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INPUTS



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FOREWORD

This is Module 11 of the Agricultural Indicators System (AIS) report, which is published annually by the Bureau of Agricultural Statistics (BAS). The module is entitled Inputs and it present indicators relating to the productive factors in agriculture such as fertilizers and wages. The statistical tables cover the years 2005 to 2009.

The BAS continues to conduct review and improvement of the AIS to meet the demand for statistics and indicators of its clients and stakeholders. It welcomes suggestions and comments from readers on how this report can be further improved.

The BAS would like to acknowledge the sources of data used in this module. These are the National Statistics Office (NSO), and Fertilizer and Pesticide Authority (FPA).


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Quezon City, Philippines
December 2010

TABLE OF CONTENTS

FOREWORD		i
LIST OF TABLES		iii
INPUTS		
Table 1a.	Fertilizer: supply and disposition, Philippines, 2005-2009	4
Table 1b.	Annual growth rates of fertilizer supply and disposition, Philippines, 2005-2009	5
Table 1c.	Proportion of fertilizer production, imports, sales and exports to total supply, Philippines, 2005-2009	6
Table 2a.	Retail prices of major fertilizer grades, Philippines, 2005-2009	7
Table 2b.	Annual growth rates of retail prices of major fertilizer grades, Philippines, 2005-2009	8
Table 2c.	Retail price indices of major fertilizer grades, Philippines, 2005-2009	9
		+
Table 3.	Quarterly nitrogen/palay price ratio, Philippines, 2005-2009	10
Table 4a.	Nominal wage rate index for agriculture, by crop, by region, Philippines, 2007-2009	11
Table 4b.	Real wage rate index for agriculture, by crop, by region, Philippines, 2007-2009	14



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Fertilizer Supply and Disposition



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

The country's production of fertilizers in 2009 was 0.20 million metric tons. It was lower by 31.7 percent from the 2008 record. Fertilizer imports at 1.73 million metric tons dropped by 13.53 percent. Overall, fertilizer supply totaled 1.93 million metric tons. Imports continued to contribute the biggest and increasing share in

the total supply of fertilizers at about 90 percent in 2009.

In 2009, local sales of fertilizers at 0.17 million metric tons recorded a big decline of 74.5 percent from the previous year's level. The share of sales in the total fertilizer supply became smaller at 9.01 percent. Exports of fertilizers at 0.16 million metric tons went down by 18.17 percent. This volume of exports accounted for 8.30 percent of the total supply of fertilizers (Tables 1a to 1c).

Retail Prices of Major Fertilizer Grades

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

In 2009, the retail prices of the five major fertilizer grades such as urea, ammosul, ammophos, complete and di-ammophos were lower than their respective 2008 records. Di-ammophos priced at P2,240.57 per bag in 2009 decreased by 16.76 percent. Annual price reduction of more than 30 percent each was registered for urea, ammosul and ammophos. Their retail prices in 2009 ranged from P570.90 to P1,111.63 per bag. Complete fertilizer was priced at P1,193.13 and it was down by 28.63 percent from the previous year's record. Meanwhile, muriate of potash reported a price gain of 14.02 percent and reached P1,951.97 per bag in 2009 (Tables 2a to 2b).

Based on the 2000 prices, the increments in the retail prices of urea, ammosul, ammophos and complete fertilizers weakened to two-fold increases in 2009. They registered four-fold increases in 2008. Di-ammophos recorded four-fold increase in 2009 compared to five-fold increase a year ago. In contrast, retail price of muriate of potash was five times higher in 2009 (Table 2c).

Input-Output Ratio

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



The nitrogen/palay price ratio in 2009 was 3.21 which was lower compared to the 2008 ratio of 5.30. It implies that in 2009, about 3.21 kilograms of palay was produced to pay for a kilogram of nitrogen fertilizer.

By quarter, the highest ratio in 2009 was posted in the first quarter at 3.62 while the lowest was noted in fourth quarter at 2.93 (Table 3).

Nominal and Real Wage Rate Indices

The agricultural wage rate is an indicator of progress and welfare of agricultural workers. Wage rate indices determine whether farm workers are getting better-off or worse-off through the increase or decrease in the wages they received over the years compared to a base year.

In nominal terms, agricultural wage rate index went up to 149.3 percent in 2009. This indicates that, on the average, the wages paid to farm workers were higher by 49.3 index points from the 2000 record. Its corresponding real wage rate index remained stable at 93.3 percent or about 6.7 index points lower than in the base year (Tables 4a to 4b).

In 2009, palay farm workers posted the biggest gain in nominal wage rate at 55.9 index points. Gains of 42.2 index points and 47.2 index points were registered for corn and coconut farm workers,

respectively. On the other hand, the lowest wage gain was reported by the sugarcane farm workers at 23.2 index points. In real terms, the wage rate of palay farm workers was 2.6 index points below the 2000 wage rate. This was down by 8 to 11 index points for corn and coconut farm workers. Wage rate decline of 23 index points was noted for sugarcane farm workers.



Across regions, the increase in agricultural wage rate in nominal terms was biggest in CALABARZON at 67.0 index points in 2009. Specifically, the region reported the biggest gain in the wage rate of coconut farm workers at 80.1 index points. Palay farm workers in Central Visayas and Davao Region posted the highest nominal wage rate increments of more than 70 index points each. In Western Visayas, corn farm workers enjoyed 75.0 index points gain in wage rate. Sugarcane farmers in Central Luzon reported an increase of 62.0 index points.

On the other hand, the real agricultural wage rates in 2009 were up in CALABARZON and Cagayan Valley by 3 index points and 6.3 index points, respectively from the base year records. Palay farm workers in Cagayan Valley, CALABARZON, Central Visayas, Zamboanga Peninsula, Davao Region and SOCCSKSARGEN had wage rate gains ranging from 1 to 5 index points. Wage rates of corn farm workers were up in CAR, Cagayan Valley, Central Luzon and CALABARZON by 1 to 9 index points. For coconut farm workers, 3 to 15 index point increments in wage rates were posted in Central Luzon, CALABARZON, and Western Visayas. Only Central Luzon reported wage rate increment of sugarcane farm workers that was above the base year.



Table 1a.
Fertilizer: supply and disposition, Philippines, 2005-2009
(in metric tons)

YEAR	PRODUCTION	IMPORTS	SUPPLY*	LOCAL SALES	EXPORTS
2005	877,098	1,615,107	2,492,205	1,212,821	449,606
2006	778,458	1,438,478	2,216,936	1,161,515	244,957
2007	747,884	1,583,393	2,331,277	1,227,645	298,531
2008	287,106	2,005,089	2,292,195	681,796	195,762
2009P	196,095	1,733,727	1,929,822	173,930	160,183

P- preliminary

Table 1b.
Annual growth rates of fertilizer supply and disposition, Philippines, 2005-2009
(in percent)

YEAR	PRODUCTION	IMPORTS	SUPPLY*	LOCAL SALES	EXPORTS
2005/2006	-11.25	-10.94	-11.05	-4.23	-45.52
2006/2007	-3.93	10.07	5.16	5.69	21.87
2007/2008	-61.61	26.63	-1.68	-44.46	-34.42
2008/2009P	-31.70	-13.53	-15.81	-74.49	-18.17

* consists of local production and imports

Table 1c.
Proportion of fertilizer production, imports, sales and exports to total supply, Philippines, 2005-2009
(in percent)

YEAR	PRODUCTION/ SUPPLY	IMPORT/ SUPPLY	SALES/ SUPPLY	EXPORT/ SUPPLY
2005	35.19	64.81	48.66	18.04
2006	35.11	64.89	52.39	11.05
2007	32.08	67.92	52.66	12.81
2008	12.53	87.47	29.74	8.54
2009P	10.16	89.84	9.01	8.30

Table 2a.
Retail prices of major fertilizer grades, Philippines, 2005-2009
(P/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)
2005	897.74	522.64	751.55	1297.21	767.36	769.04
2006	898.95	474.39	734.32	1353.17	746.21	803.23
2007	961.08	541.78	774.89	1398.92	796.40	859.21
2008	1551.43	917.81	1618.21	2691.85	1671.67	1711.99
2009	975.88	570.90	1111.63	2240.57	1193.13	1951.97

Table 2b.
Annual growth rates of retail prices of major fertilizer grades, Philippines, 2005-2009
(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)
2005/2006	0.13	-9.23	-2.29	4.31	-2.76	4.45
2006/2007	6.91	14.21	5.52	3.38	6.73	6.97
2007/2008	61.43	69.41	108.83	92.42	109.90	99.25
2008/2009	-37.10	-37.80	-31.30	-16.76	-28.63	14.02

Table 2c.
Retail price indices of major fertilizer grades, Philippines, 2005-2009
(2000=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)
2005	245.67	225.40	188.41	251.61	190.54	202.79
2006	246.00	204.59	184.10	262.46	185.29	211.81
2007	263.00	233.66	194.27	271.33	197.76	226.57
2008	424.55	395.83	405.70	522.11	415.09	451.44
2009	267.05	246.22	278.69	434.58	296.27	514.72

Table 3.
Quarterly nitrogen/palay price ratio, Philippines 2005-2009

YEAR	NITROGEN/PALAY PRICE RATIO				
	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	JAN-DEC
2005	4.11	4.10	4.11	4.21	4.13
2006	3.99	3.76	4.15	4.04	3.98
2007	4.01	3.99	4.08	4.17	4.06
2008	4.39	4.36	6.69	6.00	5.30
2009	3.62	3.03	3.24	2.93	3.21

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*

Table 4a.
Nominal wage rate index for agriculture, by crop, by region,
Philippines, 2007-2009 (2000=100)

REGION/CROPS	INDICES (%)		
	2007	2008	2009
Philippines			
Agriculture	132.6	144.6	149.3
Palay	134.3	149.7	155.9
Corn	127.2	139.1	142.2
Coconut	134.1	143.0	147.2
Sugarcane	119.4	122.5	123.2
CAR			
Agriculture	116.0	133.0	139.1
Palay	113.9	130.8	136.1
Corn	133.9	152.1	165.1
Coconut			
Sugarcane			
Ilocos Region			
Agriculture	128.0	148.9	154.4
Palay	129.0	150.4	156.1
Corn	132.8	144.9	156.4
Coconut	111.9	129.2	129.5
Sugarcane	114.7	127.5	130.1
Cagayan Valley			
Agriculture	139.4	159.7	162.6
Palay	138.2	162.0	165.3
Corn	136.4	158.2	160.3
Coconut	152.4	151.3	153.8
Sugarcane	150.1	154.5	156.5
Central Luzon			
Agriculture	129.9	142.1	148.1
Palay	125.8	137.7	144.6
Corn	146.2	161.2	163.5
Coconut	149.6	164.4	164.6
Sugarcane	141.4	142.7	162.0
CALABARZON			
Agriculture	156.6	163.8	167.0
Palay	139.0	155.5	161.0
Corn	140.6	150.5	162.3
Coconut	172.9	177.9	180.1
Sugarcane	107.8	108.1	109.2

Table 4a.
Nominal wage rate index ... (Continued)

REGION/CROPS	INDICES (%)		
	2007	2008	2009
MIMAROPA			
Agriculture	124.8	138.2	144.9
Palay	117.3	134.1	139.4
Corn	123.3	136.1	147.5
Coconut	130.8	140.1	148.2
Sugarcane			
Bicol Region			
Agriculture	131.9	143.7	144.7
Palay	133.7	154.4	156.9
Corn	124.9	135.6	139.6
Coconut	131.8	140.2	140.4
Sugarcane	128.5	130.5	130.8
Western Visayas			
Agriculture	128.2	141.6	145.0
Palay	119.3	134.9	139.4
Corn	159.7	171.4	175.0
Coconut	153.4	164.6	165.1
Sugarcane	121.9	126.0	126.5
Central Visayas			
Agriculture	143.4	149.1	152.7
Palay	158.8	173.0	179.1
Corn	151.8	157.9	161.7
Coconut	132.9	135.3	138.0
Sugarcane	122.4	125.8	126.4
Eastern Visayas			
Agriculture	136.6	140.7	141.1
Palay	130.1	138.5	139.0
Corn	142.0	148.4	151.2
Coconut	139.6	141.6	141.9
Sugarcane	111.7	111.8	113.2
Zamboanga Peninsula			
Agriculture	121.2	124.6	127.0
Palay	143.4	154.8	164.6
Corn	136.4	140.5	142.3
Coconut	109.8	110.9	111.6
Sugarcane			

Table 4a.
Nominal wage rate index ... (Continued)

REGION/CROPS	INDICES (%)		
	2007	2008	2009
Northern Mindanao			
Agriculture	136.1	149.9	153.1
Palay	122.1	141.9	143.4
Corn	137.0	151.7	153.4
Coconut	139.9	152.3	157.4
Sugarcane	133.4	134.6	136.3
Davao Region			
Agriculture	130.2	137.0	138.9
Palay	155.8	168.9	176.1
Corn	142.7	153.7	154.3
Coconut	120.3	124.6	125.9
Sugarcane	146.9	147.0	151.1
SOCCSKSARGEN			
Agriculture	133.4	143.1	147.1
Palay	140.0	155.7	163.2
Corn	129.7	137.9	142.0
Coconut	147.3	153.5	153.8
Sugarcane	133.4	134.6	138.1
Caraga			
Agriculture	135.9	144.3	149.6
Palay	136.4	151.6	167.6
Corn	130.6	145.0	148.5
Coconut	136.7	140.8	141.5
Sugarcane			
ARMM			
Agriculture	132.7	142.3	146.9
Palay	141.5	159.3	165.8
Corn	126.0	134.2	143.7
Coconut	132.8	139.0	139.0
Sugarcane			

Table 4b.
Real wage rate index for agriculture, by crop, by region,
Philippines, 2007-2009 (2000=100)

REGION/CROPS	INDICES (%)		
	2007	2008	2009
Philippines			
Agriculture	93.5	93.3	93.3
Palay	94.7	96.6	97.4
Corn	89.7	89.7	88.9
Coconut	94.5	92.3	92.0
Sugarcane	84.2	79.0	77.0
CAR			
Agriculture	81.3	85.7	86.4
Palay	79.9	84.2	84.6
Corn	93.9	97.9	102.6
Coconut			
Sugarcane			
Ilocos Region			
Agriculture	89.5	95.6	95.7
Palay	90.3	96.5	96.8
Corn	92.9	93.0	97.0
Coconut	78.3	82.9	80.3
Sugarcane	80.3	81.8	80.7
Cagayan Valley			
Agriculture	102.5	106.6	103.0
Palay	101.7	108.2	104.8
Corn	100.4	105.6	101.6
Coconut	112.2	101.0	97.5
Sugarcane	110.5	103.1	99.2
Central Luzon			
Agriculture	94.4	92.9	93.3
Palay	91.4	90.1	91.1
Corn	106.2	105.4	102.9
Coconut	108.7	107.5	103.6
Sugarcane	102.8	93.3	102.0
CALABARZON			
Agriculture	111.2	107.6	106.3
Palay	98.7	102.2	102.5
Corn	99.8	98.9	103.3
Coconut	122.7	116.9	114.6
Sugarcane	76.5	71.0	69.5

Table 4b.
Real wage rate index for ... (Continued)

REGION/CROPS	INDICES (%)		
	2007	2008	2009
MIMAROPA			
Agriculture	90.9	91.2	92.7
Palay	85.4	88.5	89.2
Corn	89.7	89.8	94.4
Coconut	95.2	92.4	94.8
Sugarcane			
Bicol Region			
Agriculture	94.0	93.5	90.1
Palay	95.3	100.5	97.7
Corn	89.0	88.3	86.9
Coconut	93.9	91.3	87.4
Sugarcane	91.6	85.0	81.4
Western Visayas			
Agriculture	92.9	92.5	90.4
Palay	86.4	88.1	86.9
Corn	115.7	111.9	109.1
Coconut	111.2	107.5	102.9
Sugarcane	88.3	82.3	78.9
Central Visayas			
Agriculture	98.5	92.3	92.0
Palay	109.0	107.1	107.9
Corn	104.2	97.7	97.4
Coconut	91.2	83.7	83.1
Sugarcane	84.0	77.8	76.1
Eastern Visayas			
Agriculture	99.6	90.3	85.9
Palay	94.9	88.9	84.6
Corn	103.6	95.3	92.1
Coconut	101.8	90.9	86.4
Sugarcane	81.5	71.8	68.9
Zamboanga Peninsula			
Agriculture	87.3	79.0	77.7
Palay	103.2	98.1	100.8
Corn	98.2	89.1	87.1
Coconut	79.0	70.3	68.3
Sugarcane			

Table 4b.
Real wage rate index for ... (Continued)

REGION/CROPS	INDICES (%)		
	2007	2008	2009
Northern Mindanao			
Agriculture	94.1	93.2	91.1
Palay	84.4	88.2	85.3
Corn	94.7	94.3	91.3
Coconut	96.7	94.6	93.7
Sugarcane	92.2	83.6	81.1
Davao Region			
Agriculture	89.9	85.9	83.2
Palay	107.6	105.8	105.4
Corn	98.5	96.3	92.4
Coconut	83.1	78.1	75.4
Sugarcane	101.5	92.1	90.5
SOOCCSKSARGEN			
Agriculture	96.8	93.0	91.8
Palay	101.5	101.1	101.8
Corn	94.0	89.6	88.6
Coconut	106.8	99.7	96.0
Sugarcane	96.7	87.5	86.2
Caraga			
Agriculture	96.7	89.4	88.6
Palay	97.1	93.9	99.2
Corn	92.9	89.8	87.9
Coconut	97.3	87.2	83.8
Sugarcane			
ARMM			
Agriculture	87.4	83.2	81.5
Palay	93.2	93.2	92.0
Corn	83.0	78.5	79.7
Coconut	87.5	81.3	77.1
Sugarcane			

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. Inputs**
12. Prices and Marketing of Agricultural Commodities

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