



Demand, supply, prices and geography

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Getting our head around China's market for fertilizers

We source this data from China's National Bureau of Statistics (NBS). We make no adjustments to the data. Some of the data is young: DAP & MAP data started to be published in 2011 and does not look like it captures the full year; Jan & Feb 2013 & 2014 production data is simply "missing" - see footnotes; and some of the data differs materially from other sources (Fertcon): China's own "tea pot fertilizers" maybe. Figures 1-18 provide annual and monthly supply and demand data; Figures 19-23 provide price information; Figures 24-27 present production cost models, coal vs. natural gas; and Figures 28-35 present a geographical spread of China's fertilizer consumption.

China's Potash imports

China, USA, Brazil and India are the world's largest importers of potash each demanding of 4-9 mln tons annually. On 21-January, China signed an import contract with Uralkali (Russia) for 700k tons at a price of US\$ 305/ ton gross of transport or roughly US\$ 285/ ton net of (US\$ 20/ton) transport. The current market price for wholesale Potash in China is US\$ 335.8/ ton (Figure 19) which includes 17% VAT (US\$ 278/ ton x-VAT). The prior China import contract was signed in January 2013 with Canpotex at a price of US\$ 400/ ton. The 21-January China purchase set the first reference price for commercial potash since the breakup of BPC and the potash pricing cartel in July 2013. We think the price level is meaningful in that it seems to be set just north of what we believe to be the cash production cost of K+S from Germany. Germany supplies ~9% of the world's potash market at a cash cost of ~US\$ 262-270/ ton. There are other smaller potash producers from Brazil and USA that are knocked off the cost curve at US\$ 262-270/ ton production cost. We suspect that knocking K+S (9%) off the global potash production line would cause prices to spike. We suspect 1) that Uralkali has set this price very deliberately to instill a bit of price discipline in the global potash market; and 2) that we have most probably hit the bottom of potash prices globally. It looks as if global potash prices have stabilized over the past 6-8 months (Figure 24).

China's fertilizer export window:

The export window for China's urea and phosphate production was reset end – December 2013. Export taxes were lowered to 15% (2014) from 75% in 2013. The urea export tax (15%) will be applied November through June 2014 in an attempt to keep production in the country during planting seasons. The urea export tax is reduced to 0% during the off-season of July through October when exports are highest. The phosphates (DAP & MAP) export tax (15%) will be applied mid-October through mid-May. The DAP & MAP export tax is reduced to 0% mid-May through mid-October when exports are the highest. Given the dramatic decline in the 2014 (15%) vs. 2013 (75%) export tax on China urea and phosphates: 1) we should see increased exports of fertilizers out of China 2014 vs. 2013; and 2) we could see less seasonality in the export patterns of fertilizer out of China in 2014 vs. 2013.

Our coal to urea and natural gas to urea, China production cost models can be found in Figures 24 and 26, respectively.



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China fertilizer demand and supply

Annual fertilizer data

Data in this report is in physical products basis and not on a nutrient basis.

The following product classifications hold true for figures 1-18.

Nitrogenous fertilizer includes urea as well as various mixtures of urea and ammonium nitrates;

Potassium fertilizer includes potassium nitrate, potassium chloride; potassium sulfate as well as crude natural potassium salts carnallite and sylvite;

“Other” phosphorus fertilizers include various blends of NPK (nitrogen, phosphorous and potassium).

Figure 1: China's annual fertilizer apparent demand and apparent demand growth

'000 Tons	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	n.a	n.a	n.a	n.a	n.a	n.a
FY02	27,861	8,044	n.a	n.a	10,567	46,472
FY03	26,316	7,978	n.a	n.a	10,871	45,164
FY04	29,625	9,551	n.a	n.a	11,913	51,090
FY05	34,440	11,414	n.a	n.a	13,330	59,184
FY06	37,439	9,785	n.a	n.a	13,816	61,040
FY07	37,167	12,176	n.a	n.a	11,757	61,099
FY08	38,955	8,057	n.a	n.a	11,616	58,628
FY09	45,338	5,514	n.a	n.a	15,590	66,442
FY10	39,654	9,504	n.a	n.a	16,692	65,849
FY11	39,930	10,770	9,788	6,080	11,817	78,385
FY12	43,530	11,507	14,360	11,969	20,326	101,692
FY13 (Mar-Dec) annualized	44,579	13,002	17,438	13,098	20,647	105,711
FY14 annualized	40,462	15,061	18,977	14,556	15,360	104,416

Y-o-Y growth %	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	n.a	n.a	n.a	n.a	n.a	n.a
FY02	n.a	n.a	n.a	n.a	n.a	n.a
FY03	-5.5%	-0.8%	n.a	n.a	2.9%	-2.8%
FY04	12.6%	19.7%	n.a	n.a	9.6%	13.1%
FY05	16.3%	19.5%	n.a	n.a	11.9%	15.8%
FY06	8.7%	-14.3%	n.a	n.a	3.6%	3.1%
FY07	-0.7%	24.4%	n.a	n.a	-14.9%	0.1%
FY08	4.8%	-33.8%	n.a	n.a	-1.2%	-4.0%
FY09	16.4%	-31.6%	n.a	n.a	34.2%	13.3%
FY10	-12.5%	72.3%	n.a	n.a	7.1%	-0.9%
FY11	0.7%	13.3%	n.a	n.a	-29.2%	19.0%
FY12	9.0%	6.8%	46.7%	96.9%	72.0%	29.7%
FY13 (Mar-Dec) annualized	2.4%	13.0%	21.4%	9.4%	1.6%	4.0%
FY14 annualized	-9.2%	15.8%	8.8%	11.1%	-25.6%	-1.2%

Source: CEIC, Deutsche Bank AG
Note: Apparent demand is calculated as production + imports - exports
.....CEIC has not published Jan and Feb fertilizer production data for 2013 and 2014.



Figure 2: China's annual fertilizer production and production growth

'000 Tons	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	25,323	1,351	n.a	n.a	7,379	34,053
FY02	27,483	1,441	n.a	n.a	7,733	36,656
FY03	28,911	1,681	n.a	n.a	8,749	39,341
FY04	33,530	2,258	n.a	n.a	9,935	45,723
FY05	35,940	2,392	n.a	n.a	11,178	49,511
FY06	38,769	2,673	n.a	n.a	12,554	53,996
FY07	42,420	2,545	n.a	n.a	13,309	58,274
FY08	43,315	2,832	n.a	n.a	12,582	58,728
FY09	48,679	3,735	n.a	n.a	14,877	67,291
FY10	46,666	4,125	n.a	n.a	17,311	68,102
FY11	43,479	4,190	10,652	10,004	15,599	83,924
FY12	50,308	5,220	14,955	15,743	20,481	106,707
FY13 (Mar-Dec) annualized	53,741	6,917	18,343	17,831	20,802	114,017
FY14 annualized	49,177	6,879	20,383	16,941	15,998	109,378

Y-o-Y growth %	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	n.a	n.a	n.a	n.a	n.a	n.a
FY02	8.5%	6.6%	n.a	n.a	4.8%	7.6%
FY03	5.2%	16.7%	n.a	n.a	13.1%	7.3%
FY04	16.0%	34.3%	n.a	n.a	13.6%	16.2%
FY05	7.2%	5.9%	n.a	n.a	12.5%	8.3%
FY06	7.9%	11.7%	n.a	n.a	12.3%	9.1%
FY07	9.4%	-4.8%	n.a	n.a	6.0%	7.9%
FY08	2.1%	11.3%	n.a	n.a	-5.5%	0.8%
FY09	12.4%	31.9%	n.a	n.a	18.2%	14.6%
FY10	-4.1%	10.5%	n.a	n.a	16.4%	1.2%
FY11	-6.8%	1.6%	n.a	n.a	-9.9%	23.2%
FY12	15.7%	24.6%	40.4%	57.4%	31.3%	27.1%
FY13 (Mar-Dec) annualized	6.8%	32.5%	22.7%	13.3%	1.6%	6.9%
FY14 annualized	-8.5%	-0.6%	11.1%	-5.0%	-23.1%	-4.1%

Source: CEIC, Deutsche Bank
.....Note: CEIC has not published Jan and Feb fertilizer production data for 2013 and 2014.



Figure 3: China's annual fertilizer imports and imports growth

'000 Tons	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	n.a	n.a	n.a	n.a	n.a	n.a
FY02	791	7,009	58	4,925	2,949	15,732
FY03	135	6,629	61	2,609	2,372	11,805
FY04	38	7,444	104	2,286	2,280	12,152
FY05	71	9,169	126	1,748	2,507	13,621
FY06	38	7,482	20	1,439	2,044	11,023
FY07	1	9,761	17	540	1,377	11,696
FY08	0	5,390	2	96	658	6,147
FY09	39	2,187	11	433	1,312	3,982
FY10	13	5,466	33	423	1,100	7,035
FY11	10	6,623	0	93	1,065	7,792
FY12	172	6,587	0	160	1,342	8,261
FY13	35	6,201	0	221	1,379	7,836
FY14 annualized	8	7,874	0	459	1,089	9,429

Y-o-Y growth %	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	n.a	n.a	n.a	n.a	n.a	n.a
FY02	n.a	n.a	n.a	n.a	n.a	n.a
FY03	-82.9%	-5.4%	5.9%	-47.0%	-19.6%	-25.0%
FY04	-71.8%	12.3%	69.1%	-12.4%	-3.9%	2.9%
FY05	86.8%	23.2%	21.2%	-23.5%	9.9%	12.1%
FY06	-47.1%	-18.4%	-83.8%	-17.7%	-18.5%	-19.1%
FY07	-98.6%	30.5%	-16.3%	-62.5%	-32.6%	6.1%
FY08	-87.6%	-44.8%	-89.9%	-82.2%	-52.2%	-47.4%
FY09	n.m	-59.4%	555.5%	351.2%	99.3%	-35.2%
FY10	-65.5%	150.0%	187.3%	-2.4%	-16.2%	76.7%
FY11	-23.7%	21.2%	-99.1%	-77.9%	-3.1%	10.8%
FY12	n.m	-0.5%	-93.0%	71.4%	26.0%	6.0%
FY13	-79.7%	-5.9%	629.4%	38.3%	2.7%	-5.1%
FY14 annualized	-78.3%	27.0%	-98.4%	107.6%	-21.0%	20.3%

Source: CEIC, Deutsche Bank



Figure 4: China's annual fertilizer exports and exports growth

'000 Tons	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	n.a	n.a	n.a	n.a	n.a	n.a
FY02	413	406	126	478	114	1,538
FY03	2,730	332	126	800	250	4,238
FY04	3,943	151	151	857	302	5,404
FY05	1,571	147	217	718	355	3,007
FY06	1,367	370	475	786	782	3,780
FY07	5,254	130	1,934	1,971	2,929	12,220
FY08	4,360	165	1,016	817	1,624	7,982
FY09	3,380	407	496	2,073	599	6,955
FY10	7,026	88	935	3,988	1,719	13,755
FY11	3,559	43	865	4,018	4,848	13,332
FY12	6,950	300	595	3,934	1,497	13,276
FY13	8,267	305	709	3,820	1,335	14,436
FY14 annualized	8,462	465	1,192	2,545	1,696	14,360

Y-o-Y growth %	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	n.a	n.a	n.a	n.a	n.a	n.a
FY02	n.a	n.a	n.a	n.a	n.a	n.a
FY03	561.1%	-18.2%	-0.2%	67.3%	118.5%	175.6%
FY04	44.4%	-54.5%	20.2%	7.1%	20.7%	27.5%
FY05	-60.2%	-2.5%	43.2%	-16.2%	17.7%	-44.3%
FY06	-12.9%	151.3%	119.1%	9.5%	120.3%	25.7%
FY07	284.3%	-64.7%	307.2%	150.8%	274.6%	223.3%
FY08	-17.0%	26.7%	-47.5%	-58.6%	-44.6%	-34.7%
FY09	-22.5%	146.5%	-51.2%	153.8%	-63.1%	-12.9%
FY10	107.8%	-78.4%	88.4%	92.4%	187.1%	97.8%
FY11	-49.3%	-51.0%	-7.5%	0.7%	182.0%	-3.1%
FY12	95.3%	597.6%	-31.2%	-2.1%	-69.1%	-0.4%
FY13	18.9%	1.6%	19.2%	-2.9%	-10.8%	8.7%
FY14 annualized	2.4%	52.6%	68.1%	-33.4%	27.0%	-0.5%

Source: CEIC, Deutsche Bank

Figure 5: China's annual fertilizer NET imports / (exports)

'000 Tons	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	n.a	n.a	n.a	n.a	n.a	n.a
FY02	378	6,604	(68)	4,447	2,834	14,194
FY03	(2,595)	6,297	(65)	1,808	2,122	7,567
FY04	(3,905)	7,293	(47)	1,429	1,978	6,748
FY05	(1,500)	9,022	(91)	1,030	2,152	10,613
FY06	(1,330)	7,112	(455)	653	1,262	7,243
FY07	(5,253)	9,631	(1,917)	(1,431)	(1,552)	(523)
FY08	(4,360)	5,225	(1,014)	(721)	(965)	(1,835)
FY09	(3,341)	1,780	(485)	(1,640)	713	(2,973)
FY10	(7,012)	5,379	(902)	(3,565)	(619)	(6,720)
FY11	(3,549)	6,580	(864)	(3,924)	(3,782)	(5,539)
FY12	(6,778)	6,287	(595)	(3,774)	(155)	(5,015)
FY13	(8,232)	5,896	(709)	(3,599)	43	(6,600)
FY14 annualized	(8,455)	7,409	(1,192)	(2,086)	(607)	(4,931)

Source: CEIC, Deutsche Bank



Monthly fertilizer data

China fertilizer apparent demand data

Apparent demand is calculated as production + imports - exports

Figure 6: China's fertilizer apparent demand data (2001- YTD2014)

'000 Tons	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	n.a	n.a	n.a	n.a	n.a	n.a
FY02	27,860.8	8,044.4	n.a	n.a	10,567.0	46,472.2
FY03	26,315.6	7,978.2	n.a	n.a	10,870.6	45,164.4
FY04	29,625.1	9,551.4	n.a	n.a	11,913.2	51,089.7
FY05	34,440.4	11,414.0	n.a	n.a	13,329.9	59,184.4
FY06	37,439.1	9,784.8	n.a	n.a	13,816.2	61,040.1
FY07	37,166.5	12,175.9	n.a	n.a	11,756.6	61,099.0
FY08	38,955.0	8,056.8	n.a	n.a	11,616.4	58,628.2
FY09	45,338.0	5,514.5	n.a	n.a	15,590.0	66,442.5
FY10	39,653.6	9,503.7	n.a	n.a	16,692.0	65,849.3
Jan-11	2,962.9	653.4	458.3	331.1	1,106.9	5,512.7
Feb-11	3,379.7	318.2	631.4	341.6	1,262.1	5,933.1
Mar-11	3,831.5	719.8	780.0	560.4	1,214.4	7,106.1
Apr-11	3,659.2	972.1	954.7	857.2	1,196.2	7,639.5
May-11	3,768.9	1,299.2	868.4	920.8	1,119.8	7,977.1
Jun-11	3,984.6	995.2	995.5	734.6	1,380.7	8,090.7
Jul-11	3,381.5	888.9	761.1	439.3	679.8	6,150.5
Aug-11	2,980.1	1,043.9	807.1	0.9	613.5	5,445.5
Sep-11	3,173.9	1,251.1	725.7	272.3	726.1	6,149.2
Oct-11	3,164.6	1,041.8	866.4	319.0	690.8	6,082.6
Nov-11	2,520.9	1,066.8	930.8	748.3	697.1	5,963.9
Dec-11	3,122.5	519.8	1,008.2	553.9	1,129.4	6,333.9
FY11	39,930.4	10,770.2	9,787.5	6,079.7	11,816.8	78,384.6
Jan-12	3,708.2	807.8	1,081.0	965.1	977.4	7,539.5
Feb-12	4,051.2	726.4	1,124.1	1,119.7	1,603.4	8,624.8
Mar-12	4,232.2	1,118.3	1,103.0	1,288.8	1,830.3	9,572.7
Apr-12	4,150.8	898.2	1,240.8	1,128.5	1,604.5	9,022.8
May-12	4,322.9	1,082.5	1,192.2	1,076.5	1,836.5	9,510.5
Jun-12	4,222.0	1,262.3	1,336.1	1,326.0	1,989.5	10,135.8
Jul-12	3,733.9	1,245.1	1,121.5	992.2	1,788.2	8,880.9
Aug-12	3,978.3	1,417.0	1,160.1	301.2	1,954.0	8,810.5
Sep-12	2,981.9	897.3	1,178.2	782.0	1,907.3	7,746.8
Oct-12	2,853.3	869.1	1,098.8	927.6	1,577.1	7,326.0
Nov-12	2,620.1	550.6	1,352.9	899.6	1,635.3	7,058.5
Dec-12	2,675.0	632.2	1,371.5	1,161.8	1,622.3	7,462.8
FY12	43,529.8	11,506.6	14,360.4	11,969.0	20,325.8	101,691.6
Jan-13	n.a	n.a	n.a	n.a	n.a	n.a
Feb-13	n.a	n.a	n.a	n.a	n.a	n.a
Mar-13	4,689.8	1,537.3	n.a	n.a	2,170.8	8,397.9
Apr-13	4,624.6	1,608.9	1,521.7	1,429.9	1,780.0	10,965.2
May-13	4,330.5	1,189.8	1,503.4	1,282.8	1,646.6	9,953.1
Jun-13	4,629.5	928.0	1,371.9	1,204.2	1,723.1	9,856.7
Jul-13	2,951.5	901.8	1,214.6	860.8	1,577.5	7,506.2
Aug-13	2,999.3	1,035.8	1,232.2	754.9	1,708.5	7,730.7
Sep-13	2,998.1	875.1	1,542.9	1,091.2	1,880.5	8,387.8
Oct-13	3,363.9	855.1	1,507.9	965.1	1,621.9	8,313.9
Nov-13	3,087.3	891.0	1,551.8	1,201.3	1,509.5	8,240.9
Dec-13	3,474.9	1,012.1	1,632.4	1,033.1	1,587.4	8,739.9
FY13	37,149.4	10,834.8	13,078.9	9,823.4	17,205.9	88,092.3
Jan-14	n.a	n.a	n.a	n.a	n.a	n.a
Feb-14	n.a	n.a	n.a	n.a	n.a	n.a
Mar-14	3,676.2	1,008.8	1,553.5	1,344.8	1,351.4	8,934.8
Apr-14	2,635.8	1,277.1	1,444.0	1,238.0	1,208.5	7,803.4
May-14	3,519.7	1,507.7	1,612.2	1,175.6	1,337.1	9,152.4
Jun-14	3,655.6	1,226.7	1,715.9	1,093.5	1,222.9	8,914.6
YTD-14	13,487.4	5,020.3	6,325.6	4,852.0	5,119.9	34,805.2

Source: CEIC, Deutsche Bank

Note: CEIC has not published Jan and Feb fertilizer production data for 2013 and 2014.



Figure 7: China's fertilizer apparent demand growth cumulative (y-o-y)

% FY	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	n.a	n.a	n.a	n.a	n.a	n.a
FY02	n.a	n.a	n.a	n.a	n.a	n.a
FY03	-5.5%	-0.8%	n.a	n.a	2.9%	-2.8%
FY04	12.6%	19.7%	n.a	n.a	9.6%	13.1%
FY05	16.3%	19.5%	n.a	n.a	11.9%	15.8%
FY06	8.7%	-14.3%	n.a	n.a	3.6%	3.1%
FY07	-0.7%	24.4%	n.a	n.a	-14.9%	0.1%
FY08	4.8%	-33.8%	n.a	n.a	-1.2%	-4.0%
FY09	16.4%	-31.6%	n.a	n.a	34.2%	13.3%
FY10	-12.5%	72.3%	n.a	n.a	7.1%	-0.9%
Jan-11	-13.3%	46.9%	n.a	n.a	-9.5%	8.4%
Feb-11	-5.4%	10.1%	n.a	n.a	-0.3%	14.8%
Mar-11	-5.8%	-2.4%	n.a	n.a	-7.4%	13.1%
Apr-11	-6.6%	-8.4%	n.a	n.a	-9.6%	13.9%
May-11	-6.5%	8.7%	n.a	n.a	-11.4%	17.3%
Jun-11	-5.3%	13.4%	n.a	n.a	-10.4%	19.7%
Jul-11	-4.9%	15.8%	n.a	n.a	-14.2%	19.3%
Aug-11	-4.7%	19.6%	n.a	n.a	-19.4%	17.8%
Sep-11	-1.9%	23.4%	n.a	n.a	-23.1%	19.0%
Oct-11	-2.2%	17.3%	n.a	n.a	-26.5%	17.0%
Nov-11	-1.2%	18.2%	n.a	n.a	-29.2%	18.1%
Dec-11	0.7%	13.3%	n.a	n.a	-29.2%	19.0%
FY11	0.7%	13.3%	n.a	n.a	-29.2%	19.0%
Jan-12	25.2%	23.6%	135.9%	191.4%	-11.7%	36.8%
Feb-12	22.3%	57.9%	102.4%	209.9%	8.9%	41.2%
Mar-12	17.9%	56.8%	76.9%	173.6%	23.1%	38.7%
Apr-12	16.7%	33.3%	61.1%	115.4%	25.9%	32.7%
May-12	16.3%	16.9%	55.5%	85.3%	33.1%	29.6%
Jun-12	14.4%	18.9%	51.0%	84.3%	35.2%	28.7%
Jul-12	13.8%	22.1%	50.5%	88.7%	46.1%	30.7%
Aug-12	15.9%	24.2%	49.6%	95.8%	58.4%	33.9%
Sep-12	13.7%	16.1%	50.9%	101.4%	66.6%	33.1%
Oct-12	11.5%	12.4%	48.3%	107.4%	70.8%	31.9%
Nov-12	11.0%	6.1%	47.9%	95.6%	75.0%	30.8%
Dec-12	9.0%	6.8%	46.7%	96.9%	72.0%	29.7%
FY12	9.0%	6.8%	46.7%	96.9%	72.0%	29.7%
Jan-13	n.a	n.a	n.a	n.a	n.a	n.a
Feb-13	n.a	n.a	n.a	n.a	n.a	n.a
Mar-13	10.8%	37.5%	-100.0%	-100.0%	18.6%	-12.3%
Apr-13	11.1%	56.0%	-35.1%	-40.8%	15.0%	4.1%
May-13	7.4%	39.9%	-14.4%	-22.4%	6.2%	4.3%
Jun-13	8.0%	20.7%	-9.8%	-18.7%	0.8%	2.4%
Jul-13	2.7%	10.0%	-6.4%	-17.8%	-1.7%	-0.9%
Aug-13	-1.7%	2.5%	-4.3%	-9.5%	-3.6%	-2.7%
Sep-13	-1.4%	2.0%	0.7%	-3.9%	-3.3%	-1.4%
Oct-13	0.4%	1.6%	4.9%	-3.0%	-2.6%	0.1%
Nov-13	1.8%	5.2%	6.1%	0.8%	-3.1%	1.6%
Dec-13	3.9%	8.6%	7.6%	-0.6%	-3.0%	3.0%
FY13	3.9%	8.6%	7.6%	-0.6%	-3.0%	3.0%
Jan-14	n.a	n.a	n.a	n.a	n.a	n.a
Feb-14	n.a	n.a	n.a	n.a	n.a	n.a
Mar-14	-21.6%	-34.4%	n.a	n.a	-37.7%	6.4%
Apr-14	-32.2%	-27.3%	-5.1%	-13.4%	-35.2%	-13.6%
May-14	-27.9%	-12.5%	1.0%	-11.0%	-30.4%	-11.7%
Jun-14	-26.2%	-4.6%	8.5%	-10.5%	-30.1%	-11.1%
YTD-14	-26.2%	-4.6%	43.9%	23.9%	-30.1%	-11.1%

Source: Deutsche Bank
Note: CEIC has not published Jan and Feb fertilizer production data for 2013 and 2014.



Figure 8: China's fertilizer apparent demand growth (y-o-y)

%	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	n.a	n.a	n.a	n.a	n.a	n.a
FY02	n.a	n.a	n.a	n.a	n.a	n.a
FY03	-5.5%	-0.8%	n.a	n.a	2.9%	-2.8%
FY04	12.6%	19.7%	n.a	n.a	9.6%	13.1%
FY05	16.3%	19.5%	n.a	n.a	11.9%	15.8%
FY06	8.7%	-14.3%	n.a	n.a	3.6%	3.1%
FY07	-0.7%	24.4%	n.a	n.a	-14.9%	0.1%
FY08	4.8%	-33.8%	n.a	n.a	-1.2%	-4.0%
FY09	16.4%	-31.6%	n.a	n.a	34.2%	13.3%
FY10	-12.5%	72.3%	n.a	n.a	7.1%	-0.9%
Jan-11	-13.3%	46.9%	n.a	n.a	-9.5%	8.4%
Feb-11	2.7%	-27.3%	n.a	n.a	9.5%	21.5%
Mar-11	-6.3%	-15.4%	n.a	n.a	-18.6%	10.4%
Apr-11	-8.6%	-17.3%	n.a	n.a	-15.7%	15.8%
May-11	-6.1%	76.4%	n.a	n.a	-18.5%	30.2%
Jun-11	0.1%	37.2%	n.a	n.a	-5.8%	31.1%
Jul-11	-2.1%	30.6%	n.a	n.a	-40.9%	16.4%
Aug-11	-3.0%	47.0%	n.a	n.a	-54.9%	5.9%
Sep-11	31.9%	49.5%	n.a	n.a	-50.4%	30.7%
Oct-11	-5.3%	-15.4%	n.a	n.a	-53.5%	0.4%
Nov-11	15.5%	26.4%	n.a	n.a	-54.0%	31.3%
Dec-11	30.1%	-37.4%	n.a	n.a	-28.9%	31.5%
FY11	0.7%	13.3%	n.a	n.a	-29.2%	19.0%
Jan-12	25.2%	23.6%	135.9%	191.4%	-11.7%	36.8%
Feb-12	19.9%	128.3%	78.1%	227.7%	27.0%	45.4%
Mar-12	10.5%	55.4%	41.4%	130.0%	50.7%	34.7%
Apr-12	13.4%	-7.6%	30.0%	31.6%	34.1%	18.1%
May-12	14.7%	-16.7%	37.3%	16.9%	64.0%	19.2%
Jun-12	6.0%	26.8%	34.2%	80.5%	44.1%	25.3%
Jul-12	10.4%	40.1%	47.4%	125.9%	163.1%	44.4%
Aug-12	33.5%	35.7%	43.7%	31901.8%	218.5%	61.8%
Sep-12	-6.0%	-28.3%	62.4%	187.1%	162.7%	26.0%
Oct-12	-9.8%	-16.6%	26.8%	190.8%	128.3%	20.4%
Nov-12	3.9%	-48.4%	45.3%	20.2%	134.6%	18.4%
Dec-12	-14.3%	21.6%	36.0%	109.7%	43.6%	17.8%
FY12	9.0%	6.8%	46.7%	96.9%	72.0%	29.7%
Jan-13	n.a	n.a	n.a	n.a	n.a	n.a
Feb-13	n.a	n.a	n.a	n.a	n.a	n.a
Mar-13	10.8%	37.5%	n.a	n.a	18.6%	-12.3%
Apr-13	11.4%	79.1%	22.6%	26.7%	10.9%	21.5%
May-13	0.2%	9.9%	26.1%	19.2%	-10.3%	4.7%
Jun-13	9.7%	-26.5%	2.7%	-9.2%	-13.4%	-2.8%
Jul-13	-21.0%	-27.6%	8.3%	-13.2%	-11.8%	-15.5%
Aug-13	-24.6%	-26.9%	6.2%	150.7%	-12.6%	-12.3%
Sep-13	0.5%	-2.5%	31.0%	39.5%	-1.4%	8.3%
Oct-13	17.9%	-1.6%	37.2%	4.0%	2.8%	13.5%
Nov-13	17.8%	61.8%	14.7%	33.5%	-7.7%	16.8%
Dec-13	29.9%	60.1%	19.0%	-11.1%	-2.2%	17.1%
FY13	3.9%	8.6%	7.6%	-0.6%	-3.0%	3.0%
Jan-14	n.a	n.a	n.a	n.a	n.a	n.a
Feb-14	n.a	n.a	n.a	n.a	n.a	n.a
Mar-14	-21.6%	-34.4%	n.a	n.a	-37.7%	6.4%
Apr-14	-43.0%	-20.6%	-5.1%	-13.4%	-32.1%	-28.8%
May-14	-18.7%	26.7%	7.2%	-8.4%	-18.8%	-8.0%
Jun-14	-21.0%	32.2%	25.1%	-9.2%	-29.0%	-9.6%
YTD-14	-26.2%	-4.6%	43.9%	23.9%	-30.1%	-11.1%

Source: Deutsche Bank
Note: CEIC has not published Jan and Feb fertilizer production data for 2013 and 2014.



China fertilizer production data

Figure 9: China's fertilizer production data (2001- YTD-14)

'000 Tons	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	25,323	1,351	n.a	n.a	7,379	34,053
FY02	27,483	1,441	n.a	n.a	7,733	36,656
FY03	28,911	1,681	n.a	n.a	8,749	39,341
FY04	33,530	2,258	n.a	n.a	9,935	45,723
FY05	35,940	2,392	n.a	n.a	11,178	49,511
FY06	38,769	2,673	n.a	n.a	12,554	53,996
FY07	42,420	2,545	n.a	n.a	13,309	58,274
FY08	43,315	2,832	n.a	n.a	12,582	58,728
FY09	48,679	3,735	n.a	n.a	14,877	67,291
FY10	46,666	4,125	n.a	n.a	17,311	68,102
Jan-11	3,309	147	544	383	1,143	5,526
Feb-11	3,576	145	633	406	1,206	5,966
Mar-11	3,885	311	806	630	1,277	6,909
Apr-11	3,701	398	961	871	1,125	7,056
May-11	3,788	491	869	938	1,290	7,376
Jun-11	4,007	449	1,007	1,067	1,552	8,082
Jul-11	3,660	449	878	985	1,255	7,227
Aug-11	3,470	400	974	940	1,311	7,095
Sep-11	3,630	445	988	1,027	1,420	7,510
Oct-11	3,650	424	934	942	1,285	7,235
Nov-11	3,416	276	1,000	983	1,311	6,986
Dec-11	3,387	255	1,058	832	1,424	6,956
FY11	43,479	4,190	10,652	10,004	15,599	83,924
Jan-12	3,824	119	1,094	1,051	1,159	7,247
Feb-12	4,049	162	1,135	1,166	1,596	8,109
Mar-12	4,231	419	1,103	1,253	1,678	8,684
Apr-12	4,153	606	1,241	1,114	1,548	8,662
May-12	4,316	460	1,192	1,089	1,691	8,748
Jun-12	4,313	510	1,427	1,403	2,046	9,699
Jul-12	4,087	487	1,195	1,415	1,783	8,967
Aug-12	4,657	532	1,227	1,469	1,931	9,816
Sep-12	4,238	568	1,300	1,560	1,995	9,660
Oct-12	4,057	559	1,181	1,395	1,694	8,886
Nov-12	4,063	399	1,416	1,347	1,646	8,871
Dec-12	4,320	397	1,443	1,481	1,716	9,357
FY12	50,308	5,220	14,955	15,743	20,481	106,707
Jan-13	n.a	n.a	n.a	n.a	n.a	n.a
Feb-13	n.a	n.a	n.a	n.a	n.a	n.a
Mar-13	4,880	625	n.a	n.a	2,038	7,543
Apr-13	4,874	669	1,550	1,432	1,745	10,270
May-13	4,535	605	1,523	1,326	1,615	9,605
Jun-13	4,665	587	1,491	1,462	1,788	9,993
Jul-13	4,267	525	1,310	1,389	1,656	9,148
Aug-13	4,442	534	1,383	1,523	1,795	9,677
Sep-13	4,468	608	1,605	1,573	1,876	10,131
Oct-13	4,352	616	1,567	1,594	1,744	9,872
Nov-13	4,073	568	1,641	1,563	1,509	9,354
Dec-13	4,227	427	1,687	1,512	1,570	9,422
FY13	44,784	5,764	13,757	13,373	17,335	95,014
Jan-14	n.a	n.a	n.a	n.a	n.a	n.a
Feb-14	n.a	n.a	n.a	n.a	n.a	n.a
Mar-14	4,328	428	1,699	1,522	1,414	9,391
Apr-14	3,975	557	1,516	1,408	1,235	8,691
May-14	4,066	611	1,692	1,351	1,289	9,009
Jun-14	4,024	696	1,887	1,366	1,395	9,368
YTD-14	16,392	2,293	6,794	5,647	5,333	36,459

Source: CEIC, Deutsche Bank
Note: CEIC has not published Jan and Feb fertilizer production data for 2013 and 2014.



Figure 10: China's fertilizer production growth cumulative (y-o-y)

% FY	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	n.a	n.a	n.a	n.a	n.a	n.a
FY02	8.5%	6.6%	n.a	n.a	4.8%	7.6%
FY03	5.2%	16.7%	n.a	n.a	13.1%	7.3%
FY04	16.0%	34.3%	n.a	n.a	13.6%	16.2%
FY05	7.2%	5.9%	n.a	n.a	12.5%	8.3%
FY06	7.9%	11.7%	n.a	n.a	12.3%	9.1%
FY07	9.4%	-4.8%	n.a	n.a	6.0%	7.9%
FY08	2.1%	11.3%	n.a	n.a	-5.5%	0.8%
FY09	12.4%	31.9%	n.a	n.a	18.2%	14.6%
FY10	-4.1%	10.5%	n.a	n.a	16.4%	1.2%
Jan-11	-13.3%	42.7%	n.a	n.a	0.4%	9.2%
Feb-11	-10.1%	46.0%	n.a	n.a	2.1%	13.1%
Mar-11	-10.2%	15.7%	n.a	n.a	-3.2%	13.2%
Apr-11	-10.5%	11.3%	n.a	n.a	-7.4%	14.7%
May-11	-9.9%	12.7%	n.a	n.a	-6.2%	17.1%
Jun-11	-8.5%	8.7%	n.a	n.a	-3.3%	20.5%
Jul-11	-7.7%	9.1%	n.a	n.a	-3.7%	22.0%
Aug-11	-7.6%	10.5%	n.a	n.a	-4.6%	22.8%
Sep-11	-6.7%	9.8%	n.a	n.a	-6.0%	23.8%
Oct-11	-6.3%	4.5%	n.a	n.a	-7.7%	23.7%
Nov-11	-6.2%	1.0%	n.a	n.a	-9.0%	23.7%
Dec-11	-6.8%	1.6%	n.a	n.a	-9.9%	23.2%
FY11	-6.8%	1.6%	n.a	n.a	-9.9%	23.2%
Jan-12	15.6%	-19.0%	101.0%	174.5%	1.4%	31.1%
Feb-12	14.4%	-3.7%	89.4%	181.0%	17.3%	33.6%
Mar-12	12.4%	16.1%	68.0%	144.5%	22.3%	30.6%
Apr-12	12.3%	30.5%	55.3%	100.2%	25.9%	28.5%
May-12	12.7%	18.3%	51.2%	75.7%	27.0%	26.2%
Jun-12	11.8%	17.2%	49.2%	64.8%	28.0%	25.0%
Jul-12	11.8%	15.6%	47.2%	60.8%	30.0%	24.9%
Aug-12	14.4%	18.1%	44.1%	60.1%	32.2%	26.6%
Sep-12	14.7%	19.4%	42.5%	59.0%	33.2%	26.8%
Oct-12	14.3%	20.9%	40.7%	57.7%	33.1%	26.4%
Nov-12	14.7%	22.6%	40.8%	55.5%	32.4%	26.5%
Dec-12	15.7%	24.6%	40.4%	57.4%	31.3%	27.1%
FY12	15.7%	24.6%	40.4%	57.4%	31.3%	27.1%
Jan-13	n.a	n.a	n.a	n.a	n.a	n.a
Feb-13	n.a	n.a	n.a	n.a	n.a	n.a
Mar-13	15.3%	49.1%	-100.0%	-100.0%	21.4%	-13.1%
Apr-13	16.3%	26.2%	-33.9%	-39.5%	17.2%	2.7%
May-13	12.5%	27.9%	-13.1%	-20.2%	9.8%	5.1%
Jun-13	11.4%	24.6%	-8.0%	-13.2%	3.2%	4.5%
Jul-13	10.0%	21.3%	-4.6%	-10.6%	1.1%	4.0%
Aug-13	7.4%	17.6%	-1.7%	-7.9%	-0.4%	3.0%
Sep-13	7.1%	16.0%	2.0%	-6.4%	-1.2%	3.3%
Oct-13	7.1%	15.2%	5.7%	-3.7%	-0.7%	4.3%
Nov-13	6.4%	17.5%	7.0%	-1.5%	-1.5%	4.4%
Dec-13	5.5%	16.7%	8.1%	-1.1%	-2.2%	4.0%
FY13	5.5%	16.7%	8.1%	-1.1%	-2.2%	4.0%
Jan-14	n.a	n.a	n.a	n.a	n.a	n.a
Feb-14	n.a	n.a	n.a	n.a	n.a	n.a
Mar-14	-11.3%	-31.4%	n.a	n.a	-30.6%	24.5%
Apr-14	-14.9%	-23.8%	-2.2%	-1.6%	-30.0%	1.5%
May-14	-13.4%	-15.9%	4.4%	0.0%	-27.0%	-1.2%
Jun-14	-13.5%	-7.8%	11.6%	-2.2%	-25.8%	-2.5%
YTD-14	-13.5%	-7.8%	11.6%	-2.2%	-25.8%	-2.5%

Source: Deutsche Bank

Note: CEIC has not published Jan and Feb fertilizer production data for 2013 and 2014.



Figure 11: China's fertilizer production growth (y-o-y)

%	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	n.a	n.a	n.a	n.a	n.a	n.a
FY02	8.5%	6.6%	n.a	n.a	4.8%	7.6%
FY03	5.2%	16.7%	n.a	n.a	13.1%	7.3%
FY04	16.0%	34.3%	n.a	n.a	13.6%	16.2%
FY05	7.2%	5.9%	n.a	n.a	12.5%	8.3%
FY06	7.9%	11.7%	n.a	n.a	12.3%	9.1%
FY07	9.4%	-4.8%	n.a	n.a	6.0%	7.9%
FY08	2.1%	11.3%	n.a	n.a	-5.5%	0.8%
FY09	12.4%	31.9%	n.a	n.a	18.2%	14.6%
FY10	-4.1%	10.5%	n.a	n.a	16.4%	1.2%
Jan-11	-13.3%	42.7%	n.a	n.a	0.4%	9.2%
Feb-11	-7.0%	49.5%	n.a	n.a	3.9%	16.9%
Mar-11	-10.2%	-3.1%	n.a	n.a	-11.7%	13.4%
Apr-11	-11.3%	5.3%	n.a	n.a	-18.6%	18.9%
May-11	-7.6%	15.5%	n.a	n.a	-1.9%	26.3%
Jun-11	-1.4%	-2.8%	n.a	n.a	9.8%	36.1%
Jul-11	-2.7%	10.9%	n.a	n.a	-6.0%	31.4%
Aug-11	-6.6%	20.1%	n.a	n.a	-10.1%	28.8%
Sep-11	0.7%	5.5%	n.a	n.a	-15.0%	31.9%
Oct-11	-2.0%	-23.9%	n.a	n.a	-20.5%	22.6%
Nov-11	-5.8%	-29.6%	n.a	n.a	-20.1%	23.4%
Dec-11	-13.3%	10.9%	n.a	n.a	-17.9%	18.5%
FY11	-6.8%	1.6%	n.a	n.a	-9.9%	23.2%
Jan-12	15.6%	-19.0%	101.0%	174.5%	1.4%	31.1%
Feb-12	13.2%	11.8%	79.4%	187.1%	32.4%	35.9%
Mar-12	8.9%	34.8%	36.9%	98.9%	31.4%	25.7%
Apr-12	12.2%	52.1%	29.1%	27.9%	37.6%	22.8%
May-12	13.9%	-6.3%	37.2%	16.1%	31.0%	18.6%
Jun-12	7.6%	13.6%	41.7%	31.5%	31.8%	20.0%
Jul-12	11.7%	8.6%	36.1%	43.7%	42.0%	24.1%
Aug-12	34.2%	33.1%	26.0%	56.3%	47.3%	38.4%
Sep-12	16.7%	27.7%	31.6%	51.9%	40.5%	28.6%
Oct-12	11.2%	31.9%	26.5%	48.1%	31.8%	22.8%
Nov-12	18.9%	44.7%	41.6%	37.1%	25.5%	27.0%
Dec-12	27.5%	55.8%	36.4%	78.0%	20.5%	34.5%
FY12	15.7%	24.6%	40.4%	57.4%	31.3%	27.1%
Jan-13	n.a	n.a	n.a	n.a	n.a	n.a
Feb-13	n.a	n.a	n.a	n.a	n.a	n.a
Mar-13	15.3%	49.1%	n.a	n.a	21.4%	-13.1%
Apr-13	17.4%	10.4%	24.9%	28.5%	12.7%	18.6%
May-13	5.1%	31.6%	27.8%	21.8%	-4.5%	9.8%
Jun-13	8.1%	15.2%	4.5%	4.2%	-12.6%	3.0%
Jul-13	4.4%	7.7%	9.6%	-1.8%	-7.1%	2.0%
Aug-13	-4.6%	0.4%	12.7%	3.6%	-7.0%	-1.4%
Sep-13	5.4%	7.1%	23.5%	0.8%	-5.9%	4.9%
Oct-13	7.3%	10.0%	32.7%	14.3%	3.0%	11.1%
Nov-13	0.3%	42.3%	15.9%	16.0%	-8.3%	5.4%
Dec-13	-2.1%	7.4%	16.9%	2.1%	-8.5%	0.7%
FY13	5.5%	16.7%	8.1%	-1.1%	-2.2%	4.0%
Jan-14	n.a	n.a	n.a	n.a	n.a	n.a
Feb-14	n.a	n.a	n.a	n.a	n.a	n.a
Mar-14	-11.3%	-31.4%	n.a	n.a	-30.6%	24.5%
Apr-14	-18.4%	-16.6%	-2.2%	-1.6%	-29.2%	-15.4%
May-14	-10.4%	1.0%	11.1%	1.8%	-20.1%	-6.2%
Jun-14	-13.7%	18.5%	26.6%	-6.5%	-22.0%	-6.3%
YTD-14	-13.5%	-7.8%	11.6%	-2.2%	-25.8%	-2.5%

Source: CEIC, Deutsche Bank
Note: CEIC has not published Jan and Feb fertilizer production data for 2013 and 2014.



China fertilizer import data

Figure 12: China's fertilizer import data (2001- YTD-14)

'000 Tons	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	n.a	n.a	n.a	n.a	n.a	n.a
FY02	790.8	7,009.2	58.0	4,925.0	2,948.9	15,732.0
FY03	134.9	6,628.8	61.4	2,608.8	2,371.5	11,805.5
FY04	38.0	7,444.2	103.9	2,285.6	2,279.9	12,151.6
FY05	71.0	9,168.8	125.9	1,748.1	2,506.8	13,620.5
FY06	37.5	7,481.7	20.4	1,439.3	2,043.8	11,022.8
FY07	0.5	9,761.3	17.1	540.1	1,377.3	11,696.4
FY08	0.1	5,390.4	1.7	95.9	658.4	6,146.5
FY09	38.8	2,186.6	11.4	432.9	1,312.2	3,981.9
FY10	13.4	5,466.5	32.7	422.7	1,099.9	7,035.1
Jan-11	0.0	525.3	0.3	93.2	150.4	769.3
Feb-11	0.1	175.0	-	0.0	85.0	260.1
Mar-11	0.1	409.3	0.0	-	30.0	439.4
Apr-11	0.3	574.3	0.0	-	116.9	691.6
May-11	0.2	808.9	0.0	0.0	31.1	840.2
Jun-11	0.6	553.0	0.0	0.0	147.1	700.7
Jul-11	1.3	440.1	0.0	0.0	69.6	511.0
Aug-11	2.2	644.3	0.0	0.0	82.3	728.8
Sep-11	1.6	806.3	0.0	0.0	60.2	868.2
Oct-11	2.1	617.9	0.0	-	74.7	694.8
Nov-11	1.1	794.1	-	0.0	79.2	874.4
Dec-11	0.6	274.5	-	0.0	138.8	414.0
FY11	10.2	6,623.2	0.3	93.2	1,065.4	7,792.4
Jan-12	0.1	708.7	0.0	0.0	85.0	793.8
Feb-12	2.4	581.9	0.0	0.0	116.8	701.1
Mar-12	1.8	710.9	0.0	58.2	164.4	935.4
Apr-12	0.5	320.4	0.0	40.2	79.8	440.8
May-12	106.7	647.0	0.0	0.0	159.3	913.0
Jun-12	0.1	773.3	0.0	0.0	104.7	878.0
Jul-12	0.6	770.2	0.0	0.0	139.0	909.8
Aug-12	0.1	894.4	0.0	0.0	141.4	1,035.9
Sep-12	0.1	339.1	0.0	61.5	138.6	539.3
Oct-12	40.4	345.6	0.0	0.0	75.1	461.1
Nov-12	5.7	240.9	0.0	0.0	85.3	331.9
Dec-12	13.2	254.4	0.0	0.0	52.8	320.4
FY12	171.7	6,586.9	0.0	159.8	1,342.2	8,260.6
Jan-13	3.1	474.6	0.0	65.9	124.0	667.7
Feb-13	14.5	375.1	0.0	0.0	96.8	486.4
Mar-13	11.1	934.9	0.0	45.9	148.8	1,140.6
Apr-13	0.3	970.6	0.0	54.2	95.6	1,120.7
May-13	4.1	605.2	0.0	0.0	116.2	725.5
Jun-13	0.1	371.3	0.0	0.0	129.9	501.2
Jul-13	0.2	395.4	0.0	0.0	104.2	499.7
Aug-13	0.9	535.9	0.1	0.0	143.7	680.6
Sep-13	0.4	272.9	0.0	0.0	135.8	409.1
Oct-13	0.0	269.7	0.0	0.0	36.7	306.5
Nov-13	0.1	362.7	0.0	0.0	151.8	514.6
Dec-13	0.1	632.7	0.0	55.0	95.4	783.2
FY13	34.9	6,201.0	0.2	221.0	1,378.7	7,835.8
Jan-14	0.2	496.6	-	39.3	79.7	615.8
Feb-14	0.2	543.1	0.0	92.9	17.1	653.4
Mar-14	0.7	637.0	0.0	66.7	113.0	817.4
Apr-14	1.3	760.1	0.0	0.0	53.1	814.5
May-14	0.6	937.6	0.0	0.0	164.8	1,103.1
Jun-14	0.7	562.6	0.0	30.5	116.7	710.5
YTD-14	3.8	3,937.1	0.0	229.4	544.4	4,714.6

Source: CEIC, Deutsche Bank



Figure 13: China's fertilizer imports growth cumulative (y-o-y)

% FY	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	n.a	n.a	n.a	n.a	n.a	n.a
FY02	n.a	n.a	n.a	n.a	n.a	n.a
FY03	-82.9%	-5.4%	5.9%	-47.0%	-19.6%	-25.0%
FY04	-71.8%	12.3%	69.1%	-12.4%	-3.9%	2.9%
FY05	86.8%	23.2%	21.2%	-23.5%	9.9%	12.1%
FY06	-47.1%	-18.4%	-83.8%	-17.7%	-18.5%	-19.1%
FY07	-98.6%	30.5%	-16.3%	-62.5%	-32.6%	6.1%
FY08	-87.6%	-44.8%	-89.9%	-82.2%	-52.2%	-47.4%
FY09	n.m	-59.4%	555.5%	351.2%	99.3%	-35.2%
FY10	-65.5%	150.0%	187.3%	-2.4%	-16.2%	76.7%
Jan-11	-99.9%	45.0%	-98.3%	-45.8%	-4.4%	7.9%
Feb-11	-98.6%	-1.3%	-99.0%	-64.1%	20.6%	-14.3%
Mar-11	-98.3%	-10.6%	-99.1%	-76.1%	-8.1%	-25.2%
Apr-11	-96.0%	-17.4%	-99.1%	-76.1%	1.7%	-24.2%
May-11	-94.3%	5.8%	-99.1%	-76.1%	-12.8%	-8.1%
Jun-11	-90.0%	16.2%	-99.1%	-76.1%	-2.3%	1.9%
Jul-11	-80.3%	20.2%	-99.1%	-76.1%	3.9%	6.9%
Aug-11	-64.0%	25.1%	-99.1%	-76.1%	-8.5%	9.4%
Sep-11	-51.7%	32.4%	-99.1%	-77.9%	-13.1%	14.2%
Oct-11	-36.3%	26.1%	-99.1%	-77.9%	-11.2%	11.6%
Nov-11	-28.3%	30.7%	-99.1%	-77.9%	-9.9%	16.1%
Dec-11	-23.7%	21.2%	-99.1%	-77.9%	-3.1%	10.8%
FY11	-23.7%	21.2%	-99.1%	-77.9%	-3.1%	10.8%
Jan-12	n.m	34.9%	-93.3%	n.m	-43.5%	3.2%
Feb-12	n.m	84.3%	-93.3%	n.m	-14.3%	45.2%
Mar-12	n.m	80.4%	-93.2%	-37.6%	38.0%	65.5%
Apr-12	817.6%	37.9%	-93.2%	5.5%	16.6%	32.9%
May-12	n.m	19.1%	-93.2%	5.5%	46.4%	26.1%
Jun-12	n.m	22.9%	-93.1%	5.5%	26.6%	26.0%
Jul-12	n.m	29.4%	-93.1%	5.5%	34.7%	32.3%
Aug-12	n.m	30.9%	-93.1%	5.5%	39.0%	33.7%
Sep-12	n.m	16.4%	-93.1%	71.4%	46.1%	23.0%
Oct-12	n.m	9.7%	-93.0%	71.4%	42.1%	17.0%
Nov-12	n.m	-0.3%	-93.0%	71.4%	39.2%	7.6%
Dec-12	n.m	-0.5%	-93.0%	71.4%	26.0%	6.0%
FY12	n.m	-0.5%	-93.0%	71.4%	26.0%	6.0%
Jan-13	n.m	-33.0%	-99.5%	n.m	45.9%	-15.9%
Feb-13	620.1%	-34.2%	-99.0%	n.m	9.4%	-22.8%
Mar-13	569.1%	-10.8%	-97.8%	92.1%	0.9%	-5.6%
Apr-13	503.6%	18.7%	-96.5%	68.8%	4.3%	19.0%
May-13	-70.3%	13.2%	-96.0%	68.8%	-4.0%	9.4%
Jun-13	-70.2%	-0.3%	-95.4%	68.8%	0.2%	-0.4%
Jul-13	-70.2%	-8.5%	-95.4%	68.8%	-4.0%	-7.7%
Aug-13	-69.5%	-13.8%	617.6%	68.8%	-3.2%	-11.9%
Sep-13	-69.1%	-14.1%	618.7%	3.9%	-3.0%	-12.8%
Oct-13	-77.3%	-14.5%	632.6%	3.9%	-6.0%	-14.1%
Nov-13	-78.0%	-12.1%	627.8%	3.9%	-0.5%	-11.2%
Dec-13	-79.7%	-5.9%	629.4%	38.3%	2.7%	-5.1%
FY13	-79.7%	-5.9%	629.4%	38.3%	2.7%	-5.1%
Jan-14	-93.5%	4.7%	-100.0%	-40.4%	-35.8%	-7.8%
Feb-14	-97.5%	22.4%	-36.9%	100.4%	-56.2%	10.0%
Mar-14	-95.9%	-6.0%	-42.3%	77.8%	-43.2%	-9.1%
Apr-14	-91.5%	-11.6%	-48.9%	19.8%	-43.5%	-15.1%
May-14	-90.6%	0.4%	-42.7%	19.8%	-26.4%	-3.3%
Jun-14	-88.6%	5.5%	33.4%	38.2%	-23.5%	1.6%
YTD-14	-88.6%	5.5%	33.4%	38.2%	-23.5%	1.6%

Source: Deutsche Bank



Figure 14: China's fertilizer imports growth (y-o-y)

% FY	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	n.a	n.a	n.a	n.a	n.a	n.a
FY02	n.a	n.a	n.a	n.a	n.a	n.a
FY03	-82.9%	-5.4%	5.9%	-47.0%	-19.6%	-25.0%
FY04	-71.8%	12.3%	69.1%	-12.4%	-3.9%	2.9%
FY05	86.8%	23.2%	21.2%	-23.5%	9.9%	12.1%
FY06	-47.1%	-18.4%	-83.8%	-17.7%	-18.5%	-19.1%
FY07	-98.6%	30.5%	-16.3%	-62.5%	-32.6%	6.1%
FY08	-87.6%	-44.8%	-89.9%	-82.2%	-52.2%	-47.4%
FY09	n.m	-59.4%	555.5%	351.2%	99.3%	-35.2%
FY10	-65.5%	150.0%	187.3%	-2.4%	-16.2%	76.7%
Jan-11	-99.9%	45.0%	-98.3%	-45.8%	-4.4%	7.9%
Feb-11	-97.5%	-49.6%	n.m	n.m	125.0%	-46.8%
Mar-11	-98.0%	-22.9%	n.m	n.m	-68.0%	-42.4%
Apr-11	-69.6%	-28.0%	575.0%	n.m	34.1%	-21.9%
May-11	n.m	154.3%	-63.6%	94.8%	-68.3%	101.9%
Jun-11	369.3%	108.1%	n.m	-6.2%	47.6%	91.7%
Jul-11	n.m	58.3%	n.m	-84.5%	114.8%	64.6%
Aug-11	n.m	60.1%	n.m	101.0%	-52.2%	26.8%
Sep-11	n.m	89.4%	n.m	n.m	-45.6%	52.5%
Oct-11	n.m	-8.7%	n.m	n.m	15.5%	-6.3%
Nov-11	n.m	74.9%	n.m	-99.3%	5.6%	65.3%
Dec-11	n.m	-54.8%	n.m	153.2%	95.4%	-39.0%
FY11	-23.7%	21.2%	-99.1%	-77.9%	-3.1%	10.8%
Jan-12	n.m	34.9%	-93.3%	n.m	-43.5%	3.2%
Feb-12	n.m	232.5%	n.m	-85.0%	37.4%	169.6%
Mar-12	n.m	73.7%	n.m	n.m	447.6%	112.9%
Apr-12	61.2%	-44.2%	-96.3%	n.m	-31.8%	-36.3%
May-12	n.m	-20.0%	0.0%	34.0%	411.6%	8.7%
Jun-12	-80.9%	39.8%	n.m	-76.5%	-28.9%	25.3%
Jul-12	-56.5%	75.0%	n.m	107.9%	99.8%	78.1%
Aug-12	-97.3%	38.8%	50.0%	74.1%	71.7%	42.1%
Sep-12	-90.8%	-57.9%	0.0%	n.m	130.3%	-37.9%
Oct-12	n.m	-44.1%	36.6%	n.m	0.6%	-33.6%
Nov-12	432.5%	-69.7%	n.m	50.0%	7.7%	-62.0%
Dec-12	n.m	-7.3%	n.m	-99.0%	-62.0%	-22.6%
FY12	n.m	-0.5%	-93.0%	71.4%	26.0%	6.0%
Jan-13	n.m	-33.0%	-99.5%	n.m	45.9%	-15.9%
Feb-13	506.5%	-35.5%	262.1%	-97.1%	-17.1%	-30.6%
Mar-13	501.0%	31.5%	-30.7%	-21.1%	-9.5%	21.9%
Apr-13	-41.0%	203.0%	n.m	34.9%	19.8%	154.2%
May-13	-96.1%	-6.5%	n.m	854.7%	-27.1%	-20.5%
Jun-13	-24.1%	-52.0%	-33.3%	8.0%	24.1%	-42.9%
Jul-13	-69.1%	-48.7%	-98.1%	-50.5%	-25.1%	-45.1%
Aug-13	n.m	-40.1%	n.m	476.6%	1.6%	-34.3%
Sep-13	192.5%	-19.5%	n.m	n.m	-2.0%	-24.1%
Oct-13	n.m	-21.9%	n.m	n.m	-51.1%	-33.5%
Nov-13	-97.7%	50.5%	-31.1%	n.m	77.9%	55.0%
Dec-13	-99.3%	148.7%	n.m	n.m	80.7%	144.4%
FY13	-79.7%	-5.9%	629.4%	38.3%	2.7%	-5.1%
Jan-14	-93.5%	4.7%	n.m	n.m	-35.8%	-7.8%
Feb-14	-98.4%	44.8%	23.8%	n.m	-82.3%	34.3%
Mar-14	-93.3%	-31.9%	-46.8%	45.3%	-24.1%	-28.3%
Apr-14	323.9%	-21.7%	-60.8%	-100.0%	-44.4%	-27.3%
May-14	-84.5%	54.9%	1.0%	-99.6%	41.9%	52.0%
Jun-14	713.1%	51.5%	488.2%	n.m	-10.1%	41.8%
YTD-14	-88.6%	5.5%	33.4%	38.2%	-23.5%	1.6%

Source: Deutsche Bank



China fertilizer export data

Figure 15: China's fertilizer export data (2001- YTD-14)

'000 Tons	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	n.a	n.a	n.a	n.a	n.a	n.a
FY02	413.0	405.6	126.2	478.4	114.4	1,537.6
FY03	2,730.3	331.6	125.9	800.4	249.9	4,238.1
FY04	3,942.9	150.8	151.4	857.1	301.7	5,403.8
FY05	1,570.6	147.1	216.8	718.0	355.0	3,007.5
FY06	1,367.3	369.7	475.0	786.0	781.9	3,779.9
FY07	5,254.0	130.3	1,934.3	1,971.4	2,929.5	12,219.6
FY08	4,359.7	165.1	1,016.1	816.9	1,623.9	7,981.6
FY09	3,380.2	406.9	496.3	2,073.1	598.8	6,955.3
FY10	7,025.8	87.7	935.0	3,988.0	1,718.9	13,755.5
Jan-11	346.1	18.9	86.0	145.1	186.5	782.6
Feb-11	196.4	1.8	1.6	64.4	28.8	293.0
Mar-11	53.6	0.5	26.0	69.6	92.6	242.3
Apr-11	42.1	0.2	6.3	13.8	45.7	108.1
May-11	19.3	0.7	0.6	17.2	201.4	239.1
Jun-11	23.0	6.8	11.5	332.4	318.4	692.1
Jul-11	279.8	0.2	116.9	545.7	644.8	1,587.5
Aug-11	492.0	0.4	166.9	939.1	779.9	2,378.3
Sep-11	457.7	0.2	262.3	754.7	754.1	2,229.0
Oct-11	487.5	0.2	67.6	623.0	668.9	1,847.2
Nov-11	896.1	3.3	69.2	234.7	693.1	1,896.5
Dec-11	265.1	9.7	49.8	278.1	433.4	1,036.1
FY11	3,558.8	43.0	864.8	4,017.5	4,847.6	13,331.7
Jan-12	115.6	20.0	12.6	86.2	266.4	500.8
Feb-12	0.6	17.6	11.2	45.9	109.7	185.0
Mar-12	0.8	11.7	0.0	22.3	12.0	46.8
Apr-12	3.0	27.7	0.0	25.8	23.8	80.2
May-12	100.1	24.4	0.0	12.5	13.4	150.4
Jun-12	91.6	20.8	90.9	77.2	161.1	441.6
Jul-12	353.5	12.6	73.5	423.1	133.4	996.1
Aug-12	678.3	9.7	67.4	1,168.0	118.1	2,041.5
Sep-12	1,256.2	10.1	121.6	839.1	225.8	2,452.7
Oct-12	1,244.2	35.9	82.4	467.0	191.6	2,021.1
Nov-12	1,448.2	89.8	63.3	447.7	95.7	2,144.6
Dec-12	1,658.1	19.6	71.9	319.3	146.4	2,215.1
FY12	6,950.0	299.9	594.8	3,934.0	1,497.4	13,276.1
Jan-13	308.4	12.3	30.4	67.9	41.8	460.8
Feb-13	306.4	11.8	-	50.6	6.2	375.0
Mar-13	201.4	22.3	0.0	42.0	15.6	281.3
Apr-13	249.9	30.4	28.7	56.0	60.4	425.3
May-13	208.5	20.7	20.1	43.6	84.2	377.0
Jun-13	35.2	30.5	118.9	257.6	194.9	637.1
Jul-13	1,315.8	18.7	95.2	528.3	182.9	2,141.0
Aug-13	1,443.9	34.4	151.0	767.6	230.3	2,627.2
Sep-13	1,470.8	6.3	62.0	481.4	131.7	2,152.1
Oct-13	987.6	30.2	59.5	629.0	158.7	1,865.1
Nov-13	986.1	40.0	89.1	361.8	151.1	1,628.1
Dec-13	752.5	47.2	54.3	533.8	77.7	1,465.5
FY13	8,266.7	304.7	709.2	3,819.6	1,335.5	14,435.6
Jan-14	613.1	38.1	25.4	127.3	50.8	854.6
Feb-14	709.7	24.6	102.1	252.8	136.6	1,225.7
Mar-14	652.3	56.7	145.6	243.6	175.4	1,273.6
Apr-14	1,340.8	40.4	71.7	170.4	79.3	1,702.5
May-14	546.4	41.1	80.3	175.3	117.0	960.0
Jun-14	368.9	31.7	171.0	303.2	288.7	1,163.6
YTD-14	4,231.2	232.6	596.1	1,272.5	847.8	7,180.1

Source: CEIC, Deutsche Bank



Figure 16: China's fertilizer exports growth cumulative (y-o-y)

% FY	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	n.a	n.a	n.a	n.a	n.a	n.a
FY02	n.a	n.a	n.a	n.a	n.a	n.a
FY03	561.1%	-18.2%	-0.2%	67.3%	118.5%	175.6%
FY04	44.4%	-54.5%	20.2%	7.1%	20.7%	27.5%
FY05	-60.2%	-2.5%	43.2%	-16.2%	17.7%	-44.3%
FY06	-12.9%	151.3%	119.1%	9.5%	120.3%	25.7%
FY07	284.3%	-64.7%	307.2%	150.8%	274.6%	223.3%
FY08	-17.0%	26.7%	-47.5%	-58.6%	-44.6%	-34.7%
FY09	-22.5%	146.5%	-51.2%	153.8%	-63.1%	-12.9%
FY10	107.8%	-78.4%	88.4%	92.4%	187.1%	97.8%
Jan-11	-14.0%	-8.7%	23.5%	26.0%	155.8%	15.0%
Feb-11	-43.5%	-24.5%	-14.0%	18.2%	81.3%	-22.4%
Mar-11	-50.4%	-25.1%	-3.7%	9.1%	85.2%	-25.5%
Apr-11	-53.5%	-24.5%	-8.5%	-4.6%	63.8%	-30.6%
May-11	-54.8%	-36.5%	-8.2%	-9.8%	117.4%	-25.0%
Jun-11	-55.8%	-22.5%	-6.3%	-14.1%	189.7%	-14.8%
Jul-11	-48.0%	-26.3%	4.6%	-20.5%	192.3%	-4.7%
Aug-11	-41.8%	-54.6%	-8.6%	-6.0%	190.9%	4.2%
Sep-11	-48.2%	-60.7%	3.0%	3.4%	175.6%	2.8%
Oct-11	-41.2%	-61.6%	-3.4%	12.6%	185.9%	11.4%
Nov-11	-40.3%	-58.3%	-7.9%	4.4%	194.1%	6.3%
Dec-11	-49.3%	-51.0%	-7.5%	0.7%	182.0%	-3.1%
FY11	-49.3%	-51.0%	-7.5%	0.7%	182.0%	-3.1%
Jan-12	-66.6%	5.8%	-85.3%	-40.6%	42.8%	-36.0%
Feb-12	-78.6%	81.7%	-72.8%	-36.9%	74.6%	-36.2%
Mar-12	-80.4%	133.0%	-79.0%	-44.7%	26.0%	-44.4%
Apr-12	-81.2%	259.6%	-80.1%	-38.5%	16.4%	-43.0%
May-12	-66.5%	358.6%	-80.2%	-37.9%	-23.4%	-42.2%
Jun-12	-54.2%	323.0%	-13.0%	-58.0%	-32.9%	-40.4%
Jul-12	-30.7%	363.1%	-24.3%	-41.7%	-52.6%	-39.1%
Aug-12	-7.5%	390.0%	-38.5%	-12.5%	-63.5%	-29.7%
Sep-12	36.1%	419.9%	-44.4%	-6.3%	-65.1%	-19.4%
Oct-12	60.3%	536.7%	-38.4%	-9.6%	-66.3%	-14.3%
Nov-12	60.7%	743.1%	-35.8%	-3.3%	-69.4%	-10.0%
Dec-12	95.3%	597.6%	-31.2%	-2.1%	-69.1%	-0.4%
FY12	95.3%	597.6%	-31.2%	-2.1%	-69.1%	-0.4%
Jan-13	166.8%	-38.6%	141.0%	-21.3%	-84.3%	-8.0%
Feb-13	429.0%	-36.1%	27.6%	-10.3%	-87.2%	21.9%
Mar-13	597.5%	-6.2%	27.5%	4.0%	-83.6%	52.5%
Apr-13	788.5%	-0.4%	147.6%	20.2%	-69.9%	89.8%
May-13	479.2%	-4.0%	231.7%	35.0%	-51.0%	99.3%
Jun-13	320.3%	4.6%	72.5%	91.8%	-31.2%	82.0%
Jul-13	294.8%	8.7%	55.7%	51.0%	-18.6%	95.7%
Aug-13	202.9%	25.2%	73.8%	-2.5%	-2.6%	64.9%
Sep-13	113.1%	21.1%	34.2%	-15.0%	-10.9%	37.4%
Oct-13	69.8%	14.1%	23.1%	-7.7%	-11.8%	27.2%
Nov-13	42.0%	-8.2%	25.2%	-9.1%	-6.9%	17.3%
Dec-13	18.9%	1.6%	19.2%	-2.9%	-10.8%	8.7%
FY13	18.9%	1.6%	19.2%	-2.9%	-10.8%	8.7%
Jan-14	98.8%	209.7%	-16.6%	87.6%	21.6%	85.5%
Feb-14	115.1%	160.4%	319.2%	220.8%	290.1%	148.9%
Mar-14	142.0%	157.6%	798.1%	288.7%	469.8%	200.2%
Apr-14	211.0%	108.1%	483.8%	266.8%	256.4%	227.8%
May-14	203.0%	106.1%	437.1%	272.7%	168.5%	213.4%
Jun-14	223.0%	81.8%	201.0%	145.8%	110.3%	180.8%
YTD-14	223.0%	81.8%	201.0%	145.8%	110.3%	180.8%

Source: Deutsche Bank



Figure 17: China's fertilizer exports growth (y-o-y)

%	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	n.a	n.a	n.a	n.a	n.a	n.a
FY02	n.a	n.a	n.a	n.a	n.a	n.a
FY03	561.1%	-18.2%	-0.2%	67.3%	118.5%	175.6%
FY04	44.4%	-54.5%	20.2%	7.1%	20.7%	27.5%
FY05	-60.2%	-2.5%	43.2%	-16.2%	17.7%	-44.3%
FY06	-12.9%	151.3%	119.1%	9.5%	120.3%	25.7%
FY07	284.3%	-64.7%	307.2%	150.8%	274.6%	223.3%
FY08	-17.0%	26.7%	-47.5%	-58.6%	-44.6%	-34.7%
FY09	-22.5%	146.5%	-51.2%	153.8%	-63.1%	-12.9%
FY10	107.8%	-78.4%	88.4%	92.4%	187.1%	97.8%
Jan-11	-14.0%	-8.7%	23.5%	26.0%	155.8%	15.0%
Feb-11	-64.8%	-73.2%	-94.9%	3.8%	-37.1%	-58.4%
Mar-11	-77.7%	-44.2%	61.8%	-11.5%	94.8%	-36.8%
Apr-11	-75.3%	141.8%	-52.1%	-73.0%	-7.9%	-61.9%
May-11	-77.0%	-89.2%	188.5%	-53.5%	411.8%	43.5%
Jun-11	-72.6%	172.8%	19.9%	-17.8%	588.5%	26.6%
Jul-11	-9.6%	-90.3%	20.4%	-26.9%	196.0%	15.6%
Aug-11	-23.7%	-98.6%	-23.1%	22.1%	188.1%	23.4%
Sep-11	-61.8%	-97.8%	29.2%	44.0%	137.5%	-1.0%
Oct-11	26.7%	-91.2%	-40.6%	91.9%	244.7%	81.2%
Nov-11	-37.9%	85.4%	-38.8%	-49.8%	248.1%	-14.8%
Dec-11	-82.4%	21.5%	-0.1%	-31.8%	98.6%	-52.7%
FY11	-49.3%	-51.0%	-7.5%	0.7%	182.0%	-3.1%
Jan-12	-66.6%	5.8%	-85.3%	-40.6%	42.8%	-36.0%
Feb-12	-99.7%	880.3%	584.6%	-28.7%	280.2%	-36.9%
Mar-12	-98.5%	n.m	-99.9%	-68.0%	-87.0%	-80.7%
Apr-12	-92.9%	n.m	-99.9%	87.5%	-48.0%	-25.8%
May-12	419.2%	n.m	-99.2%	-27.1%	-93.4%	-37.1%
Jun-12	297.8%	206.9%	692.4%	-76.8%	-49.4%	-36.2%
Jul-12	26.4%	n.m	-37.1%	-22.5%	-79.3%	-37.3%
Aug-12	37.9%	n.m	-59.6%	24.4%	-84.9%	-14.2%
Sep-12	174.4%	n.m	-53.7%	11.2%	-70.1%	10.0%
Oct-12	155.2%	n.m	21.8%	-25.0%	-71.4%	9.4%
Nov-12	61.6%	n.m	-8.6%	90.8%	-86.2%	13.1%
Dec-12	525.5%	100.8%	44.3%	14.8%	-66.2%	113.8%
FY12	95.3%	597.6%	-31.2%	-2.1%	-69.1%	-0.4%
Jan-13	166.8%	-38.6%	141.0%	-21.3%	-84.3%	-8.0%
Feb-13	n.m	-33.2%	n.m	10.3%	-94.3%	102.7%
Mar-13	n.m	89.7%	-95.1%	88.7%	30.2%	500.8%
Apr-13	n.m	9.9%	n.m	117.1%	154.1%	430.2%
May-13	108.4%	-15.4%	n.m	247.9%	530.4%	150.7%
Jun-13	-61.6%	46.4%	30.7%	233.8%	21.0%	44.3%
Jul-13	272.2%	48.8%	29.5%	24.9%	37.1%	114.9%
Aug-13	112.9%	255.8%	124.2%	-34.3%	94.9%	28.7%
Sep-13	17.1%	-37.9%	-49.0%	-42.6%	-41.7%	-12.3%
Oct-13	-20.6%	-15.9%	-27.7%	34.7%	-17.2%	-7.7%
Nov-13	-31.9%	-55.4%	40.8%	-19.2%	57.9%	-24.1%
Dec-13	-54.6%	141.2%	-24.4%	67.2%	-46.9%	-33.8%
FY13	18.9%	1.6%	19.2%	-2.9%	-10.8%	8.7%
Jan-14	98.8%	209.7%	-16.6%	87.6%	21.6%	85.5%
Feb-14	131.6%	108.9%	n.m	399.6%	n.m	226.8%
Mar-14	223.8%	154.5%	n.m	479.8%	n.m	352.7%
Apr-14	436.6%	32.8%	150.3%	204.3%	31.3%	300.3%
May-14	162.1%	98.6%	299.7%	302.0%	38.9%	154.6%
Jun-14	948.4%	4.0%	43.9%	17.7%	48.2%	82.6%
YTD-14	223.0%	81.8%	201.0%	145.8%	110.3%	180.8%

Source: Deutsche Bank



China fertilizer NET imports / (exports) data

Figure 18: China's fertilizer NET imports (exports) data (2001- YTD-14)

'000 Tons	Nitrogenous Fertilizer	Potassium Fertilizer	Phosphorus Fertilizer			Aggregated Product
			Monoammonium Phosphate (MAP)	Diammonium Phosphate (DAP)	Other	
FY01	n.a	n.a	n.a	n.a	n.a	n.a
FY02	377.8	6,603.7	(68.2)	4,446.6	2,834.5	14,194.4
FY03	(2,595.4)	6,297.2	(64.5)	1,808.4	2,121.6	7,567.3
FY04	(3,904.9)	7,293.4	(47.5)	1,428.5	1,978.2	6,747.8
FY05	(1,499.7)	9,021.7	(90.8)	1,030.1	2,151.7	10,613.0
FY06	(1,329.8)	7,112.0	(454.6)	653.4	1,261.9	7,242.9
FY07	(5,253.5)	9,631.0	(1,917.2)	(1,431.4)	(1,552.2)	(523.2)
FY08	(4,359.6)	5,225.3	(1,014.4)	(721.0)	(965.5)	(1,835.1)
FY09	(3,341.4)	1,779.8	(484.9)	(1,640.2)	713.4	(2,973.4)
FY10	(7,012.4)	5,378.7	(902.4)	(3,565.3)	(619.0)	(6,720.4)
Jan-11	(346.1)	506.4	(85.7)	(51.9)	(36.1)	(13.3)
Feb-11	(196.3)	173.2	(1.6)	(64.4)	56.1	(32.9)
Mar-11	(53.5)	408.8	(26.0)	(69.6)	(62.6)	197.1
Apr-11	(41.8)	574.1	(6.3)	(13.8)	71.2	583.5
May-11	(19.1)	808.2	(0.6)	(17.2)	(170.2)	601.1
Jun-11	(22.4)	546.2	(11.5)	(332.4)	(171.3)	8.7
Jul-11	(278.5)	439.9	(116.9)	(545.7)	(575.2)	(1,076.5)
Aug-11	(489.9)	643.9	(166.9)	(939.1)	(697.5)	(1,649.5)
Sep-11	(456.1)	806.1	(262.3)	(754.7)	(693.9)	(1,360.8)
Oct-11	(485.4)	617.8	(67.6)	(623.0)	(594.2)	(1,152.4)
Nov-11	(895.1)	790.8	(69.2)	(234.7)	(613.9)	(1,022.1)
Dec-11	(264.5)	264.8	(49.8)	(278.1)	(294.6)	(622.1)
FY11	(3,548.6)	6,580.2	(864.5)	(3,924.3)	(3,782.2)	(5,539.4)
Jan-12	(115.6)	688.7	(12.6)	(86.2)	(181.4)	293.0
Feb-12	1.8	564.3	(11.2)	(45.9)	7.1	516.1
Mar-12	1.0	699.2	(0.0)	35.9	152.4	888.5
Apr-12	(2.5)	292.7	(0.0)	14.4	56.0	360.6
May-12	6.6	622.6	(0.0)	(12.5)	146.0	762.6
Jun-12	(91.5)	752.4	(90.9)	(77.2)	(56.4)	436.4
Jul-12	(352.9)	757.7	(73.5)	(423.1)	5.6	(86.2)
Aug-12	(678.3)	884.7	(67.4)	(1,168.0)	23.3	(1,005.7)
Sep-12	(1,256.0)	329.0	(121.6)	(777.6)	(87.2)	(1,913.4)
Oct-12	(1,203.7)	309.7	(82.4)	(467.0)	(116.5)	(1,560.0)
Nov-12	(1,442.5)	151.2	(63.3)	(447.7)	(10.4)	(1,812.7)
Dec-12	(1,644.9)	234.8	(71.9)	(319.3)	(93.6)	(1,894.7)
FY12	(6,778.3)	6,286.9	(594.7)	(3,774.2)	(155.2)	(5,015.5)
Jan-13	(305.3)	462.3	(30.4)	(1.9)	82.2	206.9
Feb-13	(291.9)	363.3	0.0	(50.6)	90.5	111.4
Mar-13	(190.4)	912.6	(0.0)	3.9	133.2	859.3
Apr-13	(249.6)	940.2	(28.7)	(1.8)	35.2	695.4
May-13	(204.4)	584.5	(20.1)	(43.6)	32.0	348.5
Jun-13	(35.1)	340.8	(118.9)	(257.6)	(65.0)	(135.8)
Jul-13	(1,315.7)	376.6	(95.2)	(528.3)	(78.7)	(1,641.3)
Aug-13	(1,443.0)	501.5	(150.9)	(767.6)	(86.6)	(1,946.6)
Sep-13	(1,470.3)	266.7	(62.0)	(481.4)	4.1	(1,743.0)
Oct-13	(987.6)	239.5	(59.5)	(629.0)	(122.0)	(1,558.6)
Nov-13	(986.0)	322.7	(89.1)	(361.8)	0.7	(1,113.5)
Dec-13	(752.4)	585.5	(54.3)	(478.8)	17.7	(682.3)
FY13	(8,231.7)	5,896.2	(709.0)	(3,598.6)	43.3	(6,599.8)
Jan-14	(612.9)	458.6	(25.4)	(88.0)	28.8	(238.9)
Feb-14	(709.5)	518.5	(102.1)	(159.9)	(119.4)	(572.4)
Mar-14	(651.5)	580.4	(145.6)	(176.9)	(62.5)	(456.2)
Apr-14	(1,339.5)	719.7	(71.7)	(170.4)	(26.2)	(888.1)
May-14	(545.8)	896.5	(80.3)	(175.3)	47.9	143.1
Jun-14	(368.2)	530.9	(171.0)	(272.6)	(172.0)	(453.1)
YTD-14	(4,227.4)	3,704.5	(596.1)	(1,043.1)	(303.4)	(2,465.4)

Source, Deutsche Bank



China fertilizer prices

Figure 19: China fertilizer prices- Summary (all China prices include 17% VAT)

	Avg 2012 US\$/ ton	Avg 2013 US\$/ ton	Jan-Mar 2014 US\$/ ton	Apr-Jun 2014 US\$/ ton	Jun-14 US\$/ ton (5)	Marginal Prod Cost US\$/ ton	Anthracite Shanxi China US\$/ ton (4)
- UREA	351.6	311.9	269.6	242.2	245.1	255 (1)	141.3
Y/y Change		-11.3%			-21.4%		
- DAP	504.9	485.8	433.2	408.5	412.8	na	na
Y/y Change		-3.8%			-15.0%		
- MAP	422.0	342.4	317.5	304.8	303.1	na	na
Y/y Change		-18.9%			-11.5%		
- POTASH	487.5	403.4	345.4	335.8	337.6 (3)	262-295 (2)	na
Y/y Change		-17.3%			-16.3%		
- N.P.K- Domestic	510.4	495.7	438.2	421.9	427.6	na	na
Y/y Change		-2.9%			-13.7%		

Notes:

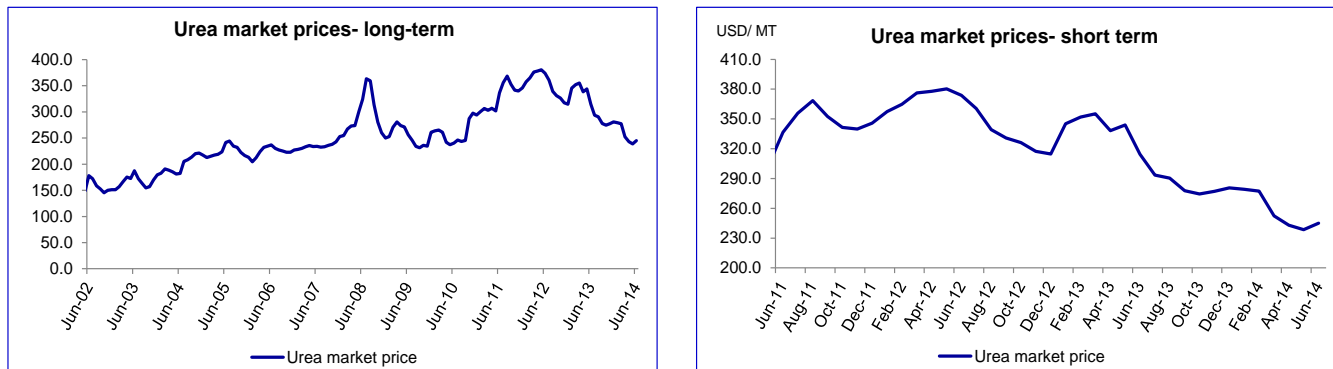
- 1) China is the world's marginal cost producer of Urea. China uses coal to produce its Urea. China produces roughly 38% of the world's Urea with a cash cost of ~ US\$ 255/ ton.
- 2) Brazil is the marginal cost producer of Potash in the world. Yet, Brazil (Valle Rio Doce) produces only ~2% of the world's Potash at a cash cost of US\$ 295/ ton. Germany (K&S) produces 9% of the world's Potash at a cash cost of ~ US\$ 262/ ton.
- 3) On 21-January, 2014 China purchased 700k tons of Potash from Uralkali (Russia) at a price of US\$ 305/ ton (gross) or ~US\$ 285 net of transport fees. Uralkali is the world's largest producer of Potash; it is also the world's low cost producer with an estimated cash cost of US\$ 140/ ton.
- 4) Prices above are taken from the China Petroleum & Chemical Industry as reported by CEIC. The price of Anthracite is the average price for Jun-14
- 5) Y / y price change under "Jun-14" is change from Avg 2013 to average Jun-2014 price.

Source: CEIC, Deutsche Bank



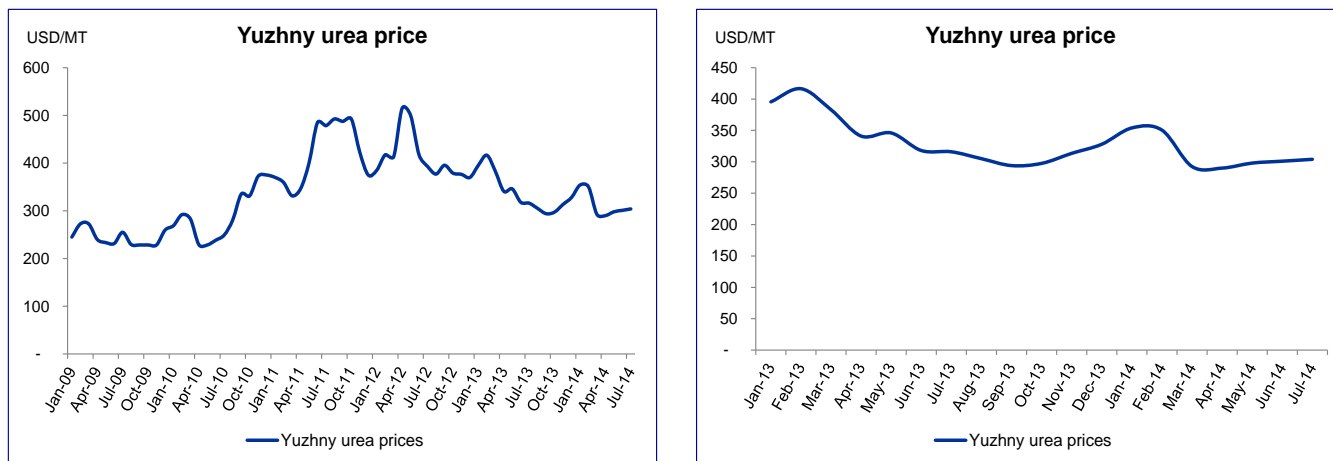
Note: The price charts below (Figure 20- Figure 25) represent latest monthly (June) prices available from CEIC and Bloomberg.

Figure 20: Average wholesale urea price in China (include 17% VAT)



Source: CEIC, Deutsche Bank
 Note: Urea 46% or above
 The charts represent national average monthly market prices

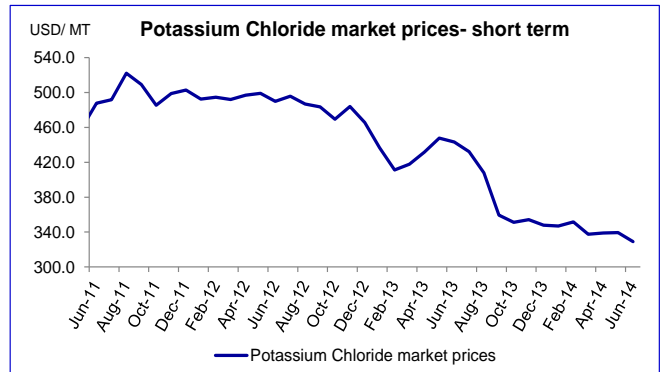
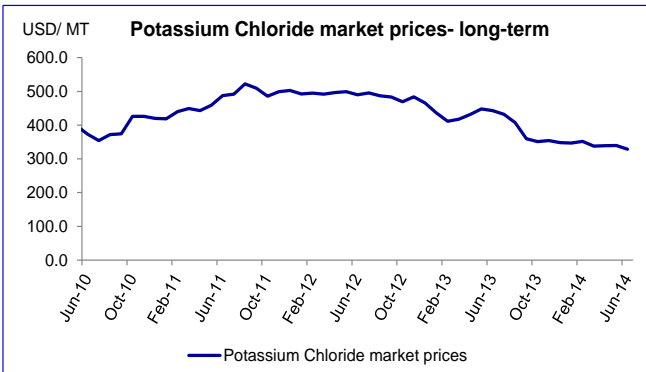
Figure 21: Yuzhny – Ukraine wholesale Urea market price



Source: Bloomberg Finance LP, Deutsche Bank

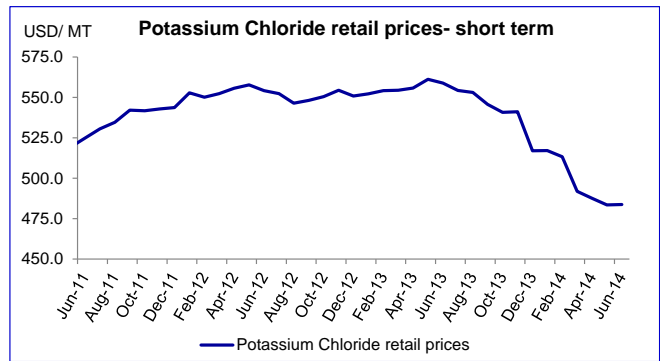
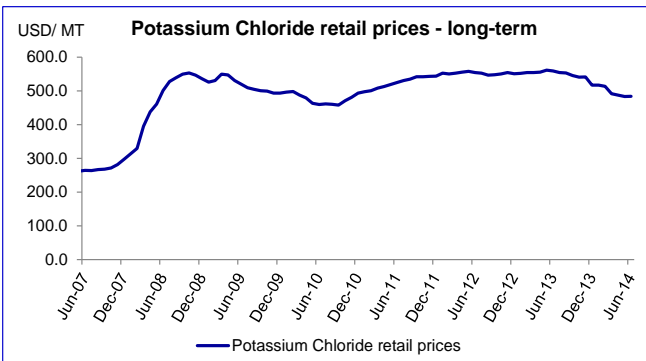


Figure 22: Average Potassium Chloride wholesale price in China (include 17% VAT)



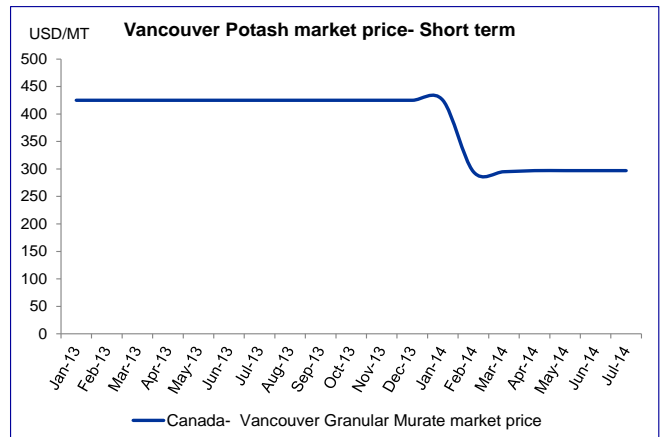
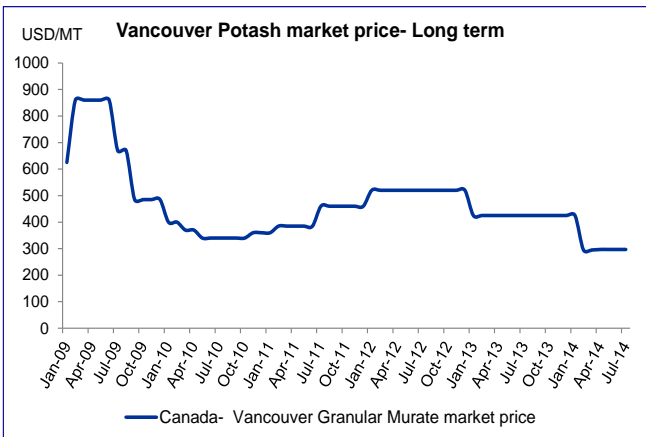
Source: CEIC, Deutsche Bank
 Note: The charts represent national average monthly market prices

Figure 23: Average Potassium Chloride retail price in China (includes 17% VAT)



Source: CEIC, Deutsche Bank

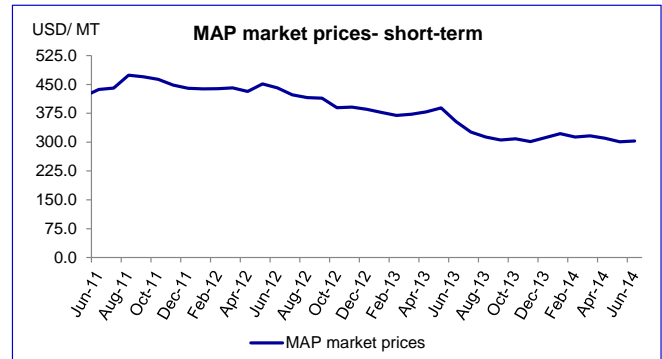
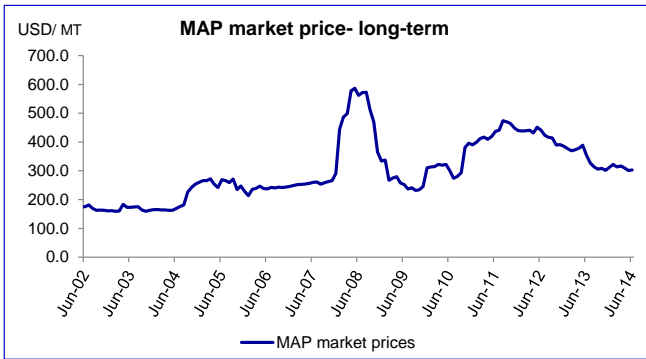
Figure 24: Canada- Vancouver Potash Granular Murate wholesale price



Source: Bloomberg Finance LP, Deutsche Bank



Figure 25: Average M.A.P wholesale price in China (include 17% VAT)



Source: CEIC, Deutsche Bank
Note: The charts represent national average monthly market prices



China coal prices

Figure 26: China quarterly coal prices

USD/Ton	Thermal 5000Kcal	Thermal 5500Kcal	Anthracite	Coking Coal	Lignite
1Q2010	94	108	141	183	25
2Q2010	94	109	142	200	22
3Q2010	93	108	146	201	24
4Q2010	103	117	173	208	27
FY2010	96	110	150	198	24
1Q2011	103	118	209	222	28
2Q2011	113	128	219	230	28
3Q2011	114	130	221	240	38
4Q2011	115	131	228	249	43
FY2011	111	127	219	235	34
1Q2012	107	123	230	244	43
2Q2012	101	118	208	226	40
3Q2012	84	99	189	200	32
4Q2012	88	101	194	199	30
FY2012	95	110	205	217	36
1Q2013	86	100	201	205	31
2Q2013	84	99	192	183	35
3Q2013	77	90	172	169	34
4Q2013	85	94	172	176	31
FY2013	83	96	184	183	33
1Q2014	78	89	172	167	30
2Q2014	73	85	145	136	27
3Q2014	70	80	140	128	22
YTD-14	74	84	153	144	26
Chg Q-o-Q	-4.8%	-6.2%	-3.0%	-5.8%	-17.1%
Chg Q-o-Q (Y-o-Y)	-9.2%	-12.0%	-18.5%	-24.1%	-34.8%
Chg Y-o-Y	-11.2%	-12.0%	-17.2%	-21.4%	-19.2%

Source: China Coal Resources, www.100ppi.com, X-Rates, Deutsche Bank

Coal prices in China continue to slide. Urea in China is produced from both thermal coal and anthracite. As coal prices in China slide so do Urea production costs and similarly urea sales prices. According to consultants Fertecon, 45% of China's urea is now produced from anthracite, 18% from thermal coal, 28% from legacy natural gas (natural gas is now prohibited from being used as a feedstock into any new urea production capacity in China) with 7% coming from fuel oil. Changes in coal-to-urea technology is allowing for greater use of lower-cost thermal coal (vs. anthracite) in the production of urea. As China converts its anthracite-coal-to-urea facilities to thermal-coal-to-urea facilities, the average cost of urea production in China should continue to slide. This explains why the average price of China urea as depicted in [Figure 20](#) (including a 17% VAT) is less than Case 1 and 2 in [Figure 28](#).

New coal-to-urea technology lowering average costs.



Urea cost models

Coal to Urea - cost model

Key assumptions of the model:

- 0.59 ton of ammonia is needed to produce 1 ton of urea;
- 0.77 ton of Anthracite (coal) is needed to produce 1 ton of urea;
- In our Coal to Urea production cost model (Figure 27) we assume no debt financing and therefore no interest expense. Our interest in this note is to cost out the feedstock (coal and natural gas) and the respective manufacturing process (coal-to-urea and natural gas-to-urea) rather than the cost of capital on various projects.
- We assume a standard Urea plant size of 300-400K ton production per year. We assume the plant is located in central/northern provinces (Shanxi) with rail and/ or heavy-duty vehicle transport available;
- For Case 1 (Figure 27), we assume 1) vertical integration of the urea facility with its coal mine; 2) the coal reserve is located on premise of the urea facility; 3) the cost of self-supplied coal is 75% of coal purchased from a third-party located within 300km from the facility; and 4) the end product of urea is sold within the same province.
- For Case 2 (Figure 27), we assume 1) the coal is purchased from a third-party supplier; 2) the supplier is located within 300kms of the urea facility; 3) the coal transport cost is unbundled and therefore reflected as a standalone expense item; and 4) the end-product urea is sold within the same province.
- Our Anthracite coal price assumption (Figure 27) is taken from actual daily transaction prices in Shanxi-Jincheng as posted by Jincheng Anthracite Mining Company and represents the average posted price from the previous month (May 2014).

It is interesting to note that China's recent price movement for both coal (down) and natural gas (up) has placed natural gas-to-urea production at a cost disadvantage relative to coal-to-urea production.

At an anthracite coal price of Rmb 1,354 / ton (US\$ 218/ ton), coal based urea becomes price competitive to current natural gas based urea (Figure 26) using the current price of China natural gas of Rmb 1.70/ cubic meter (US\$ 7.76mcf).



Figure 27: Coal to Urea cost model

	Case 1: From self-owned coal mines		Case 2: From third parties	
Urea production cost	216	USD / ton	255	
	1,337	RMB / ton	1,583	
Coal used for feedstock				
Coal price (ex-plant Anthracite)	653	RMB / ton coal	870	
	105	USD / ton coal	140	
Coal feedstock consumption	0.77	ton coal / ton urea	0.77	
Coal feedstock cost	499	RMB / ton urea	666	
Total coal cost per ton urea	499	RMB / ton urea	666	
	81	USD / ton urea	107	
Transportation				
Distance from coal mine to plant	N/A	km	300	
Transportation cost	N/A	RMB / ton coal	50	
Other related expenses	N/A	RMB / ton coal	10	
Total transportation cost per ton coal	N/A	RMB / ton coal	60	
Total transportation cost per ton urea	N/A	RMB / ton urea	80	
Electricity				
Usage per ton urea	950	Kwh / ton urea	950	
Electricity tariff	0.45	RMB / Kwh	0.45	
Total electricity cost per ton urea	428	RMB / ton urea	428	
OPEX				
Depreciation	150	RMB / ton urea	150	
Staff	100	RMB / ton urea	100	
Utilities and production supplies	100	RMB / ton urea	100	
R&M	50	RMB / ton urea	50	
Transportation fee of urea product	10	RMB / ton urea	10	
Urea production cost	1,337	RMB / ton urea	1,583	
	216	USD / ton urea	255	
July 2014 exchange rate	6.20			

Source: Deutsche Bank

Figure 28: Sensitivity of urea cost to changes in coal cost

Case 1: From self-owned coal mines			Case 2: From third parties		
Change in coal cost	Urea cost (USD / ton)	Compared with base case	Change in coal cost	Urea cost (USD / ton)	Compared with base case
-10%	208	-3.7%	-10%	245	-4.2%
-5%	212	-1.9%	-5%	250	-2.1%
Current Cost	216	0.0%	Current Cost	255	0.0%
+5%	220	1.9%	+5%	261	2.1%
+10%	224	3.7%	+10%	266	4.2%
+15%	228	5.6%	+15%	271	6.3%
+20%	232	7.5%	+20%	277	8.4%
+30%	240	11.2%	+30%	288	12.6%
+50%	256	18.7%	+50%	309	21.0%

Source: Deutsche Bank



Natural gas to Urea cost model

Key assumptions of the model:

- 0.59 ton of ammonia is needed to produce 1 ton of urea;
- 700 cubic meters (24.7 mcf) of natural gas is needed to produce 1 ton of urea;
- In our Natural gas to Urea production cost model (Figure 29) we assume no debt financing and therefore no interest expense. Our interest in this note is to cost out the feedstock (coal and natural gas) and the respective manufacturing process (coal-to-urea and natural gas-to-urea) rather than the cost of capital on various projects.
- We assume a standard Urea plant size of 300-400K ton production per year. We assume the plant is located in western province (Sichuan) with close proximity to natural gas resources (via "Sichuan-East China Natural Gas Pipeline") ;
- We also assume 1) the natural gas is supplied by Sinopec's Sichuan Puguang Gas Field, the second largest gas field in China with an output of 377 bcf in 2013; 2) no suspension of natural gas supplies at peak consumption period (January and December of each year); 3) no significant infrastructure Capex for gaining access to Sichuan-East China Natural Gas Pipeline; and 4) the end product of urea is sold within the same province.
- Our assumed price for natural gas into urea (Figure 29) is Rmb 1.70 / cubic meter (US\$ 7.76/ mcf). This (adjusted) price is equal to Rmb 1.35 / cubic meter (NDRC gas-to-urea maximum allowed price, prior to gas reform of 10-July 2013), plus Rmb 0.25 / cubic meter (the NDRC's maximum price adjustment for gas-to-fertilizer post gas reform 10-July 2013), plus the variable (+/- 10%) as provided by the NDRC for buyers and sellers to negotiate a final market price.

At a natural gas price of Rmb 1.16 / cubic meter (US\$ 5.30 / mcf), gas based urea becomes price complete to current third-party anthracite based urea (Figure 24 – Case #2) using anthracite coal at a current price of US\$ 140/ ton.



Figure 29: Gas to urea cost model

Urea production cost	316	USD / ton
	1,960	RMB / ton
Natural gas cost		
NG price per m3	1.70	RMB / m3 NG
NG consumption per ton urea	700	m3 NG / ton urea
Total gas cost per ton urea	1,190	RMB / ton urea
	192	USD / ton urea
Electricity		
Usage per ton urea	800	Kwh / ton urea
Electricity tariff	0.45	RMB / Kwh
Total electricity cost per ton urea	360	RMB / ton urea
OPEX		
Depreciation	150	RMB / ton urea
Staff	100	RMB / ton urea
Utilities and production supplies	100	RMB / ton urea
R&M	50	RMB / ton urea
Transportation fee of urea product	10	RMB / ton urea
Total production cost per ton urea	316	USD / ton urea
	1,960	RMB / ton urea
July 2014 exchange rate	6.20	

Source: Deutsche Bank

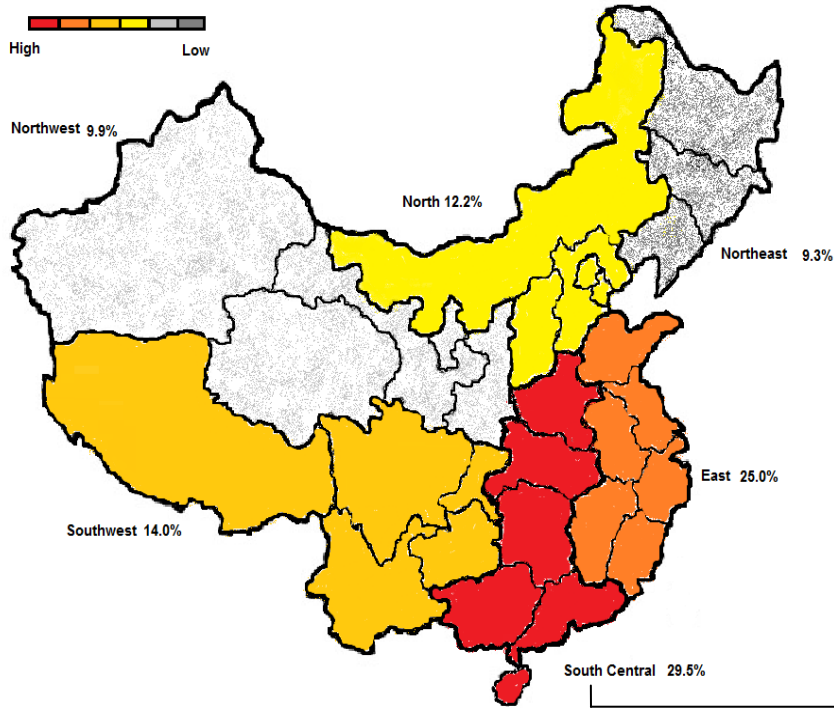
Figure 30: Sensitivity of urea cost to changes in gas cost

Change in NG price	Urea cost (USD / ton)	Compared with base case
-10%	297	-6.1%
-5%	307	-3.0%
Current Cost	316	0.0%
+5%	326	3.0%
+10%	335	6.1%
+15%	345	9.1%
+20%	355	12.1%
+30%	374	18.2%
+50%	412	30.4%

Source: Deutsche Bank

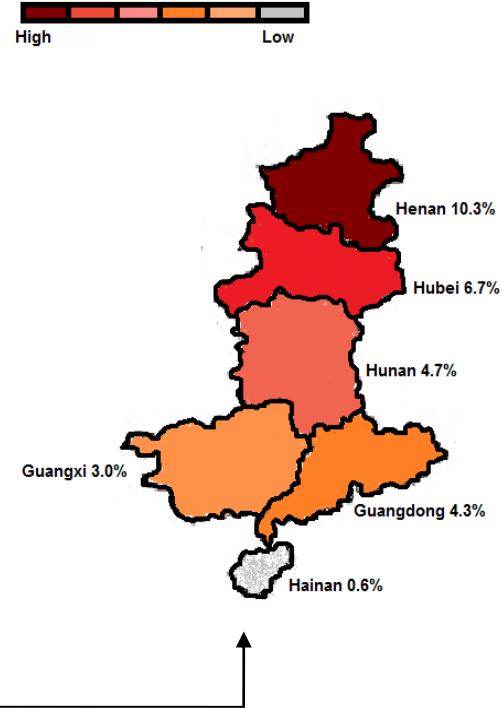
Geographical spread of China's fertilizer consumption

Figure 31: Province-wise urea consumption



Source: Deutsche Bank, CEIC

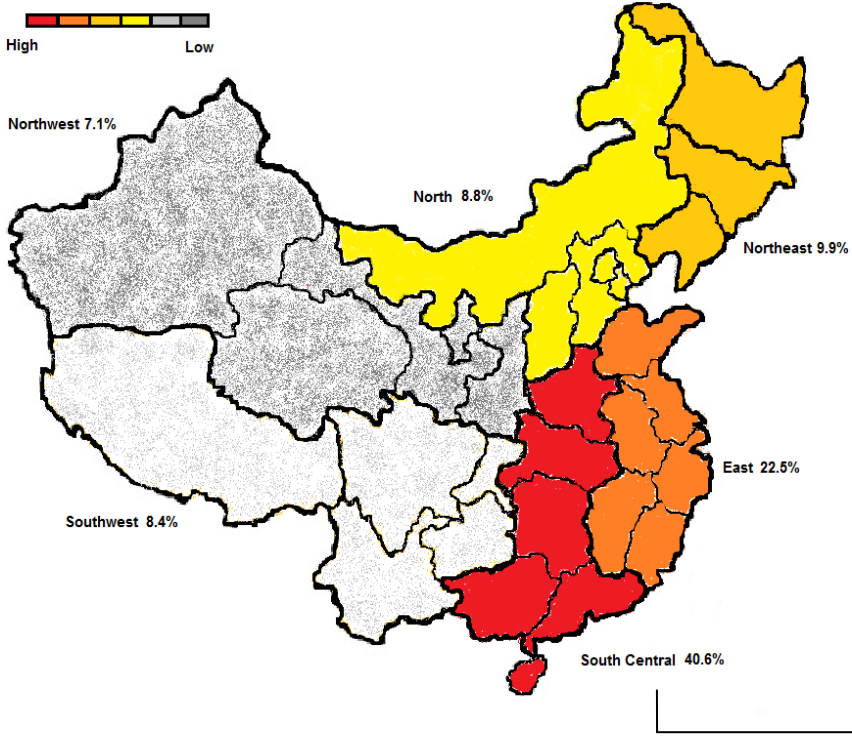
Figure 32: Urea consumption in South Central province



Source: Deutsche Bank, CEIC

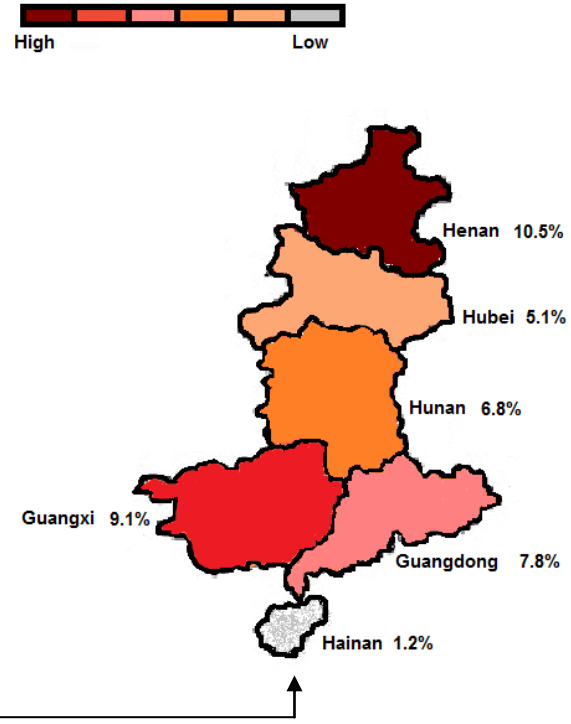


Figure 33: Province-wise potash consumption



Source: Deutsche Bank, CEIC

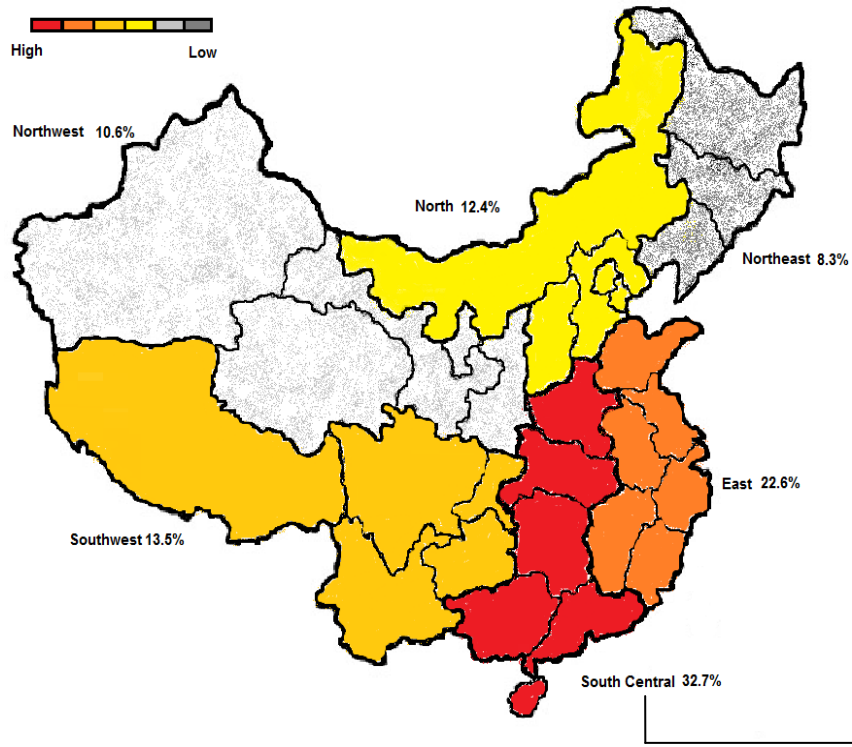
Figure 34: Potash consumption in South Central province



Source: Deutsche Bank, CEIC

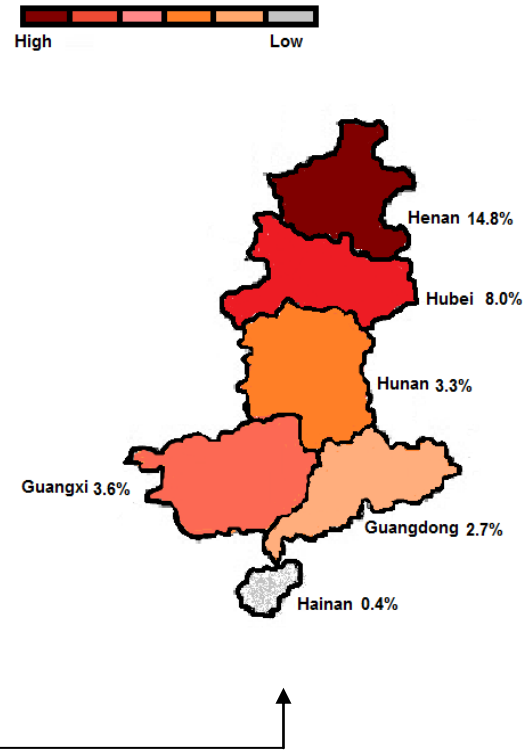


Figure 35: Province-wise phosphate consumption



Source: Deutsche Bank, CEIC

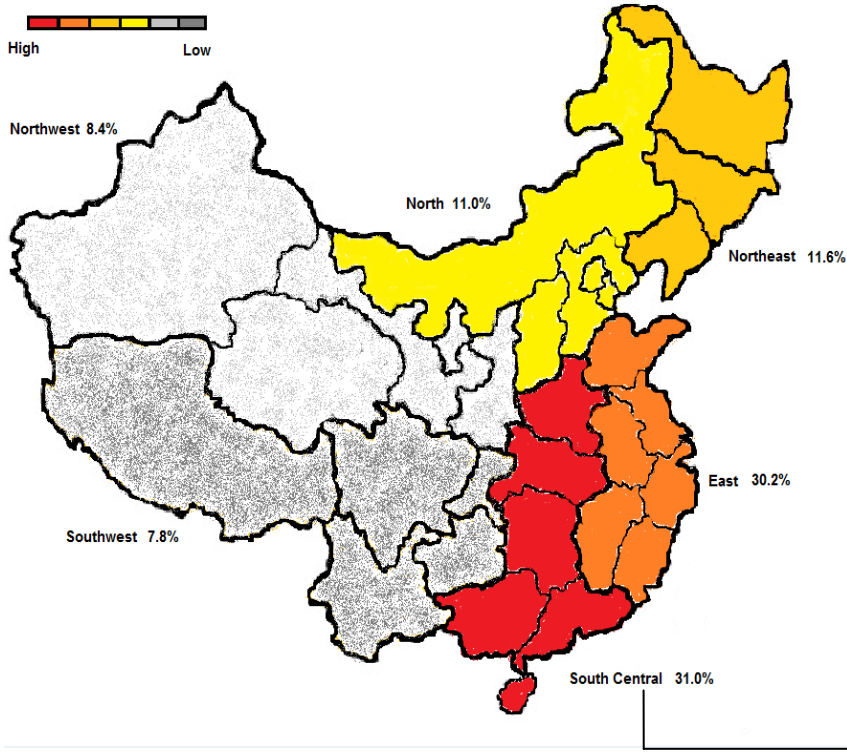
Figure 36: Phosphate consumption in South Central province



Source: Deutsche Bank, CEIC

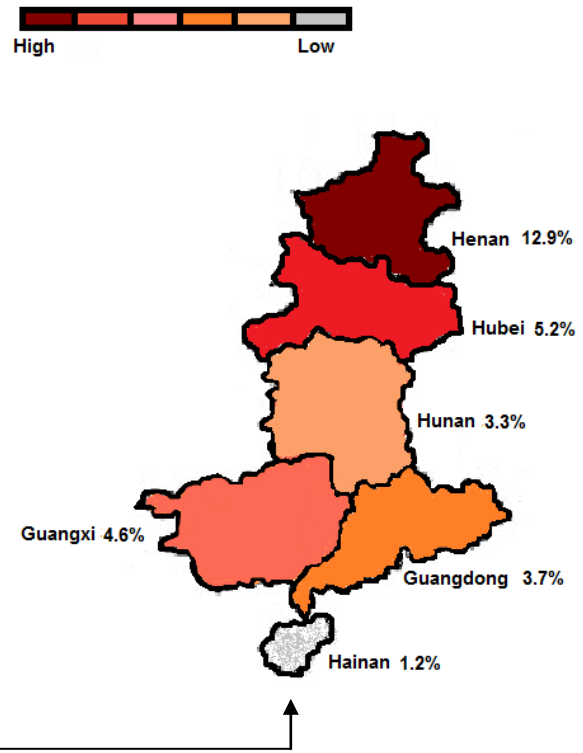


Figure 37: Province-wise compound fertilizer consumption



Source: Deutsche Bank, CEIC

Figure 38: Compound fertilizer consumption in South Central province



Source: Deutsche Bank, CEIC





The author of this report wishes to acknowledge the contribution made by Dilini Gunawardane, employee of Copal Amba, a third-party provider to Deutsche Bank of offshore research support services.



Appendix 1

Important Disclosures

Additional information available upon request

Disclosure checklist			
Company	Ticker	Recent price*	Disclosure
Petronas Chemicals Group	PCGB.KL	6.69 (MYR) 6 Aug 14	7,14
Sinofert	0297.HK	1.14 (HKD) 6 Aug 14	1,7

*Prices are sourced from local exchanges via Reuters, Bloomberg and other vendors. Data is sourced from Deutsche Bank and subject companies

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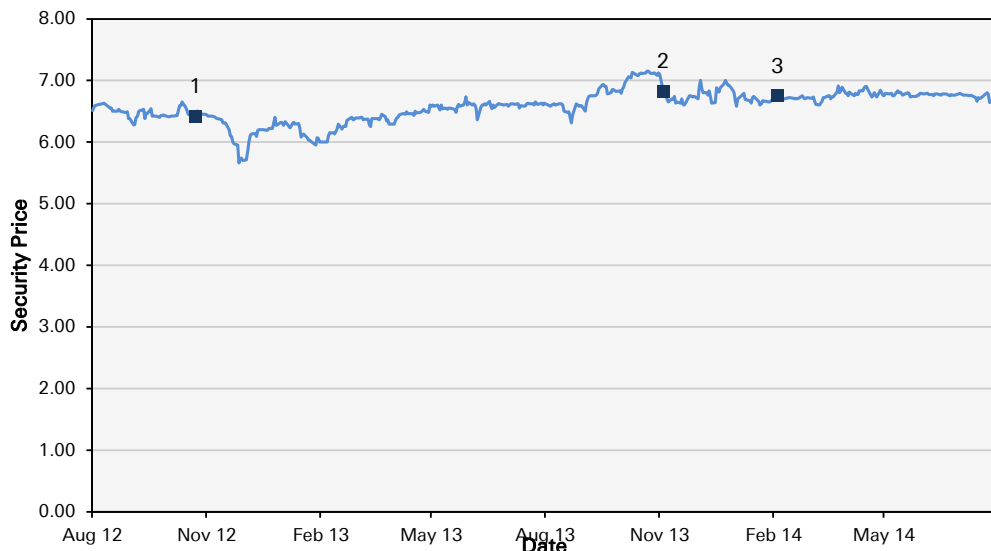
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Historical recommendations and target price: Petronas Chemicals Group (PCGB.KL)

(as of 8/6/2014)



Previous Recommendations

- Strong Buy
- Buy
- Market Perform
- Underperform
- Not Rated
- Suspended Rating

Current Recommendations

- Buy
- Hold
- Sell
- Not Rated
- Suspended Rating

*New Recommendation Structure as of September 9,2002

1. 30/10/2012:	Hold, Target Price Change MYR6.12	3. 11/02/2014:	Hold, Target Price Change MYR6.90
2. 11/11/2013:	Hold, Target Price Change MYR6.95		

Historical recommendations and target price: Sinofert (0297.HK)

(as of 8/6/2014)



Previous Recommendations

- Strong Buy
- Buy
- Market Perform
- Underperform
- Not Rated
- Suspended Rating

Current Recommendations

- Buy
- Hold
- Sell
- Not Rated
- Suspended Rating

*New Recommendation Structure as of September 9,2002

1. 06/09/2012:	Upgrade to Buy, Target Price Change HKD2.38	3. 10/02/2014:	Upgrade to Buy, Target Price Change HKD1.30
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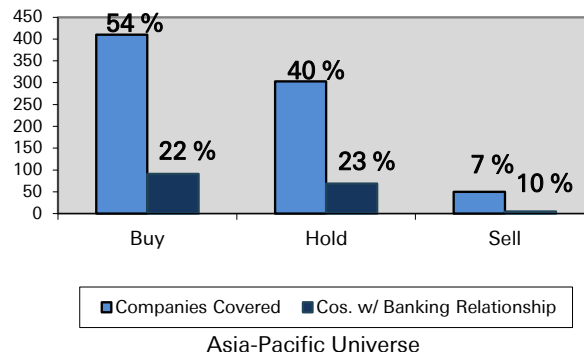
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Equity rating dispersion and banking relationships





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