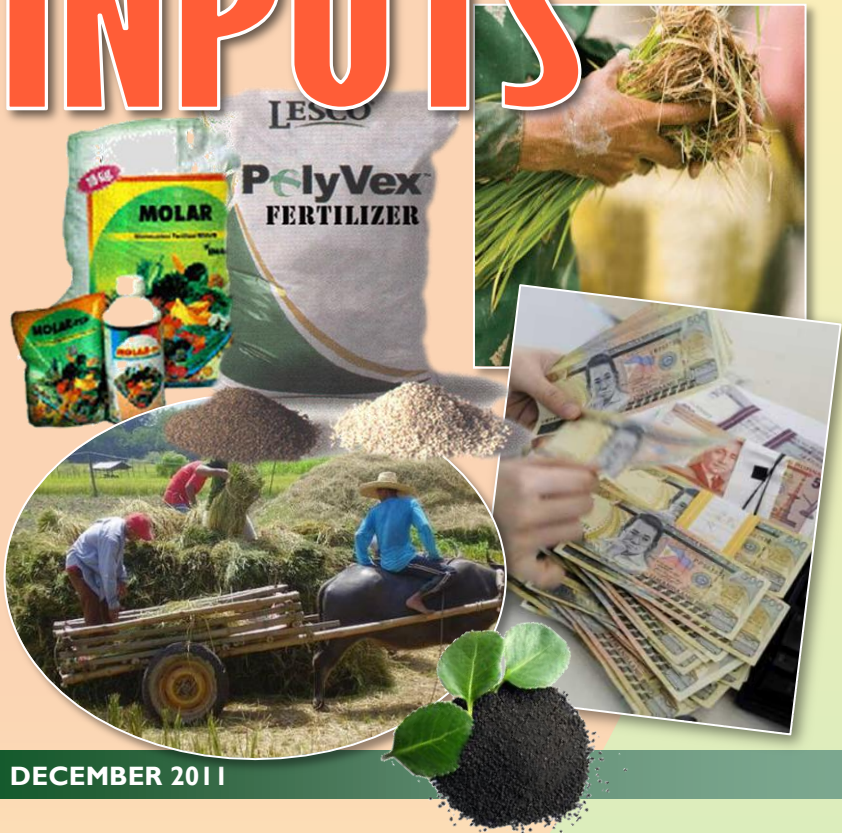


Agricultural Indicators System (AIS)
REPORT No. 2011-11

INPUTS



DECEMBER 2011



Republic of the Philippines
Department of Agriculture

BUREAU OF AGRICULTURAL STATISTICS

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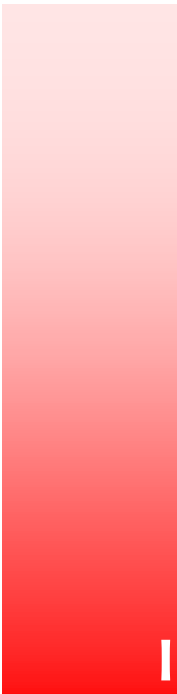
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FOREWORD

The Agricultural Indicators System (AIS) is one of the statistical frameworks maintained by the Bureau of Agricultural Statistics (BAS). It has twelve (12) modules and these are being 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 2006 to 2010.

The AIS hopes to cover more agricultural development indicators to support the information needs of BAS clientele and stakeholders. Hence, the readers are encouraged to give their comments and suggestions on the improvement of the AIS, in general, and the report, in particular.

The BAS would like to acknowledge the National Statistics Office (NSO) and Fertilizer and Pesticide Authority (FPA) for providing the basic data on this module.


ROMEO S. RECIDÉ
Director

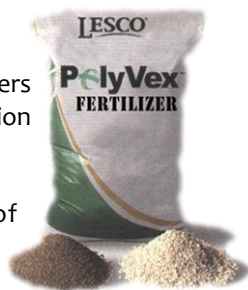
Quezon City, Philippines
December 2011

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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.



From 2006 to 2010, the domestic production of fertilizers continued to go down. In 2010, fertilizer production was 0.18 million metric tons and it posted 6.91 percent drop from the 2009 record. Meanwhile, importation of fertilizers increased to 1.97 million metric tons or by 13.66 percent from the previous year's level. Total supply of fertilizers was 2.15 million metric tons which was 11.57 percent higher than in 2009. The share of local production to total supply declined to 8.48 percent while that of imports rose to 91.52 percent.

Local sales of fertilizers at 0.33 million metric tons in 2010 grew by 90.43 percent. It recovered from its negative performance in the last two years. Fertilizer exports rose vigorously by more than 100 percent and reached 0.32 million metric tons in 2010. Both sales and exports shared around 15 percent each in the total supply of fertilizers (Tables 1a-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.

Among the fertilizer grades, the retail prices of di-ammophos were consistently highest throughout the reference period. In 2010, di-ammophos was priced P1,767.94 per bag. Prices of muriate of potash and complete fertilizer were P1,648.88 and P1,068.46 per bag, respectively. Ammosul maintained the lowest price at P512.27 per bag. For the year, the retail prices of the five (5) major fertilizer grades exhibited negative growth rates ranging from 2.81 percent for urea to 21.09 percent for di-ammophos (Tables 2a - 2b).

Based on 2000 prices, the 2010 retail price of muriate of potash was bigger by four times while that of di-ammophos by three times. Urea, ammosul and ammophos were priced more than twice higher than in 2000 (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).

Over the last three years (2008 to 2010), the nitrogen/palay price ratios decreased from 5.30 to 2.98 which means that the amount of output required for every kilogram of input was declining. In 2010, the nitrogen/palay price ratio at 2.98 indicated that 2.98 kilograms of palay were needed to pay for a kilogram of nitrogen fertilizer.

By quarter, the highest ratio of 3.16 was posted in the last quarter of 2010 while the lowest was observed in the 3rd quarter at 2.86 (Table 3).

Nominal and Real Wage Rate Indices in Agriculture

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 2010, the agricultural wage rate index, in nominal terms, rose to 153.1 percent and gained 53.1 index points from the 2000 wage rate. In real terms, wage rate index decreased to 92.2 percent or 7.8 index points lower than the base year (Tables 4a-4b).

Among the agricultural workers, those working in palay farms received the biggest increment in nominal wage rate at 63.1 index points. Sugarcane farm workers recorded a wage gain of 27.0 index points. Wage increments of more than 40.0 index points were noted among corn and coconut farm workers. On the other hand, the real wage rate



of palay farm workers in 2010 was down by 1.8 index points from the 2000 wage rate. This was lower for corn and coconut by 12.3 and 11.1 index points, respectively. Sugarcane farm workers got the biggest reduction of 23.5 index points in its real wage rate in 2010.

At the regional level, the biggest increases in the 2010 nominal wage rates of palay farm workers were reported in Central Visayas, Davao Region and Caraga; these ranged from 85 to 91 index points. In contrast, CAR had only 38.3 index point gain. Corn farm workers in Western Visayas and CAR recorded the highest wage increments at 78.1 and 68.9 index points, respectively. The lowest wage gain was noted in ARMM and Bicol Region at 41 index points each. For coconut farm workers, the growth in the nominal wage rates was biggest in CALABARZON at 91.2 index points and least in Zamboanga Peninsula at 17.2 index points. Central Luzon and Cagayan Valley exhibited the biggest wage gains for sugarcane farmers corresponding to 62.3 and 57.8 index points. A 10.1 index point expansion was posted in CALABARZON.

In real terms, the 2010 regional wage rates of palay, corn and coconut farm workers were mostly lower than the 2000 records. However, the real wage rates of palay farm workers in Cagayan Valley, CALABARZON, Central Visayas, Zamboanga Peninsula, Davao Region, SOCCSKSARGEN and Caraga were higher by 1 to 11 index points from the 2000 records. About 1 to 8 index points were the gains of corn farm workers in CAR, Cagayan Valley, Central Luzon, CALABARZON and Western Visayas. Coconut farm workers in Central Luzon, CALABARZON and Western Visayas had wage increases from 1 to 16 index points. The 2010 real wage rates of sugarcane farm workers in all regions were still below the 2000 records.

Table 1a.**Fertilizer: supply and disposition, Philippines, 2006-2010**

(in metric tons)

YEAR	PRODUCTION	IMPORTS	SUPPLY*	LOCAL SALES	EXPORTS
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
2008R	287,105	1,512,245	1,799,350	678,544	7,258
2009	196,095	1,733,728	1,929,823	173,929	160,182
2010P	182,549	1,970,489	2,153,038	331,219	322,593

*P- preliminary*** consists of local production and imports***Table 1b.****Annual growth rates of fertilizer supply and disposition, Philippines, 2006-2010**

(in percent)

YEAR	PRODUCTION	IMPORTS	SUPPLY*	LOCAL SALES	EXPORTS
2004/2005	-11.39	-14.78	-13.61	-38.71	43.61
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	-4.49	-22.82	-44.73	-97.57
2008/2009	-31.70	14.65	7.25	-74.37	2106.97
200/2010P	-6.91	13.66	11.57	90.43	101.39

*P- preliminary*** consists of local production and imports*

Table 1c.
Proportion of fertilizer production, imports, sales and exports
to total supply, Philippines, 2006-2010
 (in percent)

YEAR	PRODUCTION/ SUPPLY	IMPORT/ SUPPLY	SALES/ SUPPLY	EXPORT/ SUPPLY
2006	35.11	64.89	52.39	11.05
2007	32.08	67.92	52.66	12.81
2008	15.96	84.04	37.71	0.40
2009	10.16	89.84	9.01	8.30
2010P	8.48	91.52	15.38	14.98

P- preliminary

Table 2a.
Retail prices of major fertilizer grades, Philippines, 2006-2010
(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)
2006	898.95	474.39	734.32	1,353.17	746.21	803.23
2007	961.08	541.78	774.89	1,398.92	796.40	859.21
2008	1,551.43	917.81	1,618.21	2,691.85	1,671.67	1,711.99
2009	975.88	570.90	1,111.63	2,240.57	1,193.13	1,951.97
2010	948.47	512.27	920.91	1,767.94	1,068.46	1,648.88

Table 2b.
Annual growth rates of retail prices of major fertilizer grades, Philippines, 2006-2010
(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)
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
2009/2010	-2.81	-10.27	-17.16	-21.09	-10.45	-15.53

Table 2c.
Retail price indices of major fertilizer grades, Philippines, 2006-2010
 (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)
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
2010	259.55	220.93	230.88	342.91	265.31	434.80

Table 3.
Quarterly nitrogen/palay price ratio, Philippines 2006-2010

YEAR	NITROGEN/PALAY PRICE RATIO				
	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	JAN-DEC
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
2010	2.92	2.98	2.86	3.16	2.98

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 and
by region, Philippines, 2008-2010 (2000=100)

REGION/ CROPS	INDICES (%)		
	2008	2009	2010
Philippines			
Agriculture	144.6	149.3	153.1
Palay	149.7	155.9	163.1
Corn	139.1	142.2	145.5
Coconut	143.0	147.2	147.6
Sugarcane	122.5	123.2	127.0
CAR			
Agriculture	133.0	139.1	141.5
Palay	130.8	136.1	138.3
Corn	152.1	165.1	168.9
Coconut			
Sugarcane			
Ilocos Region			
Agriculture	148.9	154.4	160.8
Palay	150.4	156.1	162.7
Corn	144.9	156.4	167.0
Coconut	129.2	129.5	131.1
Sugarcane	127.5	130.1	130.5
Cagayan Valley			
Agriculture	159.7	162.6	165.6
Palay	162.0	165.3	166.1
Corn	158.2	160.3	167.6
Coconut	151.3	153.8	158.3
Sugarcane	154.5	156.5	157.8
Central Luzon			
Agriculture	142.1	148.1	154.5
Palay	137.7	144.6	152.3
Corn	161.2	163.5	167.8
Coconut	164.4	164.6	164.6
Sugarcane	142.7	162.0	162.3

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

REGION/ CROPS	INDICES (%)		
	2008	2009	2010
CALABARZON			
Agriculture	163.8	167.0	177.2
Palay	155.5	161.0	174.6
Corn	150.5	162.3	164.3
Coconut	177.9	180.1	191.2
Sugarcane	108.1	109.2	110.1
MIMAROPA			
Agriculture	138.2	144.9	152.3
Palay	134.1	139.4	149.9
Corn	136.1	147.5	155.8
Coconut	140.1	148.2	151.9
Sugarcane			
Bicol Region			
Agriculture	143.7	144.7	152.6
Palay	154.4	156.9	162.2
Corn	135.6	139.6	141.4
Coconut	140.2	140.4	149.9
Sugarcane	130.5	130.8	138.1
Western Visayas			
Agriculture	141.6	145.0	150.7
Palay	134.9	139.4	146.6
Corn	171.4	175.0	178.1
Coconut	164.6	165.1	169.1
Sugarcane	126.0	126.5	127.5
Central Visayas			
Agriculture	149.1	152.7	157.4
Palay	173.0	179.1	190.6
Corn	157.9	161.7	165.8
Coconut	135.3	138.0	141.0
Sugarcane	125.8	126.4	126.5

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

REGION/ CROPS	INDICES (%)		
	2008	2009	2010
Eastern Visayas			
Agriculture	140.7	141.1	148.7
Palay	138.5	139.0	144.8
Corn	148.4	151.2	156.7
Coconut	141.6	141.9	150.4
Sugarcane	111.8	113.2	114.6
Zamboanga Peninsula			
Agriculture	124.6	127.0	132.2
Palay	154.8	164.6	171.5
Corn	140.5	142.3	146.1
Coconut	110.9	111.6	117.2
Sugarcane			
Northern Mindanao			
Agriculture	149.9	153.1	154.6
Palay	141.9	143.4	145.9
Corn	151.7	153.4	154.5
Coconut	152.3	157.4	159.2
Sugarcane	134.6	136.3	134.0
Davao Region			
Agriculture	137.0	138.9	141.6
Palay	168.9	176.1	186.4
Corn	153.7	154.3	158.0
Coconut	124.6	125.9	126.8
Sugarcane	147.0	151.1	148.6
SOCCSKSARGEN			
Agriculture	143.1	147.1	154.4
Palay	155.7	163.2	176.5
Corn	137.9	142.0	147.0
Coconut	153.5	153.8	158.4
Sugarcane	134.6	138.1	140.6

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

REGION/ CROPS	INDICES (%)		
	2008	2009	2010
Caraga			
Agriculture	144.3	149.6	139.7
Palay	151.6	167.6	185.2
Corn	145.0	148.5	164.4
Coconut	140.8	141.5	141.6
Sugarcane			
ARMM			
Agriculture	142.3	146.9	165.1
Palay	159.3	165.8	174.7
Corn	134.2	143.7	140.7
Coconut	139.0	139.0	141.1
Sugarcane			

Table 4b.
Real wage rate index for agriculture, by crop and by region,
Philippines, 2008-2010 (2000=100)

REGION/ CROPS	INDICES (%)		
	2008	2009	2010
Philippines			
Agriculture	93.3	93.3	92.2
Palay	96.6	97.4	98.2
Corn	89.7	88.9	87.7
Coconut	92.3	92.0	88.9
Sugarcane	79.0	77.0	76.5
CAR			
Agriculture	85.7	86.4	84.4
Palay	84.2	84.6	82.5
Corn	97.9	102.6	100.7
Coconut			
Sugarcane			
Ilocos Region			
Agriculture	95.6	95.7	97.3
Palay	96.5	96.8	98.4
Corn	93.0	97.0	101.0
Coconut	82.9	80.3	79.3
Sugarcane	81.8	80.7	78.9
Cagayan Valley			
Agriculture	106.6	103.0	101.4
Palay	108.2	104.8	101.6
Corn	105.6	101.6	102.6
Coconut	101.0	97.5	96.9
Sugarcane	103.1	99.2	96.6
Central Luzon			
Agriculture	92.9	93.3	94.3
Palay	90.1	91.1	93.0
Corn	105.4	102.9	102.5
Coconut	107.5	103.6	100.5
Sugarcane	93.3	102.0	99.1

Table 4b. Real wage...(Continued)

REGION/ CROPS	INDICES (%)		
	2008	2009	2010
CALABARZON			
Agriculture	107.6	106.3	108.0
Palay	102.2	102.5	106.4
Corn	98.9	103.3	100.1
Coconut	116.9	114.6	116.5
Sugarcane	71.0	69.5	67.1
MIMAROPA			
Agriculture	91.2	92.7	93.7
Palay	88.5	89.2	92.3
Corn	89.8	94.4	95.9
Coconut	92.4	94.8	93.5
Sugarcane			
Bicol Region			
Agriculture	93.5	90.1	91.4
Palay	100.5	97.7	97.1
Corn	88.3	86.9	84.7
Coconut	91.3	87.4	89.7
Sugarcane	85.0	81.4	82.7
Western Visayas			
Agriculture	92.5	90.4	91.4
Palay	88.1	86.9	88.8
Corn	111.9	109.1	107.9
Coconut	107.5	102.9	102.5
Sugarcane	82.3	78.9	77.3
Central Visayas			
Agriculture	92.3	92.0	91.7
Palay	107.1	107.9	111.0
Corn	97.7	97.4	96.5
Coconut	83.7	83.1	82.1
Sugarcane	77.8	76.1	73.7

Table 4b. Real wage...(Continued)

REGION/ CROPS	INDICES (%)		
	2008	2009	2010
Eastern Visayas			
Agriculture	90.3	85.9	87.9
Palay	88.9	84.6	85.6
Corn	95.3	92.1	92.7
Coconut	90.9	86.4	89.0
Sugarcane	71.8	68.9	67.8
Zamboanga Peninsula			
Agriculture	79.0	77.7	78.4
Palay	98.1	100.8	101.7
Corn	89.1	87.1	86.6
Coconut	70.3	68.3	69.5
Sugarcane			
Northern Mindanao			
Agriculture	93.2	91.1	89.1
Palay	88.2	85.3	84.1
Corn	94.3	91.3	89.0
Coconut	94.6	93.7	91.8
Sugarcane	83.6	81.1	77.2
Davao Region			
Agriculture	85.9	83.2	81.5
Palay	105.8	105.4	107.2
Corn	96.3	92.4	90.9
Coconut	78.1	75.4	73.0
Sugarcane	92.1	90.5	85.5
SOCCSKSARGEN			
Agriculture	93.0	91.8	92.3
Palay	101.1	101.8	105.5
Corn	89.6	88.6	87.9
Coconut	99.7	96.0	94.7
Sugarcane	87.5	86.2	84.1

Table 4b. Real wage...*(Continued)*

REGION/ CROPS	INDICES (%)		
	2008	2009	2010
Caraga			
Agriculture	89.4	88.6	87.1
Palay	93.9	99.2	105.7
Corn	89.8	87.9	80.3
Coconut	87.2	83.8	80.8
Sugarcane			
ARMM			
Agriculture	83.2	81.5	79.0
Palay	93.2	92.0	91.4
Corn	78.5	79.7	86.0
Coconut	81.3	77.1	73.8
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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