

Fertilizers are plant nutrients, required for crops to grow

Nitrogen – the most important nutrient

Nitrogen (N)
Essential for growth and development in plants

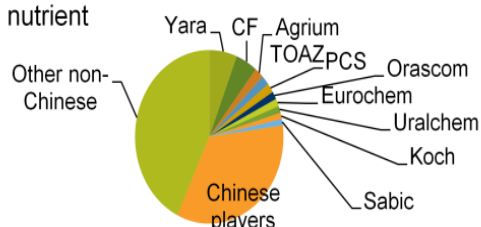
Phosphorus (P)
Vital for adequate root development

Potassium (K)
Vital for adequate root development

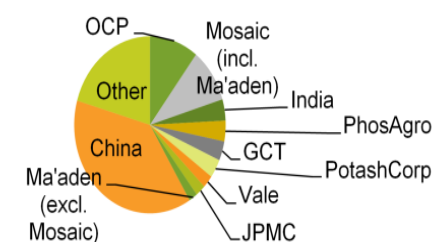
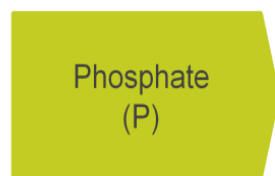
The key nitrogen, phosphate and potash products are urea, di-ammonium phosphate (DAP) and potassium chloride (MOP)

- The N industry is fragmented, while P and K industries are more concentrated

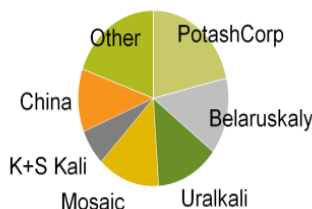
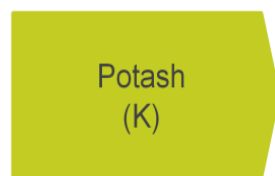
2016 figures¹, million tonnes nutrient



- Despite a consolidation trend, the industry is still higher fragmented
- Top 3 producers account for only ~15% of world capacity



- More concentrated than N-industry
- Top 3 producers account for ~24% of capacity



- Highly concentrated industry
- Top 3 producers account for ~49% of capacity

1) Nitrogen: 2013 figures

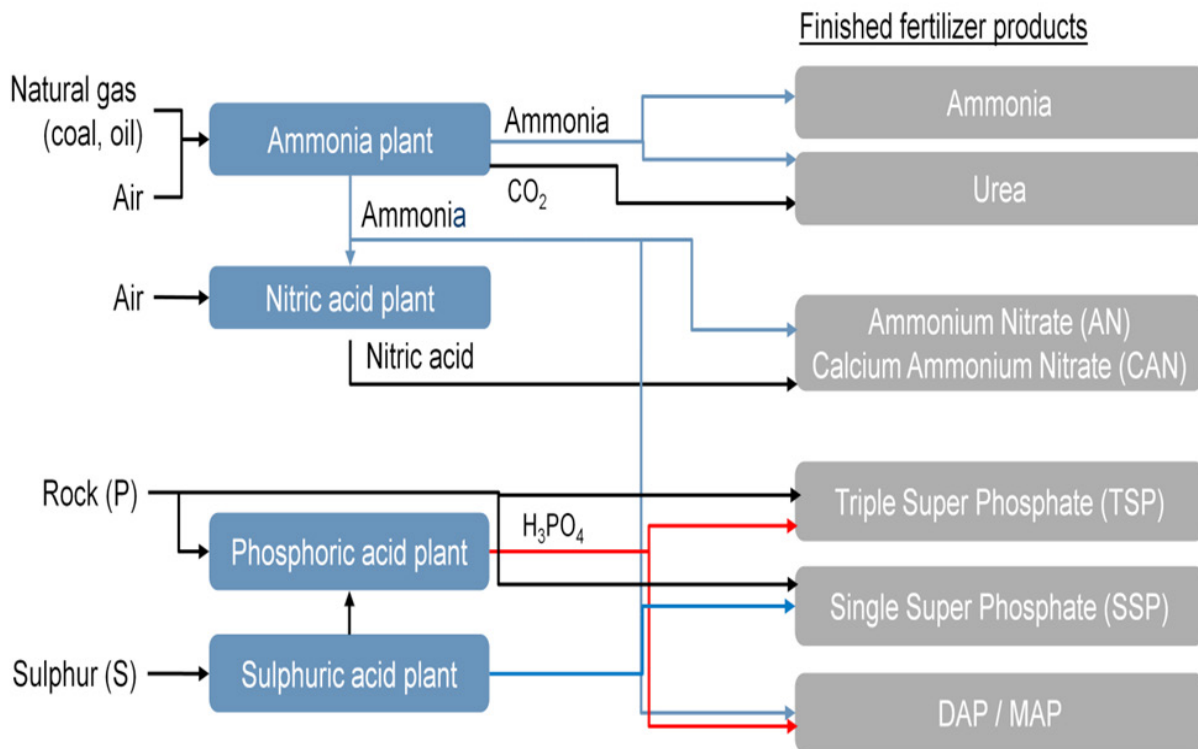
Source: IFA

- Agrium, The Mosaic Company and Yara International are among the largest global fertilizer companies

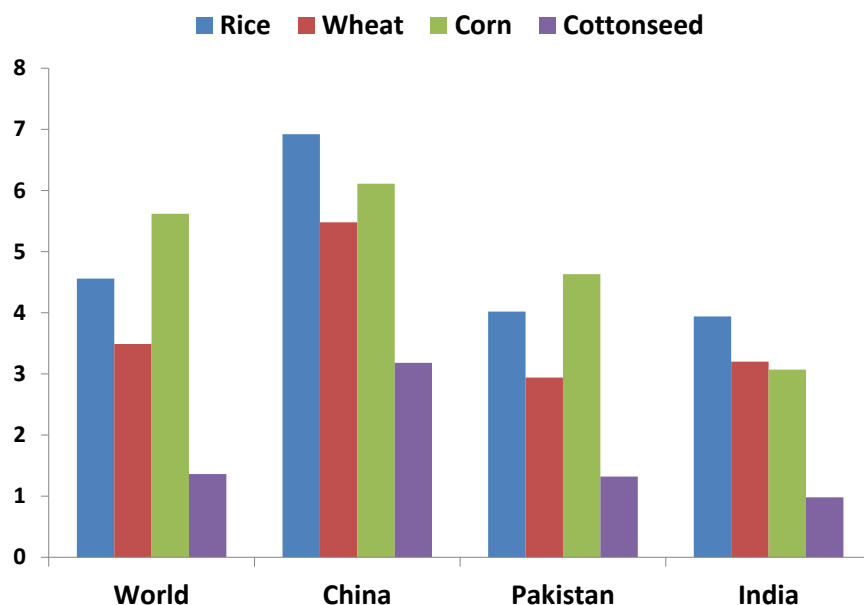
Fertilizer raw materials

- Potash and phosphate input materials are limited by globally available reserves
- Almost 81.0% of known potash reserves are concentrated in Canada and Russia, while about 75.0% of known phosphate rock reserves are concentrated in Morocco and Western Sahara
- For nitrogen fertilizers, key input raw material is natural gas which is abundantly available

Fertilizer manufacturing process

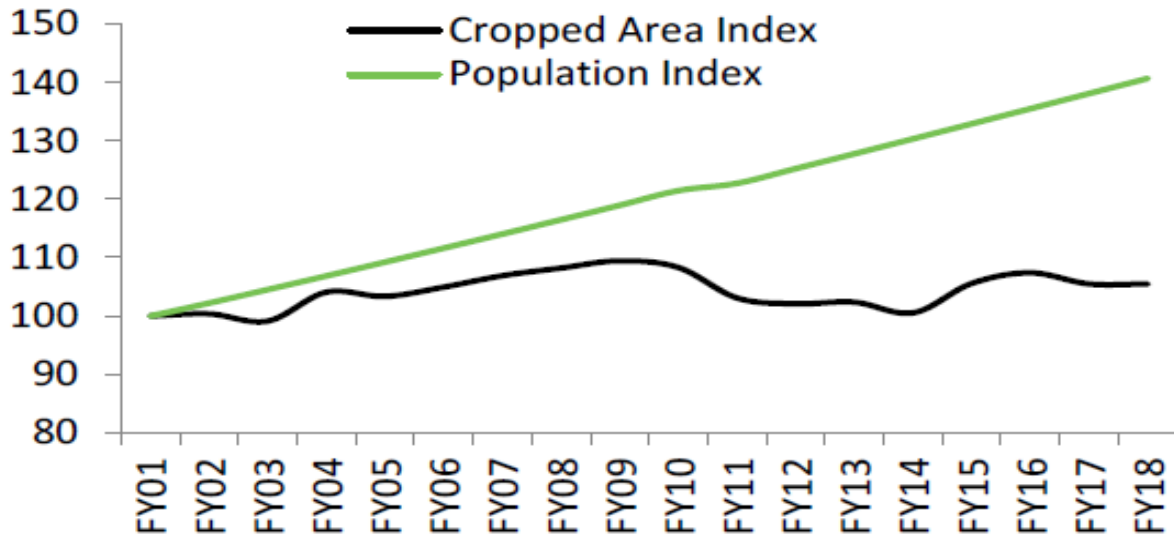


Pakistani crop yield is significantly lower than global averages



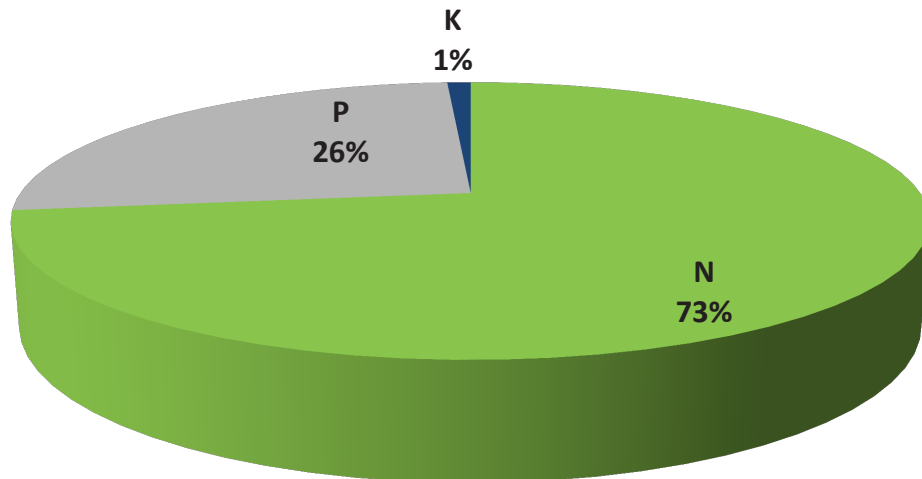
Source: USDA

... while Pakistan's population is growing at an average annual rate of 2% (total 18% in 10 years), cropped area has fallen 3.6%

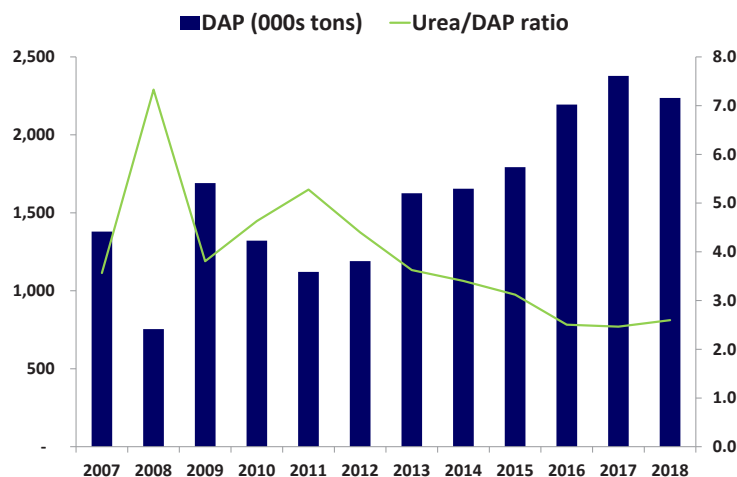


Source: PBS

In Pakistan, nutrient mix is tilted towards nitrogen mainly due to higher prices of phosphate fertilizers...

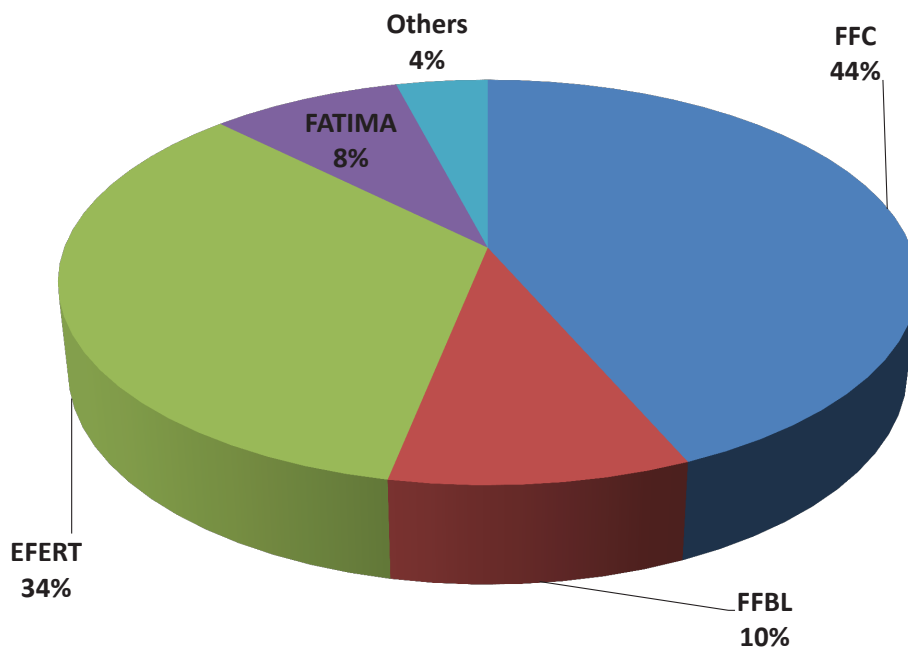


...over past few years, DAP consumption improved due to fall in prices and subsidies as depicted by decline in urea/DAP ratio

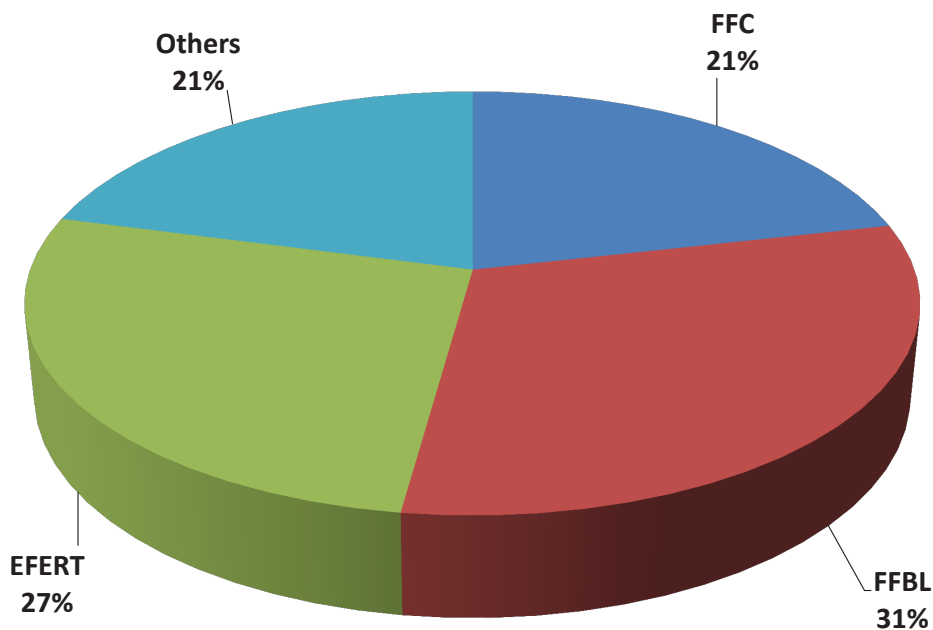


Source: Zakheera

Market Share - Urea Offtake in 2018



Market Share - DAP Offtake in 2018



- Fauji Fertilizer Company Limited (FFC) is the largest player in terms of market share in Urea.
- Fauji Fertilizer Bin Qasim Limited (FFBL) is the pioneering, sole domestic producer of Di-Ammonium Phosphate (DAP) fertilizer and Granular Urea.
- Engro Fertilizer Limited (EFERT) and Fatima Fertilizer Limited are undertakings of Engro Corporation Limited and Fatima Group & Arif Habib Group respectively.

Capacities

in 000s Tonnes at end-2018	Urea & CAN		NP & NPK		DAP	
Company Name	Capacity	Production	Capacity	Production	Capacity	Production
GAS BASED PLANTS						
Fauji Fertilizer Company Limited	2,048	2,522	-	-	-	-
Fauji Fertilizer Bin Qasim Limited	551	562	-	-	650	730
Engro Fertilizer Limited	2,275	1,928	100	133	-	-
Fatima Fertilizer Limited	920	976	360	429	-	-
LNG BASED PLANTS						
Fatimafert Limited	402	-	228	-	-	-
Pak Arab Fertilizer Limited	542	-	305	-	-	-
Agritech Fertilizer Limited	433	-	81	-	-	-

UREA

Urea Pricing

- In case of Urea production, gas is used as fuel (fuelstock) and as the principal raw material (feedstock).
- In order to ensure adequate domestic supply, reduce dependence on imports and ensure supply of Urea at lower rates vis-à-vis international rates, government has allowed fertilizer companies to utilize LNG at subsidized rates (Subsidy: Rs. 1,250/bag).

Urea Imports and LNG production have resumed in 2018

- Though LNG based urea production is being subsidized, the government has decided to ensure continuous operation of FatimaFert and Agritech plants till Oct-19.
- LNG rate has been subsidized to maintain sufficient Urea inventories to keep urea prices in check.
- Urea production increased by 9.2% during 1H2019.
- LNG based plants added ~391 KT to the industry production due to allocation of subsidized LNG by the Government .
- Full year production is expected at ~5.8m tons in case LNG based plants continue to operate.

	Production	Sales	Surplus/Deficit	Imports	Exports	Inventory
CY06	4,804	5,235	(430)	649	0	233
CY07	4,755	4,917	(163)	133	0	148
CY08	4,978	5,532	(554)	460	0	34
CY09	5,046	6,436	(1,390)	1,516	0	132
CY10	5,151	6,123	(973)	940	0	166
CY11	4,890	5,918	(1,029)	997	0	125
CY12	4,144	5,237	(1,093)	1,951	0	434
CY13	4,829	5,895	(1,066)	957	0	311
CY14	4,896	5,631	(736)	696	0	211
CY15	5,304	5,597	(293)	680	0	559
CY16	5,993	5,495	498	0	0	1,038
CY17	5,653	6,421	(768)	0	560	336
CY18	5,602	5,824	(222)	105	12	174

Source: Zakheera

Urea Offtake

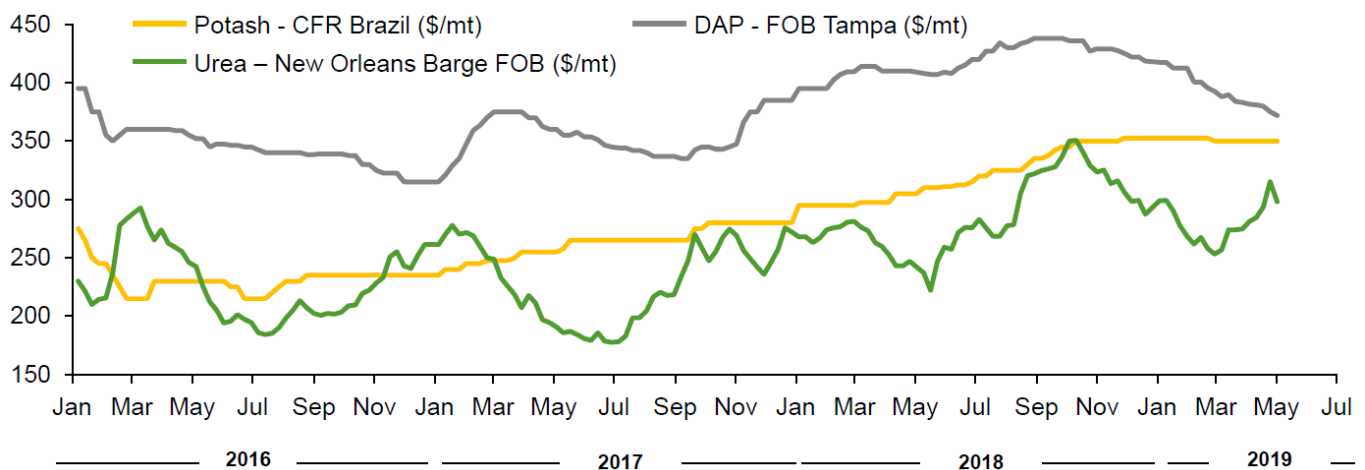
Offtake	6M19	6M18	YoY	2018	2017	2016	2015
Urea							
FFC	1,183	1,226	-4%	2,527	2,474	2,428	2,408
FFBL	214	255	-16%	562	546	443	290
EFERT	897	994	-10%	1,994	1,833	1,653	1,879
FATIMA	204	244	-16%	492	417	646	419
Others	308	9	3322%	213	361	295	81
<i>Domestic</i>	<i>2,806</i>	<i>2,728</i>	<i>3%</i>	<i>5,788</i>	<i>5,632</i>	<i>5,465</i>	<i>5,077</i>
<i>Imported</i>	<i>81</i>	<i>-</i>	<i>0%</i>	<i>24</i>	<i>260</i>	<i>30</i>	<i>520</i>
Total Urea	2,888	2,729	6%	5,811	5,892	5,495	5,597

Urea Inventory levels

Inventory	6M19	6M18	YoY	2018	2017	2016
Urea						
FFC	30	20	50%	3	8	193
FFBL	1	1	0%	0	-	3
EFERT	11	21	-48%	10	184	287
FATIMA	45	117	-62%	72	126	178
Others	91	8	1038%	7	17	
<i>Domestic</i>	<i>178</i>	<i>167</i>	<i>7%</i>	<i>93</i>	<i>335</i>	<i>661</i>
<i>Imported</i>	<i>-</i>	<i>-</i>	<i>0%</i>	<i>81</i>	<i>2</i>	<i>262</i>
Total Urea	178	167	7%	174	337	923

International Urea prices softened in early 2019 due to seasonally slow demand

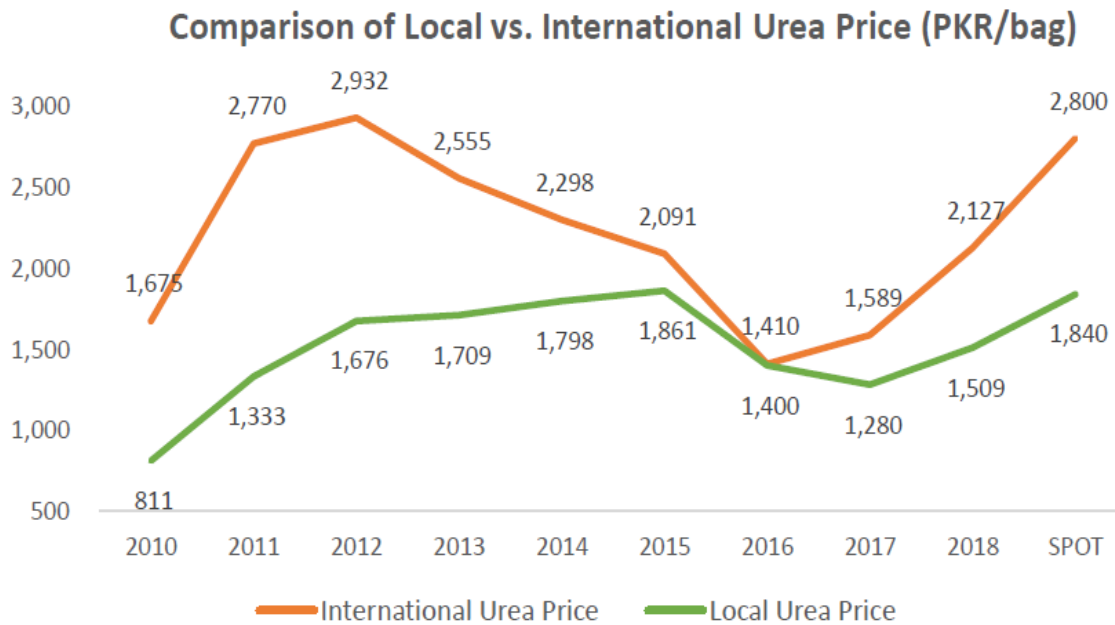
US\$ per tonne



Source: Mosaic Investor Presentation 2019

Strong US demand and limited new capacity has supported urea prices in-season, particularly in-market

Fertilizer prices in Pakistan remain subsidized despite significant difference between international urea prices



Source: Engro Fertilizer Limited Analyst Briefing

Increase in gas prices has historically been passed on to consumers

(Rs./mmbtu)	Feed Price	Fuel Price
Jan-09	95	339
Jul-09	102	324
Jan-10	102	382
Aug-11	102	434
Jan-12	116	495
Jul-12	116	460
Jan-13	123	488
Sep-15	200	600
Apr-16	123	600
Oct-18	185	780

Source: NFDC

Gas Infrastructure Development Cess (GIDC)

- In 2011, the government started levying GIDC on fuelstock and feedstock. GIDC levied on fertilizer sector is Rs. 300/mmbtu at feedstock and Rs. 150/ mmbtu on fuelstock.
- GIDC since its inception in 2012 has faced various litigations and court stay orders, thus depriving government of the GIDC collection. To resolve this, GoP has proposed GIDC Amendment Act 2019.

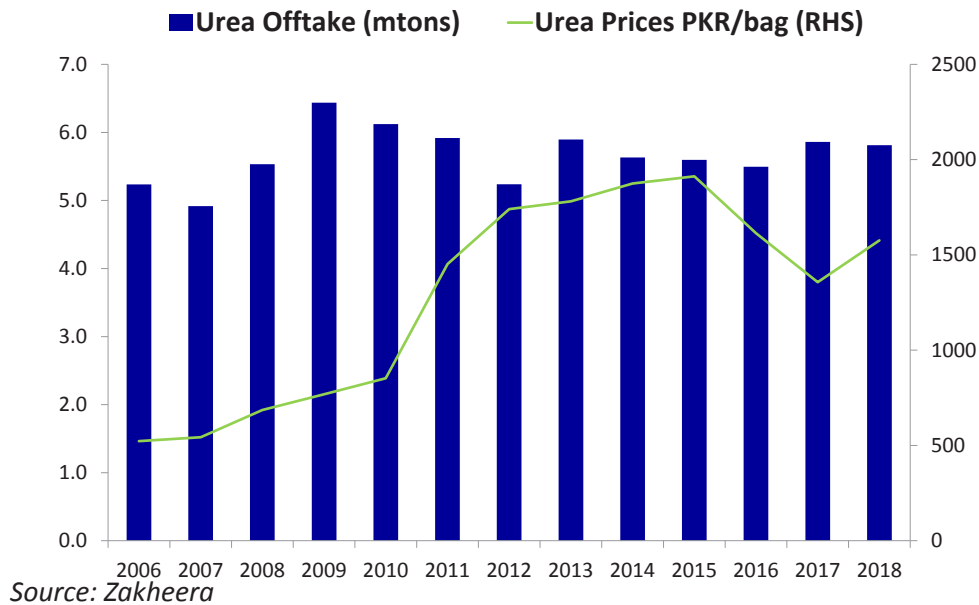
Settlement of GIDC and past subsidy has been proposed under one of the following modes:

- 50% waiver of arrear amounts in GIDC which are held up due to protracted litigations
- 50% reduction in prospective GIDC Feed and Fuel rates
- No GIDC on concessionary gas

GIDC Settlement

- Fertilizer industry has not passed on the impact of recent increase in gas prices in anticipation of GIDC settlement.
- Players that are undertaking sizeable GIDC provision (FFC and FFBL) will be the major beneficiary of GIDC settlement as future GIDC provisions will reduce by half.
- FFC and FFBL are also expected to book a sizeable one-time reversal in the financials for 2019.
- Players operating on subsidized gas do not undertake provision for subsidized portion of feed gas being used.
- GIDC settlement expected in 3QCY19

Urea demand is price inelastic vis-à-vis DAP

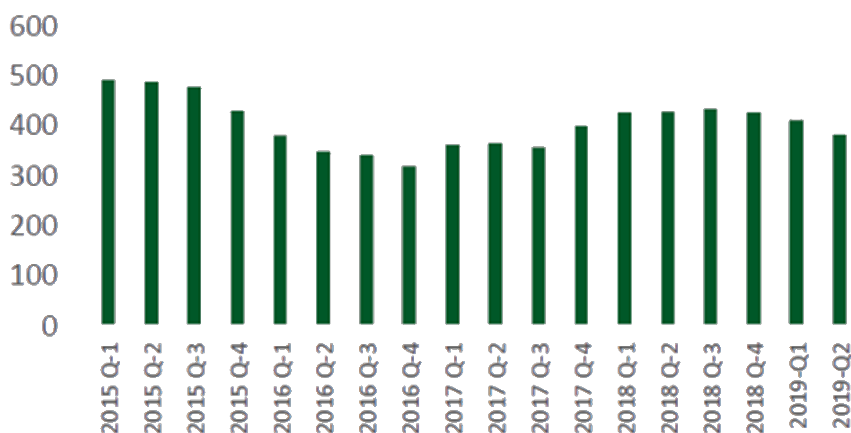


In case of rupee devaluation, imported Urea price in rupees per bag would increase, thereby providing cushion to fertilizer companies to raise domestic retail prices.

DAP

International DAP prices have been declining in last quarter due to seasonal factors and lower demand from several regions

DAP Prices CFR (USD/t)

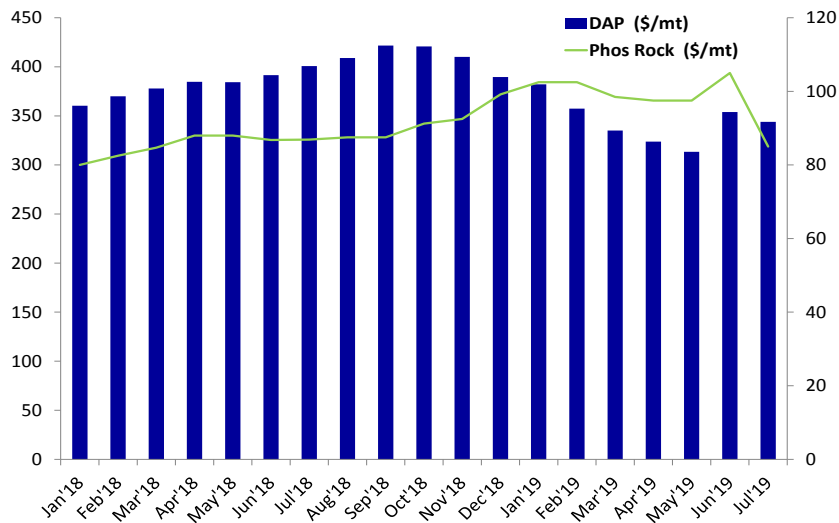


Source: Engro Fertilizer Limited Analyst Briefing 2Q2019

Fundamentals look constructive with continued, albeit slower, demand growth and no world-scale projects in the pipeline behind the Moroccan and Saudi projects that are ramping up today and continued restructuring taking place in China.

International DAP prices have dropped from a high of USD 422/T in January-2019 to USD 355/T by end-1H2019. Moving forward, Chinese producers have decided to cut production to stabilize prices. As a result, international DAP prices are expected to stay range bound over the next quarter.

Local DAP prices are directly correlated with international prices

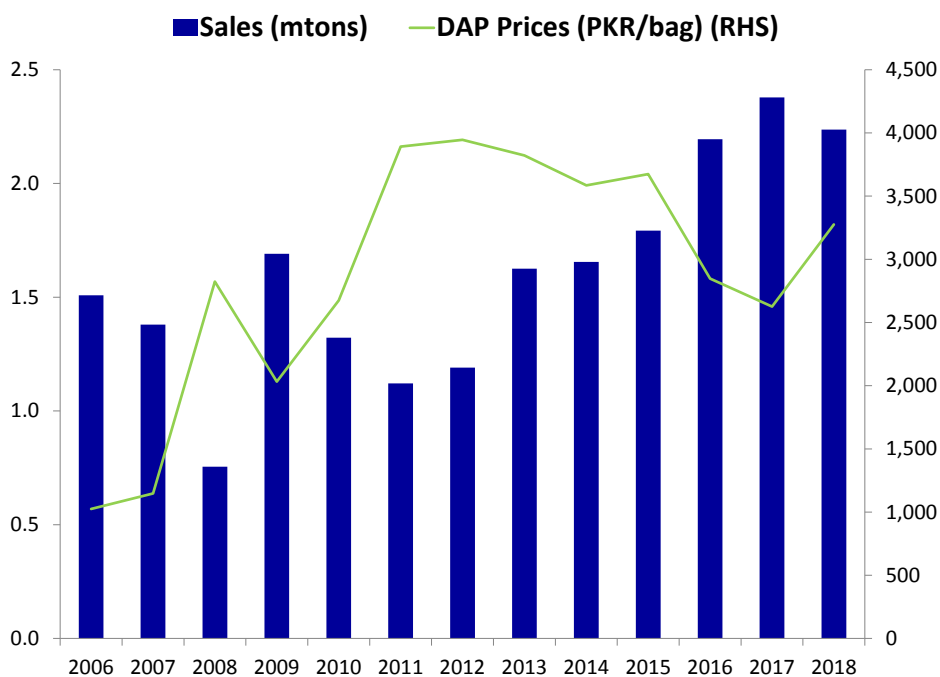


Source: Zakheera

DAP margins have remained under pressure for local players over the last few quarters but are expected to improve given the recent dip in phosacid prices and gradual improvement in demand supply dynamics.

DAP demand is more price elastic vis-à-vis Urea

In 1H19, Pakistani DAP offtake was down by 5% vis-à-vis same period last year. Lower offtake was due to rising international DAP prices and rupee devaluation.



Source: Zakheera

DAP Offtake

Offtake	6M19	6M18	YoY	2018	2017	2016	2015
Domestic							
FFBL	202	208	-3%	687	831	791	748
Importers							
FFC	83	186	-55%	480	513	202	165
EFERT	181	174	4%	602	536	528	391
Others	87	31	181%	467	498	673	499
<i>Domestic</i>	<i>202</i>	<i>208</i>	<i>-3%</i>	<i>687</i>	<i>831</i>	<i>791</i>	<i>748</i>
<i>Imported</i>	<i>351</i>	<i>391</i>	<i>-10%</i>	<i>1,549</i>	<i>1,547</i>	<i>1,403</i>	<i>1,055</i>
Total DAP	646	682	-5%	2,236	2,378	2,194	1,803

Source: NFDC

DAP Inventory levels

Build up of inventory has impacted pricing power of industry players

Offtake	6M19	6M18	YoY	2018	2017	2016	2015
Domestic							
FFBL	228	123	85%	44	-	23	748
Importers							
FFC	130	162	-20%	191	-	-	165
EFERT	32	41	-22%	68	1	8	391
Others	78	15	420%	191	28	8	499
<i>Domestic</i>	<i>228</i>	<i>123</i>	<i>85%</i>	<i>44</i>	<i>-</i>	<i>-</i>	<i>748</i>
<i>Imported</i>	<i>240</i>	<i>218</i>	<i>10%</i>	<i>450</i>	<i>29</i>	<i>16</i>	<i>1,055</i>
Total DAP	504	406	24%	494	171	82	1,803

Source: NFDC

Business Risks

Demand dynamics

Apart from FY18, demand growth for urea has remained muted over the years on account of weak farmer incomes and lower commodity prices. Moreover, area under cultivation has also witnessed a gradual decline which has impacted fertilizer off-take.

Discontinuation of GoP support

GoP support through reduction in tax on urea and DAP is a key element of maintaining fertilizer prices on the lower side. Discontinuation of the incentive could impact fertilizer sector off-take.

Gas curtailment

The fertilizer manufacturers operate on three gas networks- SSGC, SNGPL and Mari Network. FFBL operates on SSGC and still faces the issue of gas curtailment which remains a risk. Diversion of gas to household consumers during winter season for players operating on the SNGP network may lead to decline in production. Moreover, margins of players operating on RLNG are on the lower side unless subsidized by GoP

Increase in interest rate

Given that gearing levels are on the higher side, increase in interest rates will negatively impact profitability and cash flows particularly for leveraged players.

Water shortage	Inconsistent supply of water to the agricultural lands could adversely impact fertilizer off-take
Low crop prices	Farmers' income is dependent on crop prices. If they move in the downward direction it could potentially reduce their reliance on usage of fertilizers.
Increase in gas tariff	Out of all the players, only two players- EFERT and FATIMA have an edge over the others as they produce at concessionary feed gas rates. Any rise in gas prices will hit the margins of other players.

Financial Risk

Profitability

Rs. in m	2017	2018	2017	2018	2017	2018	2017	2018
Company	FFBL		FFC		EFERT		FATIMA	
Rating			AA+/A-1+		AA/A-1+		AA-/A-1+	
Net Sales	52,733	61,511	90,714	105,964	63,010	66,141	37,612	45,964
Gross Profit	6,028	8,183	18,093	27,979	20,472	27,909	20,337	26,481
Gross Margin	11.4%	13.3%	19.9%	26.4%	32.5%	42.2%	54.1%	57.6%
Net Profit	1,004	1,437	10,711	14,439	10,137	16,669	10,576	13,272
Net Profit Margin	1.9%	2.3%	11.8%	13.6%	16.1%	25.2%	28.1%	28.9%

Liquidity and Capitalization

Rs. in m	2017	2018	2017	2018	2017	2018	2017	2018
Company	FFBL		FFC		EFERT		FATIMA	
Rating			AA+/A-1+		AA/A-1+		AA-/A-1+	
FFO	915	3,031	10,960	16,561	16,128	20,783	12,345	17,623
ST Debt	9,934	13,913	11,540	28,526	1,672	637	1,726	4,822
LT Debt	18,542	21,208	22,403	15,821	30,904	30,811	16,426	13,030
Total Debt	28,476	35,122	33,943	44,348	32,576	31,448	18,152	17,852
Cash	3,547	3,690	1,713	3,818	1,655	642	810	538
ST Investments	14,194	10,936	30,883	54,586	7,036	6,335	198	623
Adjusted Debt	10,734	20,497	1,348	(14,056)	23,884	24,471	17,144	16,691
FFO/Adjusted Debt	8.5%	14.8%	813%	-118%	68%	85%	72%	106%
FFO/Long term debt	4.9%	14.3%	49%	105%	52%	67%	75%	135%
Leverage	3.99	4.78	2.73	3.39	1.59	1.65	0.85	0.77
Adjusted Gearing	0.82	1.47	0.05	(0.42)	0.58	0.57	0.32	0.27
DSCR	0.62	0.97	1.50	2.16	2.41	2.23	1.87	2.70
Total Liabilities	52,501	66,467	79,278	113,107	65,320	71,152	45,595	47,690
Total Equity	13,151	13,897	29,059	33,405	41,013	42,996	53,742	62,261
Current ratio	0.84	0.88	0.95	0.95	0.98	1.07	1.10	1.09
Stock in trade	1,854	5,655	395	12,932	3,528	2,960	3,813.63	5,028.17
Trade debt	1,005	5,719	3,722	3,679	3,485	2,375	1,796	2,397

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