per capita production of rice was -1.6 percentage points lower than the base year record. On the other hand, the per capita production of corn reported an increment at 74.64 kilograms in 2020. It recorded an index of 101.6 percent or 1.6 percentage points higher than the base year record. The 2020 per capita production of coconut at 133.22 kilograms, sugarcane at 224.31 kilograms, and coffee at 0.16 kilogram were below their base year's records. In the case of cacao, per capita production at 0.09 kilogram was above the base year's level by 13.8 percentage points.

Among the reference fruits, the per capita production of mango at 6.80 kilograms was above the base year record. In contrast, lower than the base production levels were observed for banana, pineapple, calamansi, papaya, and pomelo.

For vegetables and rootcrops, the 2020 per capita production of onion, cabbage, and sweet potato were above the 2018 levels. Bigger production index continued for onion at 129.3 percent with annual per capita production of 2.11 kilograms. On the other hand, the per capita production of tomato, garlic, eggplant, ampalaya, peanut, mongo, cassava, and potato in 2020 were lower than their respective base year levels.

Figure 1. Annual per capita production index … (Concluded)



Source: Philippine Statistics Authority

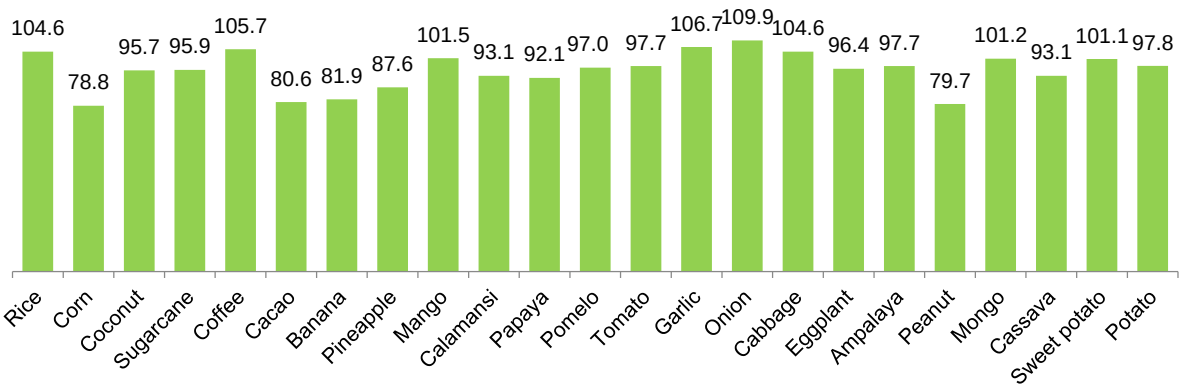
The 2020 per capita production of all the reference livestock products were lower than the base year records. Production indices of carabeef, beef, pork, and chevon ranged from 81.8 percent to 90.6 percent. For poultry products, below the base year's per capita production levels were noted for chicken (dressed) at 12.81 kilograms and duck (dressed) at 0.20 kilogram. The per capita production of chicken egg at 5.57 kilograms and duck egg at 0.46 kilogram increased in 2020 and remained higher than their 2018 record. Their respective production indices were estimated at 110.3 percent and 105.3 percent.

Among the fishery products, milkfish, roundscad, and oyster continued to record above the base year per capita production corresponding to 3.87 kilograms, 1.86 kilograms, and 0.51 kilogram in 2020. While for tilapia, tuna, shrimps and prawns, and crabs, their 2020 per capita production declined and fell below the base year records (Table 1 and Figure 1).

Daily Per Capita Net Food Disposable (NFD)

Net Food Disposable (NFD) refers to the volume of commodity available in its original (unprocessed) form for human consumption. The daily net food disposable of a commodity of each member of the population measured through an index indicates the movement of food available for consumption in a specified year relative to a base year.

Figure 2. Daily per capita net food disposable (NFD) index of selected agricultural commodities, Philippines, 2020
2018=100
(in percent)

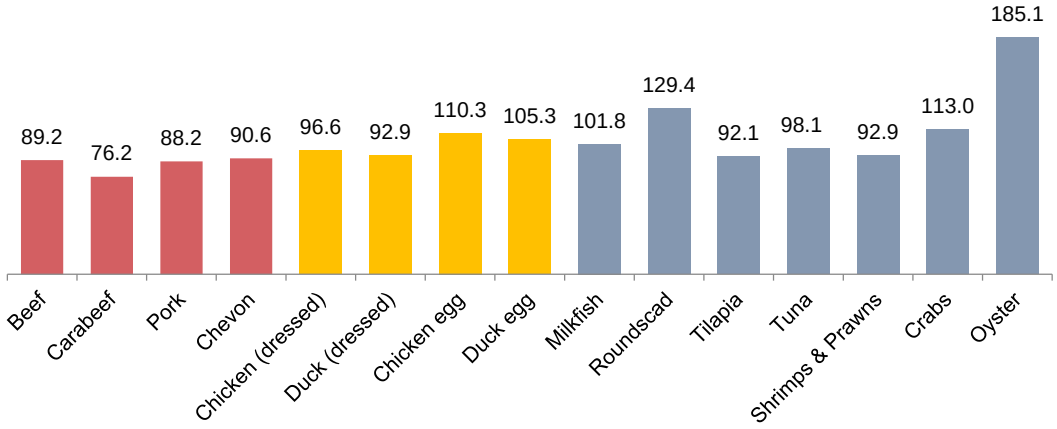


In 2020, the daily per capita NFD of rice was estimated at 343.17 grams per day. It posted an index of 104.6 percent which means that the quantity of rice available for consumption in 2020 was 4.6 percentage points higher than the base year NFD. On the other hand, the per capita NFD of corn increased to 59.75 grams but remained lower than the 2018 level. It recorded an index of 78.8 percent or -21.2 percentage points below the base year's level. Below the base year's daily per capita NFD were likewise observed in coconut at 18.25 grams, sugarcane at 6.15 grams, and cacao at 0.15 gram. In contrast, the NFD of coffee moved up to 1.13 grams per day in 2020 and it exceeded the 2018 index by 5.7 percentage points.

Above the 2018 daily per capita NFD levels was recorded in mango at 17.25 grams in 2020. Its index was estimated at 101.5 percent. Meanwhile, the 2020 NFD of banana, pineapple, calamansi, papaya, and pomelo were below their base year's records.

Vegetables and rootcrops such as garlic, onion, cabbage, mongo, and sweet potato registered higher than the base year daily per capita NFD estimates corresponding to 2.19 grams, 7.28 grams, 3.01 grams, 1.95 grams, and 13.03 grams. In contrast, lower than the base year's daily per capita NFD were noted in tomato, eggplant, ampalaya, peanut, cassava, and potato.

Figure 2. Daily per capita net food disposable (NFD) index … (Concluded)



Source: Philippine Statistics Authority

All reference livestock products exhibited daily per capita NFD below the 2018 levels in 2020. Pork indicated the highest per capita NFD at 39.19 grams per day. Carabeef reported reduction by -23.8 percentage points, with daily per capita NFD of 2.30 grams. Poultry products such as chicken egg and duck egg posted above the base year NFD. Their respective daily per capita NFD were 14.04 grams and 1.20 grams. Meanwhile, the 2020 NFD levels of chicken (dressed) and duck (dressed) recorded lower than the base year records.

Among the fishery products, the daily per capita NFD in 2020 of milkfish, roundscad, crabs, and oyster were above the base year's level. Oyster indicated the biggest NFD index of 185.1 percent at 1.38 grams. This was followed by roundscad with an index of 129.4 percent or NFD of 3.91 grams. Lower than the base year NFD were observed in tilapia, tuna, and shrimps and prawns (Table 2 and Figure 2).

Per Capita Supply of Calories, Protein and Fats

Information on the nutrient equivalents of the different food intake measured on per capita per day basis will show the food items that contributed the highest content of calories, protein, and fats.

Among the reference agricultural commodities, rice remained as the prime source of calories as it supplied 1,221.70 kcal per person per day. Corn contributed 213.31 kcal per person per day. Coconut provided the biggest quantity of calories at 18.61 kcal per person daily. The calorie contents of coffee, cacao, and sugarcane ranged from 0.53 kcal to 3.07 kcal. For fruits, the biggest supply of calories in 2020 came from banana at 102.48 kcal, pineapple at 14.60 kcal, and mango at 12.44 kcal. In the case of vegetables and rootcrops, sweet potato, peanut, and cassava contained larger supply of calories corresponding to 15.80 kcal, 9.13 kcal, and 9.84 kcal. For livestock and poultry, higher quantities of calories were sourced from pork at 139.93 kcal, chicken (dressed) at 75.43 kcal, and chicken egg at 19.51 kcal. Among the reference fishery products, tuna contained the biggest amount of calories at 13.45 kcal (Table 3a).

The daily per capita protein supply was highest in rice at 25.39 grams while corn supplied 4.96 grams. About 1.02 grams was provided by banana. Other leading sources of protein were pork at 5.94 grams and chicken (dressed) at 6.86 grams. For fishery, milkfish provided 1.34 grams, tilapia at 1.35 grams, and tuna at 2.83 grams. Less than 1.00 gram of protein was contributed by the other agricultural commodities (Table 3b).

In the case of fats supply, rice contained 1.72 grams while corn had 0.90 gram. The fat contents of pork, chicken (dressed), and chicken egg corresponded to 12.89 grams, 5.35 grams, and 1.32 grams. Minimal supply of fats came from other reference agricultural commodities (Table 3c).

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.

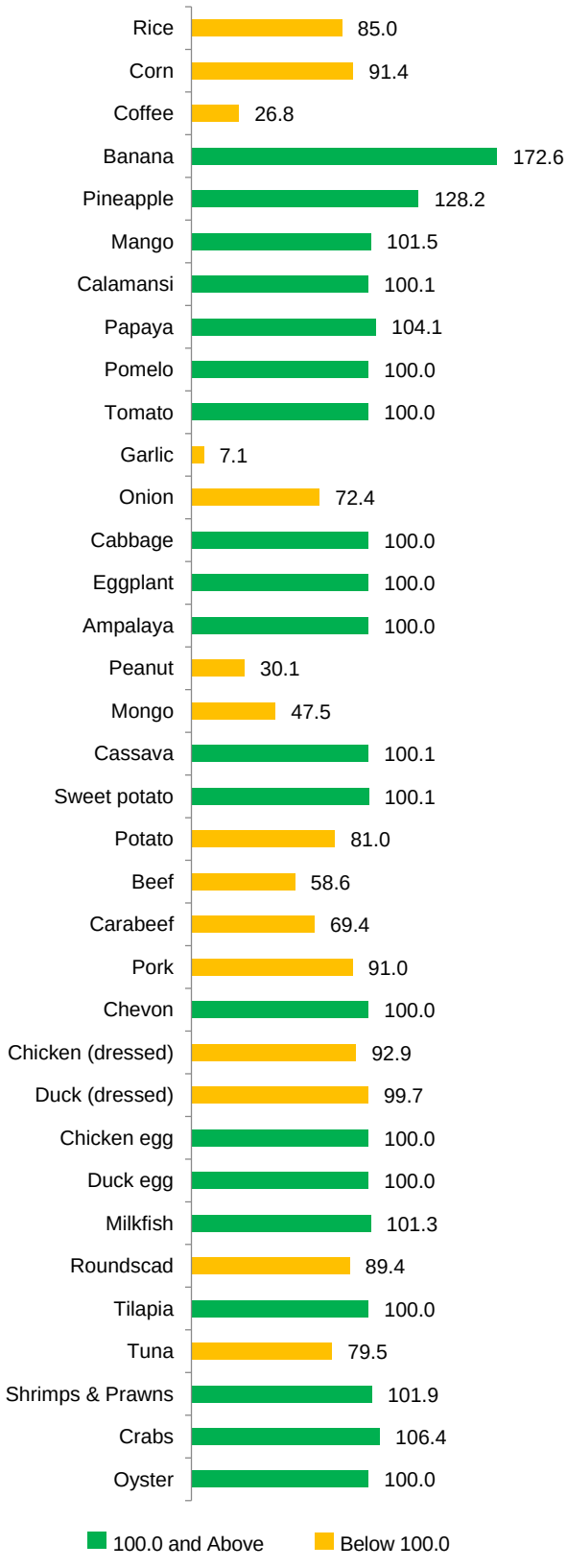
The country's self-sufficiency ratio (SSR) of rice in 2020 was recorded at 85.0 percent, an improvement from the previous year's ratio of 79.8 percent. This ratio indicates that 85.0 percent of the domestic supply of rice came from the country's own production. On the other hand, the self-sufficiency ratio of corn went down to 91.4 percent from the 2019 ratio of 94.6 percent.

Continuous sufficiency in domestic production was registered for coconut and sugarcane. Banana remained to record the highest SSR among the reference commodities in 2020 at 172.6 percent, followed by pineapple with SSR of 128.2 percent. Meanwhile, coffee production remained inadequate as it recorded a lower SSR of 26.8 percent in 2020. Adequacies in production were sustained for fruits such as mango, pineapple, calamansi, papaya, and pomelo. Self-sufficiency was likewise reached for vegetables and rootcrops such as tomato, cabbage, eggplant, ampalaya, cassava, and sweet potato. In contrast, inadequacies in production were observed for garlic, peanut, and mongo with respective SSRs of 7.1 percent, 30.1 percent, and 47.5 percent. Onion had a decline in its SSR at 72.4 percent as compared with the 90.5 percent in 2019. Meanwhile, potato had a downtrend in its SSR and was estimated at 81.0 percent in 2020.

Among the livestock and poultry products, adequacy in production was sustained for chevon, chicken egg, and duck egg. Self-sufficiency for duck (dressed) at a ratio of 99.7 percent was almost reached in 2020. Pork registered a 91.0 percent SSR while SSR of chicken (dressed) was maintained at 92.9 percent in 2020. Meanwhile, SSR of beef and carabeef declined to 58.6 percent and 69.4 percent, respectively.

Sufficiency in production levels was attained for fishery products such as milkfish, tilapia, and oyster. The recorded SSR of roundscad and tuna in 2020 were 89.4 percent and 79.5 percent, respectively. Higher SSRs were noted for shrimps and prawns at 101.9 percent and crabs at 106.4 percent (Table 4 and Figure 3).

Figure 3. Self-sufficiency ratio (SSR) of selected agricultural commodities, Philippines, 2020 (in percent)



Source: Philippine Statistics Authority

Import Dependency Ratio

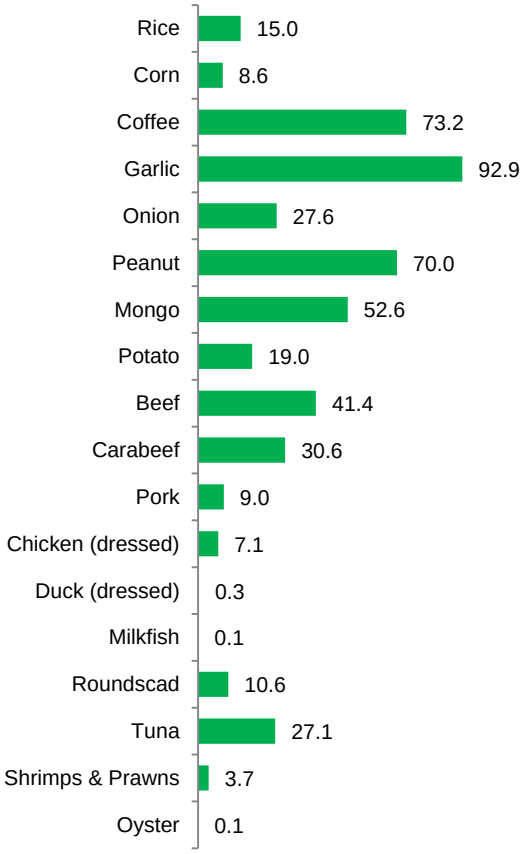
Import dependency ratio (IDR) indicates the extent to which a country's supply of commodities came from imports. A high ratio implies greater dependency on importation.

Import dependency ratio (IDR) of rice was down to 15.0 percent in 2020 as compared with the 20.2 percent in 2019. This implies that 15.0 percent of the domestic supply of rice came from imports. On the other hand, there was an increase in the IDR of corn at 8.6 percent from the 5.4 percent record in the previous year.

Increased dependency on imports was observed for coffee, onion, and mongo with corresponding ratios of 73.2 percent, 27.6 percent, and 52.6 percent. Garlic recorded an IDR of 92.9 percent which was the highest IDR among the reference commodities in 2020. Meanwhile, minimal importation was registered in potato with an IDR of 19.0 percent.

Importation continued among livestock and poultry products except for chevon, chicken egg, and duck egg. Beef and carabeef came up with higher IDRs of 41.4 percent and 30.6 percent, respectively. Dependency on imports was lesser for chicken (dressed) at 7.1 percent and duck (dressed) at 0.3 percent.

Figure 4. Import dependency ratio (IDR) of selected agricultural commodities, Philippines, 2020 (in percent)



Source: Philippine Statistics Authority

Minimal importation was observed for the reference fishery products such as milkfish, tilapia, crabs, and oyster with IDRs of 0.1 percent and lesser. Decline in the IDR was also observed in shrimps and prawns at 3.7 percent. Tuna had the highest IDR of 27.1 percent in 2020, followed by roundscad with an IDR of 10.6 percent. Both exhibited lower levels of imports in 2020 (Table 5 and Figure 4).

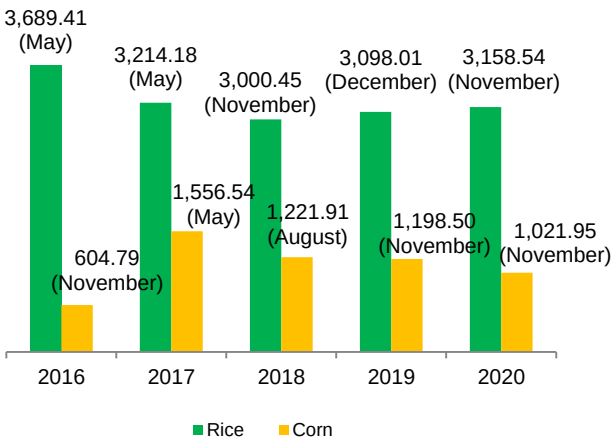
Cereals Stocks

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. This is to ensure supply and demand equilibrium, access and price stability.

The biggest rice stocks inventory in 2020 was reported in November at 3.16 million metric tons. Rice stocks held by households accounted for the highest share at 57.3 percent. This was followed by commercial warehouses at 30.5 percent. The remaining 12.2 percent was held in the National Food Authority (NFA) depositories. In the same year, rice stocks inventory was lowest in August at 1.79 million metric tons. Households and commercial warehouses accounted for 47.7 percent and 40.9 percent, respectively, of the total rice stocks. NFA depositories shared 11.4 percent (Tables 6a and 6b, and Figures 5 and 6).

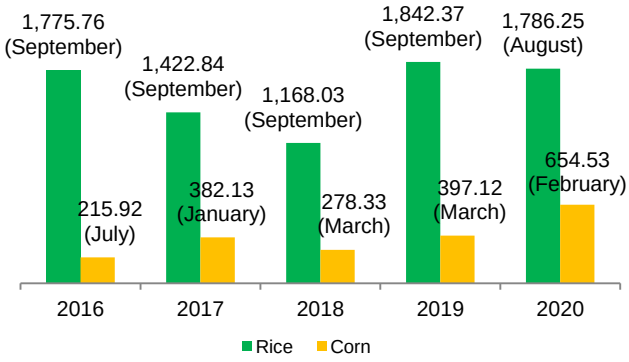
In the case of corn, the peak month of stocking was also observed in November with a total inventory of 1.02 million metric tons. In 2020, commercial warehouses comprised the biggest share in corn stocks at 66.1 percent while the remaining 33.9 percent were stocks in the households. On the other hand, February was the lean month of corn stocking with a total inventory of 0.65 million metric tons. Of this volume, 76.6 percent were in commercial holdings while 23.4 percent were stocks in the households (Tables 7a and 7b, and Figures 5 and 6).

Figure 5. Cereals inventory levels during peak months of stocking, 2016-2020 (in '000 MT)



Sources: Philippine Statistics Authority and National Food Authority

Figure 6. Cereals inventory levels during lean months of stocking, 2016-2020 (in '000 MT)



Sources: Philippine Statistics Authority and National Food Authority

Table 1. Annual per capita production index of selected agricultural commodities, Philippines, 2016-2020
(2018=100)
(in percent)

Commodity	2018 Per Capita Production (kg/annum)	Indices					Percentage Point Difference[1/]	2020 Per Capita Production (kg/annum)
		2016	2017	2018	2019	2020		
Rice	117.91	94.7	102.6	100.0	97.3	98.4	-1.6	116.01
Corn	73.49	95.1	103.4	100.0	101.2	101.6	1.6	74.64
Coconut	139.25	96.2	96.9	100.0	98.8	95.7	-4.3	133.22
Sugarcane	233.85	92.7	120.2	100.0	82.6	95.9	-4.1	224.31
Coffee	0.16	116.9	104.5	100.0	98.1	97.8	-2.2	0.16
Cacao	0.08	80.4	89.1	100.0	104.8	113.8	13.8	0.09
Banana	88.49	97.5	99.4	100.0	96.5	94.1	-5.9	83.26
Pineapple	25.82	98.0	99.3	100.0	99.2	96.2	-3.8	24.85
Mango	6.73	117.2	105.1	100.0	102.2	101.0	1.0	6.80
Calamansi	1.07	106.7	104.3	100.0	109.3	93.1	-6.9	1.00
Papaya	1.60	98.4	100.3	100.0	96.8	93.9	-6.1	1.50
Pomelo	0.25	109.6	102.7	100.0	97.9	97.0	-3.0	0.25
Tomato	2.09	97.7	100.6	100.0	99.7	97.7	-2.3	2.04
Garlic	0.07	101.2	104.1	100.0	94.6	87.0	-13.0	0.06
Onion	1.63	72.7	108.4	100.0	126.8	129.3	29.3	2.11
Cabbage	1.14	104.5	103.1	100.0	104.6	104.6	4.6	1.19
Eggplant	2.32	98.6	100.3	100.0	100.6	96.4	-3.6	2.23
Ampalaya	0.83	102.5	103.9	100.0	100.8	97.7	-2.3	0.81
Peanut	0.28	97.2	101.3	100.0	98.1	97.1	-2.9	0.27
Mongo	0.35	95.1	97.9	100.0	97.5	98.2	-1.8	0.34
Cassava	25.75	103.6	104.6	100.0	95.2	93.1	-6.9	23.97
Sweet potato	4.97	103.2	103.8	100.0	98.6	101.2	1.2	5.03
Potato	1.11	101.9	101.7	100.0	97.4	94.0	-6.0	1.04
Beef	1.46	105.2	102.7	100.0	97.6	84.6	-15.4	1.23
Carabeef	0.79	103.5	102.4	100.0	96.9	81.8	-18.2	0.65
Pork	18.50	98.5	99.1	100.0	97.6	89.8	-10.2	16.61
Chevon	0.42	103.1	102.0	100.0	97.8	90.6	-9.4	0.38
Chicken (dressed)	13.37	93.4	96.5	100.0	103.4	95.8	-4.2	12.81
Duck (dressed)	0.22	107.1	102.5	100.0	96.3	93.3	-6.7	0.20
Chicken egg	5.05	88.6	93.6	100.0	107.7	110.3	10.3	5.57
Duck egg	0.44	97.0	99.0	100.0	104.8	105.3	5.3	0.46
Milkfish	3.78	103.1	105.6	100.0	102.2	102.3	2.3	3.87
Roundscad	1.62	126.6	108.5	100.0	108.8	114.6	14.6	1.86
Tilapia	3.04	95.9	98.3	100.0	98.6	92.2	-7.8	2.80
Tuna	5.04	97.9	103.1	100.0	98.2	94.9	-5.1	4.78
Shrimps & Prawns	0.49	110.9	103.7	100.0	100.0	91.7	-8.3	0.45
Crabs	0.53	85.6	91.9	100.0	92.1	93.1	-6.9	0.49
Oyster	0.28	72.4	81.8	100.0	127.2	184.0	84.0	0.51

[1/] 2020 Index less 2018 Index, (2018=100)
Source of basic data: Philippine Statistics Authority

Table 2. Daily per capita net food disposable (NFD) index of selected agricultural commodities, Philippines, 2016-2020

(2018=100)

(in percent)

Commodity	2018 Per Capita NFD (grams/day)	Indices					Percentage Point Difference[1/]	2020 Per Capita NFD (grams/day)
		2016	2017	2018	2019	2020		
Rice	328.11	90.0	99.5	100.0	107.2	104.6	4.6	343.17
Corn	75.79	81.4	54.5	100.0	67.4	78.8	-21.2	59.75
Coconut	19.07	96.1	96.9	100.0	98.8	95.7	-4.3	18.25
Sugarcane	6.41	92.7	120.2	100.0	82.6	95.9	-4.1	6.15
Coffee	1.07	106.4	68.5	100.0	87.9	105.7	5.7	1.13
Cacao	0.19	81.7	95.2	100.0	86.4	80.6	-19.4	0.15
Banana	111.41	117.8	102.8	100.0	75.2	81.9	-18.1	91.20
Pineapple	30.30	88.2	94.5	100.0	89.2	87.6	-12.4	26.55
Mango	17.00	117.3	104.8	100.0	102.2	101.5	1.5	17.25
Calamansi	2.76	106.7	104.3	100.0	109.3	93.1	-6.9	2.57
Papaya	4.03	99.5	101.0	100.0	95.6	92.1	-7.9	3.71
Pomelo	0.66	109.6	102.7	100.0	97.9	97.0	-3.0	0.64
Tomato	4.46	97.7	100.6	100.0	99.7	97.7	-2.3	4.36
Garlic	2.05	79.5	89.2	100.0	104.8	106.7	6.7	2.19
Onion	6.62	93.9	78.6	100.0	86.0	109.9	9.9	7.28
Cabbage	2.87	104.5	103.1	100.0	104.6	104.6	4.6	3.01
Eggplant	5.83	98.6	100.3	100.0	100.6	96.4	-3.6	5.62
Ampalaya	2.08	102.5	103.9	100.0	100.8	97.7	-2.3	2.03
Peanut	2.86	87.1	99.6	100.0	96.8	79.7	-20.3	2.28
Mongo	1.93	89.2	97.3	100.0	95.4	101.2	1.2	1.95
Cassava	7.05	103.7	104.7	100.0	95.2	93.1	-6.9	6.56
Sweet potato	12.89	103.2	103.8	100.0	98.5	101.1	1.1	13.03
Potato	2.73	99.0	98.7	100.0	99.9	97.8	-2.2	2.67
Beef	5.32	97.7	98.4	100.0	100.7	89.2	-10.8	4.75
Carabeef	3.02	97.8	98.6	100.0	87.0	76.2	-23.8	2.30
Pork	44.43	96.7	98.2	100.0	96.7	88.2	-11.8	39.19
Chevon	0.88	103.1	102.0	100.0	97.8	90.6	-9.4	0.79
Chicken (dressed)	39.12	103.3	94.1	100.0	104.3	96.6	-3.4	37.78
Duck (dressed)	0.60	107.2	102.3	100.0	96.1	92.9	-7.1	0.56
Chicken egg	12.72	88.6	93.6	100.0	107.7	110.3	10.3	14.04
Duck egg	1.14	97.0	98.9	100.0	104.8	105.3	5.3	1.20
Milkfish	6.64	103.3	106.2	100.0	101.6	101.8	1.8	6.76
Roundscad	3.02	121.4	105.8	100.0	148.5	129.4	29.4	3.91
Tilapia	8.07	95.9	98.4	100.0	98.6	92.1	-7.9	7.44
Tuna	12.14	93.7	99.3	100.0	106.8	98.1	-1.9	11.90
Shrimps & Prawns	1.28	106.9	94.4	100.0	99.5	92.9	-7.1	1.19
Crabs	1.10	86.2	84.3	100.0	101.8	113.0	13.0	1.24
Oyster	0.75	72.7	81.1	100.0	127.8	185.1	85.1	1.38

NFD- Net Food Disposable

[1/] 2020 Index less 2018 Index, (2018=100)

Source of basic data: Philippine Statistics Authority

Table 3a. Daily per capita calories supply of selected agricultural commodities, Philippines, 2016-2020
(in kilo calories)

Commodity	2016	2017	2018	2019	2020
Rice	1,051.75	1,161.68	1,168.08	1,252.59	1,221.70
Corn	220.23	147.33	270.56	182.37	213.31
Coconut	18.70	18.84	19.45	19.23	18.61
Sugarcane	2.97	3.85	3.20	2.65	3.07
Coffee	0.54	0.34	0.50	0.44	0.53
Cacao	0.65	0.76	0.79	0.69	0.64
Banana	147.51	128.68	125.18	94.13	102.48
Pineapple	14.69	15.75	16.66	14.86	14.60
Mango	14.39	12.85	12.26	12.53	12.44
Calamansi	1.30	1.27	1.22	1.33	1.13
Papaya	2.13	2.16	2.14	2.04	1.97
Pomelo	0.37	0.34	0.33	0.33	0.32
Tomato	1.09	1.12	1.12	1.11	1.09
Garlic	2.10	2.36	2.64	2.77	2.82
Onion	3.73	3.12	3.97	3.42	4.37
Cabbage	0.95	0.93	0.91	0.95	0.95
Eggplant	1.67	1.70	1.69	1.70	1.63
Ampalaya	0.55	0.56	0.54	0.55	0.53
Peanut	9.98	11.41	11.46	11.09	9.13
Mongo	6.13	6.68	6.86	6.55	6.95
Cassava	10.96	11.07	10.58	10.07	9.84
Sweet potato	16.13	16.22	15.63	15.39	15.80
Potato	2.11	2.10	2.13	2.13	2.08
Beef	8.17	8.23	8.37	8.43	7.47
Carabeef	3.53	3.56	3.61	3.14	2.75
Pork	153.42	155.88	158.66	153.36	139.93
Chevon	0.92	0.91	0.89	0.87	0.81
Chicken (dressed)	80.68	73.49	78.12	81.46	75.43
Duck (dressed)	1.07	1.02	1.00	0.96	0.93
Chicken egg	15.67	16.56	17.69	19.05	19.51
Duck egg	1.95	1.99	2.01	2.11	2.12
Milkfish	9.33	9.59	9.03	9.17	9.19
Roundscad	3.67	3.20	3.02	4.49	3.91
Tilapia	8.28	8.50	8.64	8.51	7.96
Tuna	12.85	13.62	13.72	14.65	13.45
Shrimps & Prawns	1.26	1.11	1.17	1.17	1.09
Crabs	1.15	1.13	1.34	1.36	1.51
Oyster	0.33	0.36	0.45	0.57	0.83

Source of basic data: Philipine Food Composition Tables, Food and Nutrition Research Institute, and Philippine Statistics Authority

Table 3b. Daily per capita protein supply of selected agricultural commodities, Philippines, 2016-2020
(in grams)

Commodity	2016	2017	2018	2019	2020
Rice	21.86	24.15	24.28	26.04	25.39
Corn	5.12	3.43	6.29	4.24	4.96
Coconut	0.26	0.26	0.27	0.26	0.26
Sugarcane	0.01	0.01	0.01	0.01	0.01
Coffee	0.08	0.05	0.07	0.06	0.08
Cacao	0.01	0.01	0.01	0.01	0.01
Banana	1.47	1.28	1.25	0.94	1.02
Pineapple	0.11	0.11	0.12	0.11	0.11
Mango	0.12	0.10	0.10	0.10	0.10
Calamansi	0.01	0.01	0.01	0.01	0.01
Papaya	0.02	0.02	0.02	0.02	0.02
Pomelo	0.01	a/	a/	a/	a/
Tomato	0.03	0.04	0.04	0.04	0.03
Garlic	0.11	0.13	0.14	0.15	0.15
Onion	0.11	0.09	0.11	0.10	0.12
Cabbage	0.05	0.05	0.05	0.05	0.05
Eggplant	0.06	0.06	0.06	0.06	0.06
Ampalaya	0.02	0.02	0.02	0.02	0.02
Peanut	0.43	0.49	0.50	0.48	0.40
Mongo	0.40	0.44	0.45	0.43	0.46
Cassava	0.05	0.05	0.05	0.04	0.04
Sweet potato	0.12	0.12	0.11	0.11	0.11
Potato	0.06	0.06	0.07	0.07	0.06
Beef	0.11	0.11	0.11	0.11	0.10
Carabeef	0.64	0.65	0.66	0.57	0.50
Pork	6.51	6.62	6.73	6.51	5.94
Chevon	0.17	0.17	0.16	0.16	0.15
Chicken (dressed)	7.33	6.68	7.10	7.40	6.86
Duck (dressed)	0.15	0.14	0.14	0.13	0.13
Chicken egg	1.39	1.47	1.57	1.69	1.73
Duck egg	0.13	0.13	0.13	0.14	0.14
Milkfish	1.36	1.40	1.31	1.34	1.34
Roundscad	0.75	0.65	0.62	0.92	0.80
Tilapia	1.40	1.44	1.46	1.44	1.35
Tuna	2.71	2.87	2.89	3.09	2.83
Shrimps & Prawns	0.26	0.23	0.24	0.24	0.22
Crabs	0.13	0.13	0.15	0.15	0.17
Oyster	0.03	0.04	0.04	0.06	0.08

a/ - less than 0.01 gram

Source of basic data: Philippine Food Composition Tables, Food and Nutrition Research Institute, and Philippine Statistics Authority

Table 3c. Daily per capita fats supply of selected agricultural commodities, Philippines, 2016-2020
(in grams)

Commodity	2016	2017	2018	2019	2020
Rice	1.48	1.63	1.64	1.76	1.72
Corn	0.93	0.62	1.14	0.77	0.90
Coconut	0.97	0.98	1.01	1.00	0.97
Sugarcane	0.01	0.02	0.01	0.01	0.01
Coffee	-	-	-	-	-
Cacao	0.06	0.07	0.08	0.07	0.06
Banana	0.53	0.46	0.45	0.34	0.36
Pineapple	0.05	0.06	0.06	0.05	0.05
Mango	0.08	0.07	0.07	0.07	0.07
Calamansi	0.03	0.03	0.03	0.03	0.03
Papaya	0.01	0.01	0.01	0.01	0.01
Pomelo	a/	a/	a/	a/	a/
Tomato	a/	a/	a/	a/	a/
Garlic	a/4	0.01	0.01	0.01	0.01
Onion	0.02	0.02	0.03	0.02	0.03
Cabbage	a/	a/	a/	a/	a/
Eggplant	0.01	0.01	0.01	0.01	0.01
Amplaya	0.01	0.01	0.01	0.01	0.01
Peanut	0.66	0.76	0.76	0.74	0.61
Mongo	0.03	0.03	0.03	0.03	0.03
Cassava	0.01	0.01	0.01	0.01	0.01
Sweet potato	0.05	0.05	0.05	0.05	0.05
Potato	a/	a/	a/	a/	a/
Beef	0.04	0.04	0.04	0.04	0.04
Carabeef	0.10	0.11	0.11	0.09	0.08
Pork	14.13	14.36	14.62	14.13	12.89
Chevon	0.03	0.03	0.03	0.03	0.02
Chicken (dressed)	5.72	5.21	5.54	5.77	5.35
Duck (dressed)	0.05	0.05	0.05	0.05	0.05
Chicken egg	1.06	1.12	1.20	1.29	1.32
Duck egg	0.14	0.14	0.14	0.15	0.15
Milkfish	0.44	0.45	0.42	0.43	0.43
Roundscad	0.08	0.07	0.06	0.09	0.08
Tilapia	0.29	0.30	0.31	0.30	0.28
Tuna	0.23	0.24	0.24	0.26	0.24
Shrimps & Prawns	0.02	0.01	0.02	0.02	0.01
Crabs	0.04	0.04	0.04	0.04	0.05
Oyster	0.01	0.01	0.01	0.02	0.02

a/ - less than 0.01 gram

- no fat equivalent

Source of basic data: Philippine Food Composition Tables, Food and Nutrition Research Institute, and Philippine Statistics Authority

Table 4. Self-sufficiency ratio (SSR) of selected agricultural commodities, Philippines, 2016-2020
(in percent)

Commodity	2016	2017	2018	2019	2020
Rice	95.0	93.4	86.2	79.8	85.0
Corn	90.0	94.3	88.4	94.6	91.4
Coffee	31.9	44.3	29.0	32.4	26.8
Banana	124.2	145.3	150.2	192.6	172.6
Pineapple	129.8	122.7	116.8	129.8	128.2
Mango	101.8	102.2	101.9	102.0	101.5
Calamansi	100.0	100.1	100.1	100.1	100.1
Papaya	101.0	101.4	102.2	103.5	104.1
Pomelo	100.0	100.0	100.0	100.0	100.0
Tomato	100.0	100.0	100.0	100.0	100.0
Garlic	11.0	10.1	8.7	7.9	7.1
Onion	47.6	84.6	61.5	90.5	72.4
Cabbage	100.0	100.0	100.0	100.0	100.0
Eggplant	100.0	100.0	100.0	100.0	100.0
Ampalaya	100.0	100.0	100.0	100.0	100.0
Peanut	27.5	25.1	24.7	25.0	30.1
Mongo	52.2	49.2	49.0	50.0	47.5
Cassava	100.0	100.0	100.0	100.0	100.1
Sweet potato	100.0	100.0	100.0	100.1	100.1
Potato	85.2	85.3	83.4	81.9	81.0
Beef	67.3	64.3	61.0	59.7	58.6
Carabeef	68.5	67.3	65.1	71.7	69.4
Pork	89.4	87.5	86.1	87.1	91.0
Chevon	100.0	100.0	100.0	100.0	100.0
Chicken (dressed)	84.7	96.1	93.6	92.9	92.9
Duck (dressed)	99.2	99.4	99.3	99.5	99.7
Chicken egg	100.0	100.0	100.0	100.0	100.0
Duck egg	100.0	100.0	100.0	100.0	100.0
Milkfish	100.8	100.6	101.0	101.4	101.3
Roundscad	99.6	98.6	96.9	78.1	89.4
Tilapia	100.0	99.9	100.0	100.0	100.0
Tuna	83.9	83.6	81.4	76.5	79.5
Shrimps & Prawns	107.0	113.1	103.2	103.7	101.9
Crabs	127.8	140.0	128.7	116.7	106.4
Oyster	100.2	101.4	100.6	100.1	100.0

Source of basic data: Philippine Statistics Authority

Table 5. Import dependency ratio (IDR) of selected agricultural commodities, Philippines, 2016-2020
(in percent)

Commodity	2016	2017	2018	2019	2020
Rice	5.0	6.6	13.8	20.2	15.0
Corn	10.0	5.7	11.6	5.4	8.6
Coffee	68.1	55.7	71.0	67.6	73.2
Banana	a/	a/	a/	a/	a/
Pineapple	a/	a/	-	-	-
Mango	-	-	-	-	-
Calamansi	-	-	-	-	-
Papaya	-	-	-	-	-
Pomelo	a/	-	-	-	-
Tomato	-	-	-	-	-
Garlic	89.1	90.0	91.4	92.2	92.9
Onion	52.6	15.6	38.5	9.6	27.6
Cabbage	a/	-	-	-	-
Eggplant	-	-	-	-	-
Ampalaya	-	-	-	-	-
Peanut	72.5	75.0	75.3	75.0	70.0
Mongo	47.9	50.8	51.0	50.5	52.6
Cassava	a/	-	-	-	-
Sweet potato	a/	a/	-	a/	a/
Potato	14.8	14.7	16.6	18.1	19.0
Beef	32.7	35.7	39.0	40.3	41.4
Carabeef	31.5	32.7	34.9	28.3	30.6
Pork	10.6	12.5	13.9	12.9	9.0
Chevon	-	-	-	-	-
Chicken (dressed)	15.5	4.0	6.4	7.2	7.1
Duck (dressed)	0.9	0.6	0.7	0.6	0.3
Chicken egg	-	-	-	-	-
Duck egg	-	-	-	-	-
Milkfish	a/	0.1	-	0.1	0.1
Roundscad	0.4	1.5	3.1	21.9	10.6
Tilapia	a/	0.1	a/	a/	a/
Tuna	21.2	22.5	24.5	27.9	27.1
Shrimps & Prawns	5.7	8.4	10.1	8.2	3.7
Crabs	0.4	0.3	0.1	0.1	a/
Oyster	a/	a/	a/	0.1	0.1

a/ - less than 0.01 percent

- no imports

Source of basic data: Philippine Statistics Authority

Table 6a. Stocks of rice: Highest and lowest levels and percentage shares of households, commercial warehouses, and NFA, Philippines, 2016-2020

Item	2016	2017	2018	2019	2020
Highest					
Month	May	May	November	December	November
Quantity ('000 MT)	3,689.41	3,214.18	3,000.45	3,098.01	3,158.54
Percent share					
Households	40.0	46.4	51.9	51.9	57.3
Commercial	28.3	45.2	44.6	32.6	30.5
NFA	31.7	8.4	3.5	15.5	12.2
Lowest					
Month	September	September	September	September	August
Quantity ('000 MT)	1,775.76	1,422.84	1,168.03	1,842.37	1,786.25
Percent share					
Households	35.4	48.4	52.2	36.5	47.7
Commercial	29.4	47.0	38.2	41.2	40.9
NFA	35.2	4.6	9.5	22.2	11.4

Sources of basic data: Philippine Statistics Authority and National Food Authority

Table 6b. Total stock of rice by month, Philippines, 2016-2020
(in '000 metric tons)

Month	2016	2017	2018	2019	2020
January	3,198.79	2,765.12	2,289.65	2,550.70	2,675.04
February	2,942.84	2,296.32	1,795.78	2,141.23	2,375.50
March	2,674.17	2,176.20	1,697.37	2,221.42	2,178.64
April	3,359.01	2,675.55	2,182.67	2,629.03	2,367.87
May	3,689.41	3,214.18	2,909.46	2,947.42	2,794.89
June	3,235.29	2,572.94	2,360.98	2,598.34	2,395.94
July	2,733.64	2,347.90	1,990.82	2,625.25	2,104.76
August	2,103.16	2,028.00	1,520.76	2,133.84	1,786.25
September	1,775.76	1,422.84	1,168.03	1,842.37	1,823.31
October	2,286.57	1,935.87	1,589.89	2,279.73	2,647.65
November	3,302.33	2,958.73	3,000.45	2,962.46	3,158.54
December	3,338.98	2,849.37	2,718.48	3,098.01	2,766.40

Source of basic data: Philippine Statistics Authority

Table 7a. Stocks of corn: Highest and lowest levels and percentage shares of households, commercial warehouses, and NFA, Philippines, 2016-2020

Item	2016	2017	2018	2019	2020
Highest					
Month	November	May	August	November	November
Quantity ('000 MT)	604.79	1,556.54	1,221.91	1,198.50	1,021.95
Percent share					
Households	30.1	6.6	5.7	18.6	33.9
Commercial	69.7	93.0	94.3	81.4	66.1
NFA *	0.1	0.4	0.0	0.0	0.0
Lowest					
Month	July	January	March	March	February
Quantity ('000 MT)	215.92	382.13	278.33	397.12	654.53
Percent share					
Households	22.0	45.8	26.0	28.3	23.4
Commercial	77.8	53.9	74.0	71.7	76.6
NFA *	0.2	0.3	0.0	0.0	0.0

Sources of basic data: Philippine Statistics Authority and National Food Authority

* Note: Generation of data for corn stocks of NFA warehouses has already stopped since May 2018. NFA will no longer maintain buffer stock for corn. Hence, no data to be collected.

Table 7b. Total stock of corn by month, Philippines, 2016-2020
(in '000 metric tons)

Month	2016	2017	2018	2019	2020
January	386.96	382.13	951.60	676.13	812.00
February	311.67	439.57	410.33	781.52	654.53
March	302.35	1,078.29	278.33	397.12	793.28
April	365.11	1,146.76	369.34	614.00	736.07
May	517.24	1,556.54	338.31	829.11	840.52
June	327.46	978.86	592.01	859.77	905.52
July	215.92	683.62	480.86	822.70	741.66
August	336.48	696.46	1,221.91	724.08	732.18
September	380.57	1,422.21	531.07	768.66	797.37
October	543.85	1,368.86	566.83	1,095.92	985.54
November	604.79	603.29	639.52	1,198.50	1,021.95
December	369.98	536.56	629.91	794.87	960.95

Source of basic data: Philippine Statistics Authority

MODULES OF THE AGRICULTURAL INDICATORS SYSTEM

1. Government Support in Agriculture Sector
2. Economic Growth: Agriculture
3. Output and Productivity
4. Agricultural Resources
5. Agricultural Exports and Imports
6. **Food Availability and Sufficiency**
7. Employment and Wages in the Agriculture Sector
8. Prices and Marketing of Agricultural Commodities

AGRICULTURAL INDICATORS SYSTEM
FOOD AVAILABILITY AND SUFFICIENCY
PHILIPPINE STATISTICS AUTHORITY

DENNIS S. MAPA, Ph.D.
Undersecretary
National Statistician and Civil Registrar General

SECTORAL STATISTICS OFFICE

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