

AGRICULTURAL INDICATORS SYSTEM (AIS)

FOOD CONSUMPTION AND NUTRITION

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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 sixth module entitled Food Consumption and Nutrition. It provides information on per capita production, per capita consumption and per capita calories, proteins and fats supply of selected major agricultural commodities. 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.

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FOOD CONSUMPTION
AND NUTRITION



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.

In 2014, the annual per capita production of rice increased to 124.20 kilograms. It recorded an index of 107.76 percent or 7.76 percentage points higher than the 2006 record. Corn production at 77.80 kilograms per person in 2014 posted higher index of 111.25 percent. The 2014 per capita production levels of coconut at 147.14 kilograms, sugarcane at 250.60 kilograms and coffee at 0.21 kilogram remained lower than the base year records.

Among the fruits, banana and pineapple continued to register increasing and higher indices at 113.87 percent and 119.04 percent, respectively, in 2014. Their corresponding per capita production levels in 2014 were 88.96 kilograms and 25.10 kilograms. On the other hand, the 2014 per capita production of mango, calamansi, papaya and pomelo stayed below the 2006 levels.

Above the base year production levels were recorded for vegetables such as tomato, onion, cabbage, eggplant and mung bean in 2014. Onion exhibited a remarkable increase in per capita production as it went up to 2.04 kilograms in 2014 and posted higher index of 233.40 percent. Bigger production index continued for cabbage in 2014 at 122.14 percent with respective per capita production of 1.28 kilograms. Per capita production of garlic and peanut remained lower than the base year records. For rootcrops, cassava and potato continuously reported higher indices corresponding to 125.91 percent and 149.35 percent in 2014. Per capita production levels were 25.43 kilograms for cassava and 1.19 kilograms for potato. Below the base year production was still noted for sweet potato.

The 2014 per capita production of livestock products such as beef, carabeef and chevon continued to exceed the 2006 records. Their production indices ranged from 103.32 percent to 107.56 percent. Lower

than the base year production was reported for pork. For poultry products, above the base year production was exhibited by chicken meat and eggs and duck meat in 2014. In this year, chicken meat production at 11.6 kilograms per person maintained higher index of 147.53 percent. For duck meat, production index reached 110.62 percent equivalent to per capita production of 0.15 kilogram.

For the fishery products, milkfish, tilapia, shrimps and prawns exhibited declining production indices but remained above the 2006 records. These ranged from 106.97 percent to 112.86 percent in 2014. Oyster production at 0.23 kilogram per person indicated increasing and higher production index of 123.06 percent. Below the base year production was noted for roundscad, tuna and crabs.

Per Capita Consumption

The daily consumption pattern of a commodity of each member of the population measured through an index indicates the movement of consumption in a specified year relative to a base year.

The daily per capita consumption of rice dropped to 312.93 grams in 2014 and remained lower than the 2006 record. Meanwhile, corn consumption increased to 60.08 grams per person per day in 2014. It further surpassed the base year consumption at an index of 119.11 percent. Below the base year consumption was recorded for coconut, sugarcane and coffee. Declining daily per capita consumption estimates were noted for coconut at 20.33 grams and coffee at 0.71 gram. Sugarcane consumption went up to 6.93 grams per person per day.

Increasing and above the 2006 per capita consumption levels were observed for banana and pineapple at 108.19 grams and 29.04 grams, respectively. Correspondingly, consumption indices rose to 111.02 percent and 117.24 percent. The 2014 daily per capita consumption estimates of calamansi at 4.14 grams, papaya at 4.36 grams, mango at 22.52 grams and pomelo at 0.77 gram were maintained below their respective base year records.

In 2014, per capita consumption levels of tomato, onion and eggplant were continuously increasing and stayed higher than their 2006

consumption records. Among these crops, onion had the biggest increment as per capita consumption surged to 5.29 grams per day in 2014. Its respective index was estimated at 150.71 percent or 50.71 percentage points more than the base year record. Cabbage consumption per person at 3.23 grams per day in 2014 posted a declining but still higher index at 122.81 percent. An increasing daily consumption was reported for peanut at 2.41 grams per person in 2014 which exceeded the 2006 records by 3.43 percentage points. In contrast, mongo consumption contracted to 1.64 grams per day and went lower than base year estimates. Despite the increase in garlic consumption in 2014 at 0.96 gram, it was still less than the 2006 record. Lower than the base year consumption was continuously recorded for sweet potato. An opposite trend was observed for cassava and potato whose daily consumption per person went up to 7.10 grams and 2.33 grams, respectively. These were 28 to 31 percentage points more than the 2006 records.

Except carabeef, the daily per capita consumption records of the livestock products in 2014 were sustained above the base year levels. Beef consumption per person at 6.77 grams per day in 2014 exhibited the biggest index at 116.52 percent. Meanwhile, per capita consumption of pork at 51.37 grams per day in 2014 surpassed the 2006 level by 3.13 percentage points. For poultry products, consumption levels of chicken meat and eggs and duck meat continued to be higher than their respective consumption records in 2006. Chicken had the biggest consumption index of 160.51 percent equivalent to daily per capita consumption of 34.96 grams.

The 2014 consumption levels of milkfish, tilapia, shrimps and prawns were going down but remained above the 2006 records. The biggest index was seen for shrimps and prawns which dropped to 131.82 percent in 2014 corresponding to per capita consumption of 1.45 grams per day. Oyster consumption was going up to 0.63 gram in 2014 and it exceeded the 2006 record by 21.15 percentage points. Similarly, tuna consumption increased to 11.91 grams which was equal to the base year estimates. Roundscad and crabs still recorded lesser consumption in 2014.

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 con-

tributed the highest content of calories, protein and fats.

Among the agricultural commodities under review, rice was the prime source of calories. In 2014, rice provided 1,117.16 grams of calories per person per day. Corn contributed 213.88 grams of calories. High calorie contents were supplied by coconut at 37.41 grams, banana at 64.91 and mango at 10.13 grams in 2014. In case of vegetables and rootcrops, sweet potato contained the biggest amount of calories at 12.55 grams followed by peanut at 9.98 grams. For livestock and poultry products, more calories were obtained from pork at 171.06 grams and chicken meat at 86.35 grams and chicken eggs at 62.31 grams. Low supply of calories came from the fishery products. Tuna had bigger daily calorie content at 7.62 grams per person (Table 3a).

Rice had the biggest protein content at 23.47 grams per person per day in 2014. Corn supplied about 5.71 grams of protein per person daily. Other good sources were pork, chicken meat and chicken egg with corresponding protein contents at 16.28 grams, 10.59 grams and 4.80 grams. Beef contained 2.50 grams while tuna provided 1.23 grams of protein in 2014. Less than 1.0 gram of protein was contributed by other agricultural commodities (Table 3b).

For the fats supply, about 5.63 grams were sourced from rice and 2.58 grams came from corn in 2014. Coconut supplied 3.54 grams of fats contents. About 11.07 grams were provided by pork, around 4.0 grams each by chicken meat and eggs and 1.46 grams by beef. Minimal quantities at less than 1 gram of fats were derived from the other commodities (Table 3c).

FOOD CONSUMPTION AND NUTRITION

Table 1.
Annual per capita production index of selected agricultural commodities,
Philippines, 2010-2014
 (2006=100)

COMMODITY	2006 PER CAPITA PRODUCTION (Kg/annum)	INDICES (in percent)					2014 PER CAPITA PRODUCTION (Kg/annum)
		2010	2011	2012	2013	2014	
Rice	115.25	96.10	99.84	106.02	106.55	107.76	124.20
Corn	69.93	97.91	105.13	109.75	107.43	111.25	77.80
Coconut	171.98	96.83	93.48	95.57	90.92	85.55	147.14
Sugarcane	279.92	68.77	106.91	97.71	89.44	89.53	250.60
Coffee	0.34	84.81	78.00	77.00	66.91	63.12	0.21
Banana	78.12	125.09	123.72	122.38	112.71	113.87	88.96
Pineapple	21.09	110.46	112.37	117.82	118.74	119.04	25.10
Mango	10.57	83.90	78.65	75.35	78.68	83.86	8.86
Calamansi	2.26	89.46	85.17	81.84	73.93	71.20	1.61
Papaya	1.81	98.65	92.18	94.59	93.76	95.67	1.73
Pomelo	0.44	80.85	72.60	71.11	68.66	67.55	0.30
Tomato	2.02	108.63	106.34	104.48	104.75	106.41	2.15
Garlic	0.14	70.98	66.03	63.09	63.26	62.24	0.09
Onion	0.87	166.39	154.99	148.13	156.49	233.40	2.04
Cabbage	1.05	131.99	125.96	124.82	123.73	122.14	1.28
Eggplant	2.21	101.33	99.41	99.50	101.49	102.35	2.26
Peanut	0.34	94.90	93.55	90.07	88.39	88.71	0.29
Mongo	0.30	97.35	116.49	112.39	110.65	107.85	0.32
Cassava	20.20	111.70	115.36	114.04	119.06	125.91	25.43
Sweet potato	6.52	89.18	83.56	82.19	82.55	79.87	5.20
Potato	0.80	167.61	159.21	155.13	150.11	149.35	1.19
Beef	1.93	108.60	107.47	104.83	104.70	104.71	2.02
Carabeef	0.97	116.53	113.49	107.03	104.08	103.32	1.00
Pork	17.99	97.61	96.21	95.18	95.14	94.07	16.93
Chevon	0.51	115.57	113.91	109.17	107.92	107.56	0.55
Chicken (dressed)	7.57	123.26	128.24	140.51	146.36	147.53	11.16
Duck (dressed)	0.14	107.91	108.73	112.87	112.36	110.62	0.15
Chicken egg	3.80	109.51	112.03	114.88	114.69	109.58	4.16
Milkfish	3.66	104.89	108.88	110.67	112.78	109.84	4.02
Roundscad	2.99	96.32	84.49	80.91	92.23	87.26	2.61
Tilapia	2.78	117.31	115.01	114.79	116.40	112.86	3.14
Tuna	6.45	95.71	81.60	82.21	82.83	86.83	5.60
Shrimps & Prawns	0.54	115.01	111.63	111.04	111.12	106.97	0.58
Crabs	0.45	106.92	106.95	99.56	96.43	98.64	0.45
Oysters	0.19	124.93	116.91	110.51	116.09	123.06	0.23

Table 2.
Daily per capita consumption index of selected agricultural commodities,
Philippines, 2010-2014
(2006=100)

COMMODITY	2006	INDICES					2014
	PER CAPITA CONSUMPTION (grams/day)	2010	2011	2012	2013	2014	PER CAPITA CONSUMPTION (grams/day)
Rice	325.21	95.89	98.11	100.14	97.42	96.22	312.93
Corn	50.44	88.64	86.64	95.32	104.06	119.11	60.08
Coconut	23.53	96.77	93.16	95.58	90.82	86.40	20.33
Sugarcane	7.67	68.97	106.78	97.91	89.31	90.35	6.93
Coffee	0.85	118.82	109.41	131.76	109.41	83.53	0.71
Banana	97.45	156.46	145.44	132.27	106.27	111.02	108.19
Pineapple	24.77	119.01	115.70	114.70	110.82	117.24	29.04
Mango	26.44	84.23	78.74	75.64	80.22	85.17	22.52
Calamansi	5.81	89.67	85.37	82.10	74.01	71.26	4.14
Papaya	4.55	100.00	92.75	95.16	92.75	95.82	4.36
Pomelo	1.15	80.87	71.30	71.30	68.70	66.96	0.77
Tomato	4.30	109.53	105.81	104.42	105.12	106.98	4.60
Garlic	1.37	64.23	57.66	32.12	21.90	70.07	0.96
Onion	3.51	105.41	87.46	100.00	100.00	150.71	5.29
Cabbage	2.63	133.46	125.10	125.10	123.95	122.81	3.23
Eggplant	5.56	101.98	98.56	99.46	101.44	102.52	5.70
Peanut	2.33	115.02	102.15	91.85	70.39	103.43	2.41
Mongo	1.78	95.51	91.01	101.69	103.37	92.13	1.64
Cassava	5.53	113.92	115.91	113.92	120.43	128.39	7.10
Sweet potato	16.88	89.28	83.59	82.29	82.64	80.81	13.64
Potato	1.78	153.93	149.44	143.26	135.39	130.90	2.33
Beef	5.81	114.11	111.70	109.81	109.29	116.52	6.77
Carabeef	4.54	100.22	91.19	85.02	77.75	83.92	3.81
Pork	49.81	104.40	102.25	99.84	101.53	103.13	51.37
Chevon	1.43	114.69	111.19	106.99	106.99	106.99	1.53
Chicken (dressed)	21.78	129.80	135.58	146.92	151.19	160.51	34.96
Duck (dressed)	0.38	107.89	107.89	115.79	107.89	107.89	0.41
Chicken egg	9.56	109.73	112.03	115.17	114.96	109.73	10.49
Milkfish	6.49	104.31	108.01	110.63	111.86	110.63	7.18
Roundscad	5.32	95.86	84.40	80.83	92.11	87.97	4.68
Tilapia	7.40	117.03	114.73	114.46	114.05	113.24	8.38
Tuna	11.91	90.51	83.80	85.22	83.71	100.00	11.91
Shrimps & Prawns	1.10	137.27	134.55	147.27	137.27	131.82	1.45
Crabs	1.23	98.37	95.93	86.99	64.23	80.49	0.99
Oysters	0.52	126.92	115.38	111.54	115.38	121.15	0.63

Table 3a.
Daily per capita calories supply of selected agricultural commodities,
Philippines, 2010-2014
 (in grams)

COMMODITY	2010	2011	2012	2013	2014
Rice	1113.27	1139.08	1162.64	1131.05	1117.16
Corn	159.17	155.57	171.16	186.86	213.88
Coconut	41.90	40.33	41.38	39.32	37.41
Sugarcane	1.59	2.46	2.25	2.06	2.08
Coffee	0.47	0.44	0.53	0.44	0.33
Banana	91.48	85.04	77.34	62.14	64.91
Pineapple	7.66	7.45	7.39	7.14	7.55
Mango	10.02	9.37	9.00	9.54	10.13
Calamansi	1.35	1.29	1.24	1.12	1.08
Papaya	1.18	1.10	1.13	1.10	1.13
Pomelo	0.45	0.39	0.39	0.38	0.37
Tomato	0.80	0.77	0.76	0.77	0.78
Garlic	1.14	1.03	0.57	0.39	1.25
Onion	1.15	0.95	1.09	1.09	1.64
Cabbage	0.67	0.63	0.63	0.62	0.61
Eggplant	0.12	0.12	0.12	0.12	0.12
Peanut	11.10	9.85	8.86	6.79	9.98
Mongo	5.80	5.52	6.17	6.27	5.59
Cassava	6.87	6.99	6.87	7.26	7.74
Sweet potato	13.86	12.98	12.78	12.83	12.55
Potato	1.84	1.78	1.71	1.61	1.56
Beef	16.91	16.55	16.27	16.19	17.26
Carabeef	9.19	8.36	7.80	7.13	7.70
Pork	173.16	169.60	165.60	168.40	171.06
Chevon	3.94	3.82	3.67	3.67	3.67
Chicken	69.83	72.94	79.04	81.34	86.35
Duck	1.75	1.75	1.88	1.75	1.75
Chicken egg	62.31	63.62	65.40	65.28	62.31
Milkfish	4.33	4.49	4.60	4.65	4.60
Roundscad	3.26	2.87	2.75	3.14	3.00
Tilapia	5.54	5.43	5.42	5.40	5.36
Tuna	6.90	6.39	6.50	6.38	7.62
Shrimps & Prawns	0.71	0.70	0.76	0.71	0.68
Crabs	0.57	0.55	0.50	0.37	0.47
Oysters	0.47	0.43	0.41	0.43	0.45

Table 3b.
Daily per capita protein supply of selected agricultural commodities,
Philippines, 2010-2014
(in grams)

COMMODITY	2010	2011	2012	2013	2014
Rice	23.39	23.93	24.43	23.76	23.47
Corn	4.25	4.15	4.57	4.99	5.71
Coconut	0.39	0.37	0.38	0.36	0.35
Sugarcane	0.01	0.02	0.02	0.01	0.01
Coffee	0.07	0.06	0.08	0.06	0.05
Banana	1.07	0.99	0.90	0.72	0.76
Pineapple	0.06	0.06	0.06	0.05	0.06
Mango	0.09	0.08	0.08	0.08	0.09
Calamansi	0.03	0.02	0.02	0.02	0.02
Papaya	0.02	0.02	0.02	0.02	0.02
Pomelo	0.00	0.00	0.00	0.00	0.00
Tomato	0.04	0.04	0.04	0.04	0.04
Garlic	0.11	0.09	0.05	0.04	0.12
Onion	0.04	0.03	0.04	0.04	0.06
Cabbage	0.04	0.03	0.03	0.03	0.03
Eggplant	0.05	0.05	0.05	0.05	0.05
Peanut	0.50	0.45	0.40	0.31	0.45
Mongo	0.38	0.36	0.40	0.41	0.36
Cassava	0.06	0.06	0.06	0.06	0.06
Sweet potato	0.11	0.10	0.10	0.10	0.10
Potato	0.04	0.04	0.04	0.04	0.04
Beef	2.45	2.39	2.35	2.34	2.50
Carabeef	1.01	0.92	0.86	0.78	0.85
Pork	16.48	16.14	15.76	16.03	16.28
Chevon	0.47	0.45	0.44	0.44	0.44
Chicken	8.57	8.95	9.70	9.98	10.59
Duck	0.11	0.11	0.12	0.11	0.11
Chicken egg	4.80	4.91	5.04	5.03	4.80
Milkfish	0.70	0.72	0.74	0.75	0.74
Roundscad	0.53	0.46	0.44	0.50	0.48
Tilapia	0.89	0.87	0.87	0.87	0.86
Tuna	1.11	1.03	1.05	1.03	1.23
Shrimps & Prawns	0.14	0.14	0.15	0.14	0.13
Crabs	0.11	0.11	0.10	0.07	0.09
Oysters	0.07	0.06	0.06	0.06	0.07

Table 3c.
Daily per capita fats supply of selected agricultural commodities,
Philippines, 2010-2014
 (in grams)

COMMODITY	2010	2011	2012	2013	2014
Rice	5.61	5.74	5.86	5.70	5.63
Corn	1.92	1.88	2.07	2.26	2.58
Coconut	3.96	3.81	3.91	3.72	3.54
Sugarcane	0.00	0.00	0.00	0.00	0.00
Coffee	0.00	0.00	0.00	0.00	0.00
Banana	0.46	0.43	0.39	0.31	0.32
Pineapple	0.06	0.06	0.06	0.05	0.06
Mango	0.04	0.04	0.04	0.04	0.05
Calamansi	0.01	0.01	0.01	0.01	0.01
Papaya	0.00	0.00	0.00	0.00	0.00
Pomelo	0.00	0.00	0.00	0.00	0.00
Tomato	0.01	0.01	0.01	0.01	0.01
Garlic	0.00	0.00	0.00	0.00	0.00
Onion	0.01	0.01	0.01	0.01	0.01
Cabbage	0.00	0.00	0.00	0.00	0.00
Eggplant	0.57	0.55	0.55	0.56	0.57
Peanut	0.96	0.85	0.77	0.59	0.87
Mongo	0.03	0.03	0.03	0.03	0.03
Cassava	0.01	0.01	0.01	0.01	0.01
Sweet potato	0.03	0.03	0.03	0.03	0.03
Potato	0.00	0.00	0.00	0.00	0.00
Beef	1.43	1.40	1.37	1.37	1.46
Carabeef	0.43	0.39	0.36	0.33	0.36
Pork	11.20	10.97	10.71	10.89	11.07
Chevon	0.21	0.20	0.19	0.19	0.19
Chicken	3.28	3.43	3.71	3.82	4.06
Duck	0.13	0.13	0.14	0.13	0.13
Chicken egg	4.38	4.48	4.60	4.59	4.38
Milkfish	0.15	0.15	0.16	0.16	0.16
Roundscad	0.11	0.10	0.09	0.11	0.10
Tilapia	0.19	0.19	0.19	0.19	0.18
Tuna	0.24	0.22	0.22	0.22	0.26
Shrimps & Prawns	0.01	0.01	0.01	0.01	0.01
Crabs	0.01	0.01	0.01	0.00	0.00
Oysters	0.01	0.01	0.01	0.01	0.01

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
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11. Economic Growth
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