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AGRICULTURAL INDICATORS SYSTEM (AIS)

INPUTS

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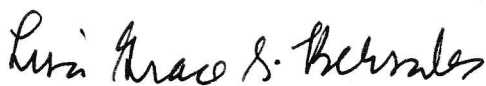
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FOREWORD

The Agricultural Indicators System (AIS) is one of the statistical indicator frameworks maintained by the Philippine Statistics Authority (PSA). AIS has twelve (12) modules which are updated and released annually. This is the eleventh module entitled Inputs. It presents indicators relating to the productive factors in agriculture such as fertilizers and wages. The reference years are 2013 to 2017.

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 this report, in particular.



LISA GRACE S. BERSALES, Ph.D.

Undersecretary

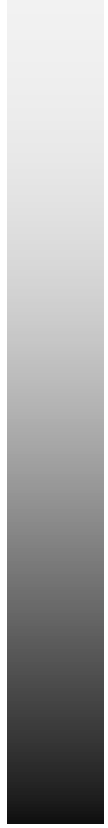
National Statistician and Civil Registrar General

Quezon City, Philippines
December 2018

TABLE OF CONTENTS

FOREWORD		i
LIST OF TABLES		iii
INPUTS		
Table 1a.	Fertilizer: supply and disposition, Philippines, 2013-2017	4
Table 1b.	Annual growth rates of fertilizer grades, supply and disposition, Philippines, 2013-2017	4
Table 1c.	Proportion of fertilizer production, imports, sales and exports to total supply, Philippines, 2013-2017	5
Table 2a.	Retail prices of major fertilizer grades, Philippines, 2013-2017	6
Table 2b.	Annual growth rates of retail prices of major fertilizer grades, Philippines, 2013-2017	6
Table 2c.	Retail price indices of major fertilizer grades, Philippines, 2013-2017	7
Table 3.	Quarterly nitrogen/palay price ratio, Philippines, 2013-2017	8
Table 4a.	Daily nominal wage rate for agriculture, by crop, by region, Philippines, 2015-2017	9
Table 4b.	Daily real wage rate for agriculture, by crop, by region, Philippines, 2015-2017	12

INPUTS



Fertilizer Supply and Disposition

Indicators on supply and disposition of fertilizers presents how the country manages the production and trade of fertilizers during a given period.

In 2017, the domestic production of fertilizers increased to 0.31 million metric tons. This was higher by 20.47 percent from the 2016 record of 0.26 million metric tons. Fertilizer importation at 2.32 million metric tons was 2.79 percent lower in 2017. The supply of fertilizers comprising of production and imports summed up to 2.63 million metric tons in 2017 and it registered an annual drop of 0.51 percent compared with the previous year's level. Of this total fertilizer supply, domestic production accounted an increased share of 11.88 percent while imports exhibited a declining share of 88.12 percent.

The volume of fertilizer exports in 2017 went up to 13,316 metric tons or by 15.59 percent. Fertilizer exports had a minimal share of 0.51 percent in the total fertilizer supply (Tables 1a to 1c).

Retail Prices of Major Fertilizer Grades

The retail prices of major fertilizer grades on a year-on-year basis indicate the behavior of prices paid by the consumers during a given period.

From 2013 to 2017, Di-Ammophos remained as the most expensive among the six (6) major fertilizer grades. However, it continued to register a decreasing retail price quotation over the five-year period. In 2017, it went down further to PhP 1,447.07 per bag which was 1.84 percent lower as compared with the previous year's price. Continuous downtrends in prices in 2017 were also recorded for Ammophos by 2.34 percent and Complete fertilizer by 2.14 percent with respective retail prices at PhP 907.59 and PhP 1,101.06 per bag. On the other hand, the retail price of Muriate of Potash at PhP 1,230.24 per bag recovered from the previous years' declines and exhibited an increment at 3.66 percent in 2017. Similar trend was observed for Ammosul whose price at PhP 551.37 per bag grew by 2.88 percent while that of Urea at PhP 918.86 per bag inched up by 0.09 percent in 2017 (Tables 2a and 2b).

In 2017, the retail price indices of all the six (6) major fertilizer grades were below 100 percent indicating that the 2017 prices were lower than the 2012 price quotations (Table 2c).

Input-Output Ratio

The nitrogen/palaya price ratio is an indicator of how much output (palaya) is needed to pay for a unit of input (nitrogen fertilizer).

The nitrogen/palaya ratio declined to 2.45 in 2017 from 2.53 in 2016. It implies that about 2.45 kilograms of palaya were produced to pay for a kilogram of nitrogen fertilizer. By quarter, the highest ratio in 2017 was reported in the first quarter at 2.51 while the lowest ratio at 2.33 was noted in the third quarter (Table 3).

Nominal and Real Wage Rates in Agriculture

The agricultural wage rate is an indicator of the progress and welfare of farm workers.

In 2017, the national wage rate of agricultural workers averaged PhP 280.37 per day in nominal terms or PhP 251.45 per day in real terms. In particular, palaya farm workers were paid the highest nominal wage rate at PhP 303.98 per day equivalent to PhP 272.63 per day in real terms. Coconut farm workers followed with wage rate at PhP 271.72 per day in nominal terms and translated to real wage rate estimated at P243.70 per day. The daily nominal wage rates of corn and sugarcane farm workers, on the average, were recorded at PhP 246.05 and PhP 253.69, respectively. These corresponded to PhP 220.67 per day and PhP 227.53 per day in real terms (Tables 4a to 4b).

At the regional level, the highest nominal wage rate received by farm workers was reported in CALABARZON at PhP 370.14 per day translated to PhP 336.49 per day in real terms. Specifically, both palaya and corn farm laborers in CALABARZON and Central Luzon enjoyed higher daily wage rates. Palaya farm workers in CALABARZON and Central Luzon were given daily nominal wage rates averaged at PhP 388.57 and PhP 363.12, respectively. Their corresponding daily real wages amounted to PhP 353.25 and PhP 324.79. Meanwhile, the daily nominal wage rates of corn farm laborers were PhP 327.35 in CALABARZON and PhP 319.76 in Central Luzon equivalent to daily real wage rates at PhP 297.59 and

PhP 286.01, respectively. The daily nominal wage rates received by coconut farm workers were biggest in Cagayan Valley at PhP 386.40 and in CALABARZON at PhP 369.99. Correspondingly, real wage rates were PhP 343.77 per day and PhP 336.36 per day. Ilocos Region topped in the regional nominal wage rate paid to sugarcane farm workers at PhP 408.59 per day equivalent to PhP 372.80 per day in real terms (Tables 4a to 4b).

Table 1a.**Fertilizer: supply and disposition Philippines, 2013-2017**

(in metric tons)

YEAR	PRODUCTION	IMPORTS	SUPPLY*	LOCAL SALES	EXPORTS
2013	335,827	872,870	1,208,697	390,906	53,473
2014	388,720	2,321,904	2,710,624	1,869,187	9,760
2015 ^{a/}	27,405	2,600,474	2,627,879	203,578	9,558
2016 ^{a/}	259,723	2,388,302	2,648,025	307,419	11,520
2017 ^{b/}	312,891	2,321,684	2,634,575	...	13,316

^{a/} as of June 13, 2018^{b/} as of July 13, 2018

* Consists of local production and imports

... Data not yet available

Source: Fertilizer and Pesticide Authority (FPA)

Table 1b.**Annual growth rates of fertilizer supply and disposition, Philippines, 2013-2017**

(in percent)

YEAR	PRODUCTION	IMPORTS	SUPPLY	LOCAL SALES	EXPORTS
2013/2014	15.75	166.01	124.26	378.17	-81.75
2014/2015	-92.95	12.00	-3.05	-89.11	-2.07
2015/2016	847.74	-8.16	0.77	51.01	20.53
2016/2017	20.47	-2.79	-0.51	...	15.59

... Data not yet available

Source of basic data: Fertilizer and Pesticide Authority (FPA)

Table 1c.
Proportion of fertilizer production, imports, sales and exports
to total supply, Philippines, 2013-2017
 (in percent)

YEAR	PRODUCTION/ SUPPLY	IMPORT/ SUPPLY	SALES/ SUPPLY	EXPORT/ SUPPLY
2013	27.78	72.22	32.34	4.42
2014	14.34	85.66	68.96	0.36
2015	1.04	98.96	7.75	0.36
2016	9.81	90.19	11.61	0.44
2017	11.88	88.12	...	0.51

... Data not yet available

Source of basic data: Fertilizer and Pesticide Authority (FPA)

Table 2a.**Retail prices of major fertilizer grades, Philippines, 2013-2017**

(PhP/bag of 50 kgs)

YEAR	UREA (46-0-0)	AMMOSUL (21-0-0)	AMMOPHOS (16-20-0)	DI-AMMOPHOS (18-46-0)	COMPLETE (14-14-14)	MURIATE OF POTASH (0-0-60)
2013	1,139.63	694.59	1,062.99	1,753.03	1,209.48	1,428.90
2014	1,058.26	592.19	1,012.19	1,630.15	1,171.10	1,347.36
2015	1,008.89	565.61	976.02	1,539.18	1,160.81	1,286.48
2016 ^R	918.06	535.95	929.35	1,474.26	1,125.15	1,186.81
2017	918.86	551.37	907.59	1,447.07	1,101.06	1,230.24

*Source: Fertilizer and Pesticide Authority (FPA)***Table 2b.****Annual growth rates of retail prices of major fertilizer grades, Philippines, 2013-2017**

(in percent)

YEAR	UREA (46-0-0)	AMMOSUL (21-0-0)	AMMOPHOS (16-20-0)	DI-AMMOPHOS (18-46-0)	COMPLETE (14-14-14)	MURIATE OF POTASH (0-0-60)
2013/2014	-7.14	-14.74	-4.78	-7.01	-3.17	-5.71
2014/2015	-4.67	-4.49	-3.57	-5.58	-0.88	-4.52
2015/2016	-9.00	-5.24	-4.78	-4.22	-3.07	-7.75
2016/2017	0.09	2.88	-2.34	-1.84	-2.14	3.66

Source of basic data: Fertilizer and Pesticide Authority (FPA)

INPUTS

Table 2c.**Retail price indices of major fertilizer grades, Philippines, 2013-2017**

(2012=100)

YEAR	UREA (46-0-0)	AMMOSUL (21-0-0)	AMMOPHOS (16-20-0)	DI-AMMOPHOS (18-46-0)	COMPLETE (14-14-14)	MURIATE OF POTASH (0-0-60)
2013	88.89	91.58	96.63	97.92	96.63	95.38
2014	82.54	78.08	92.01	91.06	93.56	89.94
2015	78.69	74.57	88.72	85.98	92.74	85.88
2016	71.61	70.66	84.48	82.35	89.89	79.22
2017	71.67	72.69	82.50	80.83	87.96	82.12

Source of basic data: Fertilizer and Pesticide Authority (FPA)

Table 3.
Quarterly nitrogen/palay price ratio, Philippines 2013-2017

YEAR	NITROGEN/PALAY PRICE RATIO				
	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	JAN-DEC
2013	3.74	3.48	3.12	2.86	3.28
2014	2.64	2.43	2.39	2.52	2.49
2015	2.81	2.73	2.65	2.83	2.75
2016	2.70	2.63	2.33	2.47	2.53
2017	2.51	2.47	2.33	2.49	2.45

Note:

*Nitrogen price was based on weighted retail price of Urea and Ammosul
Palay price was based on farmgate price per kilogram of other variety*

*Sources of basic data: Fertilizer and Pesticide Authority (FPA)
and Philippine Statistics Authority (PSA)*

INPUTS

Table 4a.
Daily nominal wage rate for agriculture, by crop, by region,
Philippines, 2015-2017
 (in PhP)

REGION/CROPS	2015	2016	2017
Philippines			
Agriculture	267.88	276.03	280.37
Palay	296.72	304.35	303.98
Corn	245.60	250.00	246.05
Coconut	239.27	257.03	271.72
Sugarcane	262.29	268.12	253.69
CAR			
Agriculture	286.25	284.02	267.30
Palay	279.37	285.03	272.64
Corn	296.56	279.55	243.73
Coconut			
Sugarcane			
Ilocos Region			
Agriculture	317.29	329.16	310.82
Palay	339.53	339.21	316.10
Corn	277.03	279.03	285.67
Coconut	336.18	337.58	274.69
Sugarcane	332.92	333.66	408.59
Cagayan Valley			
Agriculture	327.45	329.05	280.16
Palay	380.12	393.23	322.72
Corn	285.15	282.66	221.20
Coconut	280.69	281.95	386.40
Sugarcane	262.79	263.11	253.35
Central Luzon			
Agriculture	365.37	376.50	356.71
Palay	383.54	389.06	363.12
Corn	357.03	304.47	319.76
Coconut	345.25	349.05	320.53
Sugarcane	325.42	330.60	275.78
CALABARZON			
Agriculture	322.79	326.44	370.14
Palay	339.73	341.32	388.57
Corn	297.91	300.19	327.35
Coconut	319.75	320.80	369.99
Sugarcane	305.58	306.78	309.44

Table 4a.
Daily nominal wage rate... (continued)
(in PhP)

REGION/CROPS	2015	2016	2017
MIMAROPA Region			
Agriculture	272.65	275.97	296.11
Palay	292.97	297.43	307.18
Corn	254.31	257.44	233.78
Coconut	257.45	258.97	284.89
Sugarcane			
Bicol Region			
Agriculture	245.05	267.79	267.88
Palay	272.72	273.58	276.88
Corn	229.04	246.40	245.26
Coconut	224.47	267.51	263.93
Sugarcane	235.04	239.49	240.14
Western Visayas			
Agriculture	241.26	245.14	272.80
Palay	255.89	258.43	280.13
Corn	216.00	223.50	253.23
Coconut	226.88	228.99	288.17
Sugarcane	248.79	259.50	226.64
Central Visayas			
Agriculture	224.31	231.47	236.97
Palay	235.00	236.85	246.15
Corn	198.17	213.56	227.43
Coconut	236.39	238.63	250.18
Sugarcane	235.33	241.40	243.71
Eastern Visayas			
Agriculture	238.80	244.18	251.98
Palay	236.29	247.45	256.68
Corn	241.14	243.07	223.65
Coconut	238.32	240.31	251.20
Sugarcane	248.23	252.21	257.68
Zamboanga Peninsula			
Agriculture	241.10	238.63	238.30
Palay	270.59	273.60	272.01
Corn	216.57	217.47	213.07
Coconut	234.47	236.10	241.66
Sugarcane			

Table 4a.
Daily nominal wage rate... (concluded)
 (in PhP)

REGION/CROPS	2015	2016	2017
Northern Mindanao			
Agriculture	242.70	233.14	247.39
Palay	282.28	285.96	300.42
Corn	199.25	202.56	222.16
Coconut	247.91	248.23	265.49
Sugarcane	234.58	237.02	235.80
Davao Region			
Agriculture	250.38	253.03	267.46
Palay	291.69	313.21	322.16
Corn	196.95	205.16	244.43
Coconut	263.08	264.87	263.39
Sugarcane	269.87	272.96	319.56
SOCCSKSARGEN			
Agriculture	247.27	243.64	246.55
Palay	302.30	303.55	281.96
Corn	217.95	221.54	213.87
Coconut	213.78	215.82	257.78
Sugarcane	249.70	250.40	247.64
Caraga			
Agriculture	310.06	307.83	314.19
Palay	323.72	324.92	352.33
Corn	267.02	257.88	252.51
Coconut	297.78	307.79	358.54
Sugarcane			
ARMM			
Agriculture	252.70	257.53	250.92
Palay	288.11	293.68	262.26
Corn	253.28	247.71	231.86
Coconut	218.71	224.65	245.18
Sugarcane			

Source: Philippine Statistics Authority (PSA)

Table 4b.
Daily real wage rate for agriculture, by crop, by region,
Philippines, 2015-2017
(in PhP)

REGION/CROPS	2015	2016	2017
Philippines			
Agriculture	189.32	191.69	251.45
Palay	266.12	211.35	272.63
Corn	173.57	173.61	220.67
Coconut	214.59	178.49	243.70
Sugarcane	235.24	186.19	227.53
CAR			
Agriculture	205.34	200.01	239.09
Palay	249.88	200.73	243.86
Corn	212.74	196.87	218.01
Coconut			
Sugarcane			
Ilocos Region			
Agriculture	236.26	240.79	283.59
Palay	309.79	248.14	288.41
Corn	206.28	204.12	260.65
Coconut	306.73	246.95	250.63
Sugarcane	303.76	244.08	372.80
Cagayan Valley			
Agriculture	227.55	222.03	249.25
Palay	338.19	265.34	287.12
Corn	198.16	190.73	196.80
Coconut	249.72	190.25	343.77
Sugarcane	233.80	177.54	225.40
Central Luzon			
Agriculture	257.12	259.30	319.06
Palay	343.06	267.95	324.79
Corn	251.25	209.69	286.01
Coconut	308.81	240.39	286.70
Sugarcane	291.08	227.69	246.68
CALABARZON			
Agriculture	231.06	231.68	336.49
Palay	308.85	242.24	353.25
Corn	213.25	213.05	297.59
Coconut	290.68	227.68	336.36
Sugarcane	277.80	217.73	281.31

Table 4b.
Daily real wage rate... (continued)
 (in PhP)

REGION/CROPS	2015	2016	2017
MIMAROPA Region			
Agriculture	188.29	186.72	264.62
Palay	261.81	201.24	274.51
Corn	175.63	174.18	208.92
Coconut	230.07	175.22	254.59
Sugarcane			
Bicol Region			
Agriculture	168.30	181.92	242.86
Palay	247.25	185.86	251.02
Corn	157.31	167.39	222.36
Coconut	203.51	181.73	239.28
Sugarcane	213.09	162.70	217.71
Western Visayas			
Agriculture	164.46	160.43	243.14
Palay	228.07	169.13	249.67
Corn	147.24	146.27	225.70
Coconut	202.21	149.86	256.83
Sugarcane	221.74	169.83	202.00
Central Visayas			
Agriculture	155.56	156.50	205.70
Palay	203.99	160.14	213.67
Corn	137.43	144.39	197.42
Coconut	205.20	161.35	217.17
Sugarcane	204.28	163.22	211.56
Eastern Visayas			
Agriculture	157.21	158.66	216.11
Palay	202.65	160.79	220.14
Corn	158.75	157.94	191.81
Coconut	204.39	156.15	215.44
Sugarcane	212.89	163.88	220.99
Zamboanga Peninsula			
Agriculture	156.96	150.94	205.96
Palay	233.87	173.06	235.10
Corn	141.00	137.55	184.16
Coconut	202.65	149.34	208.87
Sugarcane			

Table 4b.
Daily real wage rate... (concluded)
(in PhP)

REGION/CROPS	2015	2016	2017
Northern Mindanao			
Agriculture	158.73	150.41	214.19
Palay	244.40	184.49	260.10
Corn	130.31	130.68	192.35
Coconut	214.64	160.15	229.86
Sugarcane	203.10	152.92	204.16
Davao Region			
Agriculture	168.04	164.52	239.23
Palay	260.90	203.65	288.16
Corn	132.18	133.39	218.63
Coconut	235.31	172.22	235.59
Sugarcane	241.38	177.48	285.83
SOCCSKSARGEN			
Agriculture	164.19	157.19	217.03
Palay	266.11	195.84	248.20
Corn	144.72	142.93	188.27
Coconut	188.19	139.24	226.92
Sugarcane	219.81	161.55	218.00
Caraga			
Agriculture	194.27	189.32	278.54
Palay	286.99	199.83	312.35
Corn	167.31	158.60	223.86
Coconut	263.99	189.29	317.85
Sugarcane			
ARMM			
Agriculture	161.57	159.96	216.87
Palay	249.01	182.41	226.67
Corn	161.94	153.86	200.40
Coconut	189.03	139.53	211.91
Sugarcane			

Source: Philippine Statistics Authority (PSA)

MODULES OF AGRICULTURAL INDICATORS SYSTEM

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




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