

# Fertilizers Sector of Pakistan



Punjab Board of Investment & Trade | Projects & Policy Research Department

This document produced by the Punjab Board of Investment and Trade (PBIT) contains information from sources believed reliable; we do not guarantee that the matter is accurate or complete. Our Transactions Team compiled this document based on opinions and judgments, which may vary and be revised at any time without notice. This document is for information only and is not an offer to buy or sell, or solicitation of any offer to buy or sell and is for information purposes only. It is published for the use of our clients and may not be reproduced, distributed or published by any person for any purpose whatsoever. Action will be taken for unauthorized reproduction, distribution or publication. The views expressed in this document are those of Transactions Team at PBIT and do not necessarily reflect those of PBIT or its senior management.



# CONTENT

Economic Overview .....	4
Agriculture Sector Of Pakistan.....	5
Manufacturing Sector Overview.....	7
Executive Summary.....	8
Crop-wise Of Usage Of Fertilizer.....	9
Types Of Fertilizer Used In Pakistan.....	12
Fertilizer Nutrients.....	14
Province Wise Nutrients Balance Sheet.....	16
Fertilizer Off Take Province Wise Per Hectare.....	17
Seasons Wise Balance Sheet (Nutrients).....	18
Local Outlook/Forecast Of 2017-18.....	19
Global Fertilizer Consumption.....	20
Global Fertilizer Outlook.....	21
Fertilizer Products.....	22
Province Wise Fertilizer Products Balance Sheet.....	24
Seasons Wise Balance Sheet Fertilizer Products.....	25
Products Vs. Capacity.....	26
Agriculture Credit / Fertilizer Sector Share.....	31
Gas Supply To The Fertilizer Sector.....	32
Fertilizer Prices In Pakistan.....	34
International Fertilizer Prices In Pakistan.....	35
Marketing Agencies In Pakistan For Fertilize.....	36
Financial Highlights/Company Analysis Of The Sector...37	
Source.....	42
About Us.....	43



## ABBREVIATIONS USED

---

AS Ammonium Sulphate  
CAN Calcium Ammonium Nitrate  
DAP Diammonium Phosphate  
DHCL Dawood Hercules Chemical Limited  
EFERT Engro Fertilizer Limited  
FFC Fauji Fertilizer Company Limited  
FFBL Fauji Fertilizer Bin Qasim Limited  
JBL Jaffer Brothers (Pvt) Limited  
K Symbol of Potash fertilizer expressed as K<sub>2</sub>O or Potash nutrient ( $K \times 1.20 = K_2O$ )  
KP Khyber Pakhtunkhwa  
MAF Million Acre Feet  
MMCF Million Cubic Feet  
MAP Monoammonium Phosphate  
MM Milli Meter  
MOP Muriate of Potash  
N Nitrogen  
NFDC National Fertilizer Development Centre  
NFML National Fertilizer Marketing Limited  
NP Nitro phosphate  
P Symbol of phosphate fertilizer expressed as P<sub>2</sub>O<sub>5</sub> phosphate nutrient ( $P \times 2.29 = P_2O_5$ )  
PAFL Pak-American Fertilizer (Private) Limited  
PAR Pak-Arab Fertilizer (Private) Limited  
PSFL Pak-Saudi Fertilizer Limited (Mirpur Mathelo)  
SBP State Bank of Pakistan  
SOP Sulphate of Potash  
SSP Single Superphosphate  
TCP Trading Corporation of Pakistan  
TSP Triple Superphosphate  
ZTBL Zari Taraqiati Bank Limited





Pakistan has seen a visible economic turnaround over the last five years, due to successful implementation of a comprehensive program of economic revival aimed at higher economic growth and macro-economic stability.

**“The growth momentum ranged above 5 % for the last two years in a row and reached 5.79 % in FY2018 which is 13 years high on account of a strong performance in agriculture, industry and services sectors which grew by 3.81 %, 5.80 % and 6.43 %, respectively.”**

The highest growth in agriculture sector in last 13 years was achieved on the back of initiatives taken to improve the sector such as expansion in credit to agriculture sector along with agriculture Kissan Package, provision of better quality seeds including hybrid and high yield varieties and timely availability of agriculture inputs including fertilizer, pesticides etc.

# Economic Overview

Source : Economic Survey of Pakistan 2017-18



# Agriculture Sector of Pakistan

Pakistan's agriculture sector plays a central role in the economy as it contributes 18.9 percent to GDP and absorbs 42.3 % of labor force. According to the 6th Population and Housing Census of Pakistan 2017, the country's population is growing at the rate of 2.4 % per annum. This rapid increase in population is raising demand for agricultural products. The government of Pakistan over the period is focused on developing this sector and in this connection initiated a number of measures such as crop diversification, efficient use of water and promotion of high value crops including biotechnology, reducing mark-up rates, agriculture credit enhancement, subsidized fertilizer, pesticides prices and cheap electricity for agritube wells. Further, there was a 197.6 % growth in credit to agriculture sector, which reached Rs. 1,001 billion (budget estimate) in FY 2018, compared to Rs. 336.3 billion in FY 2013 along with, relief of Rs. 341 billion provided to the farmers under Prime Minister's Kissan Package. All these measures helped in achieving 13 years high growth of 3.8 % in agricultural sector during 2017-18.

As a result, the sector's performance improved after witnessing a moderate and subdued growth in last 13 years.

During 2017-18, agriculture sector recorded a remarkable growth of 3.81 % and surpassed its targeted growth of 3.5 % and last year's growth of 2.07 %. This stemmed from higher yields, attractive output prices and supportive government policies, better availability of certified seeds, pesticides, agriculture credit and intensive fertilizers off-take.



Source : Economic Survey of Pakistan 2017-18



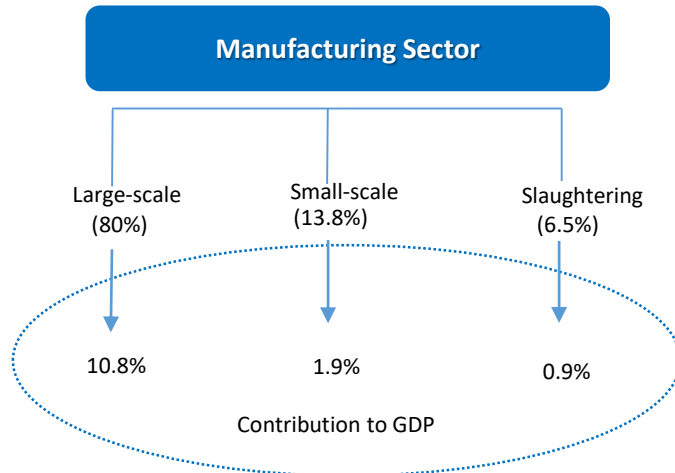
## Abstract

Agriculture is an important sector of Pakistan's economy, accounting for approximately 26 percent of the country's gross domestic product (GDP). The Purpose of this study was to explore different fertilizer nutrients & products with prospective to cropped area, fertilizer consumption, credit distribution and Gas supply to the. We found that fertilizer consumption, improved seed distribution, and credit distribution had a positive and significant influence on agricultural gross domestic product (AGDP). Independent economic analysts suggest that the Government of Pakistan should formulate policies and funding schemes for the development and improvement of water availability including irrigation systems.





# Manufacturing Sector Overview

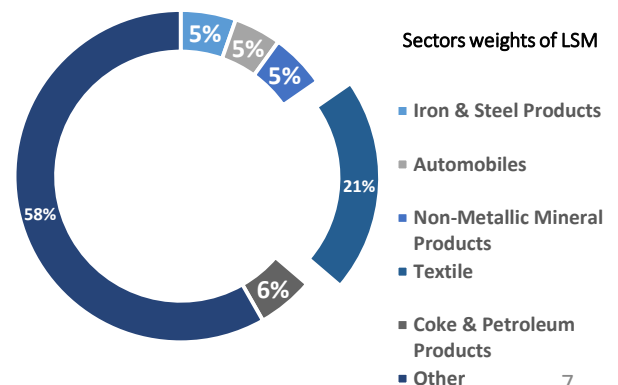
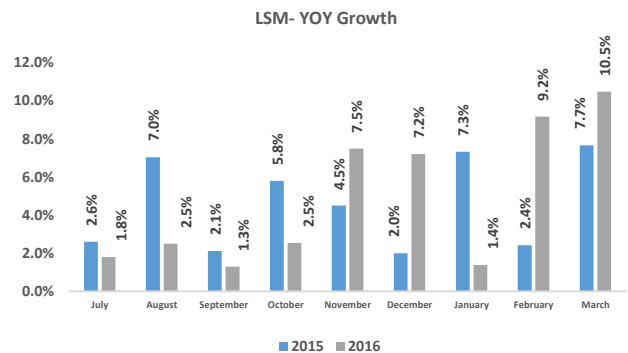


Manufacturing sector is the backbone of Pakistan's economy and constitutes the second largest sector of economy contributing 13.6 % to Gross Domestic Product (GDP) It comprises mainly of Large Scale Manufacturing (LSM) with 80 % share in Manufacturing and 10.8 % in GDP, whereas small scale manufacturing accounts for 1.9 % in total GDP and 13.8 % share in manufacturing.

Source : Economic Survey of Pakistan 2017-18

During July-Feb 2018, Manufacturing sector recorded an impressive growth of 6.2 % against 4.4% in same period of last year. The Year on Year (YoY), LSM recorded significant growth of 5.52 % in Feb 2018 compared to 9.4% in Feb 2017.

Growth in Sub sectors and sectors weights in LSM for the period of July-Feb FY 2018 versus July-Feb FY 2018 are below. The performance of Electronics having highest weight of 38.79% vs. 16.15% in corresponding year. The sectors which recorded negative growth are wood products (27.32%) and fertilizer (7.36%). However chemical and leather products also recorded negative growth. The downturn witnessed in fertilizer sectors is on account of domestic piped natural gas from small scale urea producers.



# Executive Summary

The fertilizer industry of Pakistan has enormous potential and is well on its way to becoming one of the biggest fertilizer exporters in the region in the coming years. Factors that are directly contributing to these forecasts are the recent issuance of LNG regasification licenses and the establishment of new fertilizer plants by prominent organizations within the country.

Being primarily an agrarian state, Pakistan's growth is heavily dependent on the fertilizer industry. According to reports, Pakistan's fertilizer demand has always remained higher than its supply. However, with the advancement of technology and increased number of players in the industry, production capacity has increased to approx. 9 million tons per year, which has consistently surpassed the national demand over the last few years. (refer section production vs. capacity)

Furthermore, the consumption of fertilizer has increased manifold due to heightened awareness among farmers that its usage in good quantity is fruitful for higher yields and a significant increase in their income as the commodity is provided subsidized rates.

During FY 2018, cumulative sales of urea increased by 40% to 6.3 million tons and DAP sales edged to 6% to 2.3 million tons. Moreover, a further pick-up in demand for urea can be foreseen. Also, comfortable inventory levels of urea and DAP have reduced pricing power for local fertilizer manufacturers and as a result, average urea price has increased by 10-11% year-on-year. At present, international urea and DAP prices were hovering around \$218 and \$335 per ton (avg. annual price), respectively, and are expected to remain steady which, along with removal of price cap (Rs 1,400 per bag) from urea, would provide an added advantage to local manufacturers. In fact, for farmer the government of Pakistan has provided subsidy.

## **Government Subsidy**

The government in order to enhance productivity in agriculture sector provided the following subsidies:

- Tax relief on phosphate fertilizer equivalent to Rs. 300 per 50 kg bag of DAP.
- Reduction in GST on urea from 17 to 5 percent/voluntary price reduction by the fertilizers manufactures.
- Cash subsidy of Rs. 100 per 50 kg bag of urea.
- Subsidy of Rs. 800 and Rs. 500 per bag of SOP and MOP respectively, by the Government of Punjab in order to promote the use of Potash.

Besides passing on the benefits of tax incentives and gas subsidy to farmers, we must appreciate that the fertilizer industry has always looked beyond profitability.

Currently, in Pakistan, there are six major producers of fertilizers which include Fauji Fertilizer, Engro Fertilizer Company, Dawood Hercules, and Fatima Fertilizers. Media reports suggest that the Chinese government is keenly looking for avenues to enter Pakistan's agriculture and fertilizer sector. The Chinese state and banks are expected to provide capital and loans to Chinese companies interested in setting up ventures in Pakistan. There are rumors that China is going to set up a fertilizer plant that will produce 800,000 tons per year.

In order to keep the graph of the fertilizer industry stable, the government should and must avoid knee-jerk decisions pertaining to GIDC and GST, as it has displayed in the past. Over the years, this essential industry has been suffering due to these unfavorable policies and decisions. Thus, the government should strategically extend more support for the fertilizer sector, enabling it to play a more authoritative role in national food-security. Source: Business Recorder, Fertilizer Industry in Pakistan The government should expedite remedy of cash-flow challenges caused by large amounts mired in overdue refunds and sluggish reimbursement of subsidy to the fertilizer companies.





## Crop-wise of usage of Fertilizer

Pakistan has two cropping seasons, "Kharif" being the first sowing season starting from April-June and is harvested during October- December. Rice, sugarcane, cotton, maize, moong, mash, bajra and jowar are "Kharif" crops. "Rabi", the second sowing season, begins in October-December and is harvested in April- May. Wheat, gram, lentil (masoor), tobacco, rapeseed, barley and mustard are "Rabi" crops. Pakistan's agricultural productivity is dependent upon the timely availability of water.

The total cropped area in Pakistan is about 22.2 million ha. The share of food grain crops is 54 percent, followed by cotton and sugar cane 20 %; pulses 6 %; oilseed crops 3 %; fruit/vegetables 4 % and other crops about 13 %. Wheat is the main food crop. It occupies about 36.3 % of the total cropped area, followed by cotton with 14 %, paddy with 9.5 %, sugar cane with 4.5 % , maize with 4.5 % and other crops with 20.8 %.

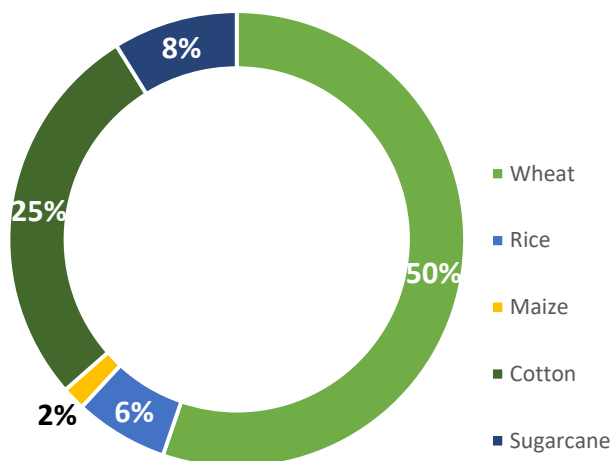
According to the fertilizer use survey five major crops: wheat, cotton, sugar cane, rice and maize account for about 87 % of fertilizer consumption. Wheat accounts for about 45 % followed by cotton with a share of 23 %. Sugar cane is the third crop; nutrient use per ha is highest on this crop. The share of fruit and vegetables is 5.6 %.

The yields of the major crops are below their agronomic and genetic potential. There is a consensus among researchers, extensionists and policy planners that, given the necessary resources and inputs, yields could be increased by 30 to 40 %.





## Fertilizer Usage by Crop in 2016-17



Less than two percent of the farmers apply potash whereas 92 percent apply nitrogen and 83 percent apply phosphate. Half of the farmers apply FYM. Almost five percent apply micronutrients. The use of green manures, crop residues and bio-fertilizers is negligible.

Almost all farmers having access to canal or tube well irrigation water use fertilizers. In rain fed areas scarcely 50 percent of the farmers use fertilizers. About 92 percent of small-scale farmers (< 5 ha) use fertilizers. Application rates decrease with an increase in farm size (rain fed and irrigated). In rain fed areas the difference between application rates for small and large farms is very wide.

Usage of Fertilizer by major crops produced in Pakistan (000 nutrients tonnes)					
	2012-13	2013-14	2014-15	2015-16	2016-17
<b>Wheat</b>	1810.5	2044.5	2158.5	1849.5	2520
<b>Rice</b>	217.26	245.34	259.02	221.94	302.4
<b>Maize</b>	54.32	61.34	64.76	55.49	75.6
<b>Cotton</b>	905.25	1022.25	1079.25	924.75	1260
<b>Sugarcane</b>	289.68	327.12	345.36	295.92	403.2
<b>Others</b>	344	388.46	410.12	351.41	478.8
<b>Total</b>	3621.01	4089.01	4317.01	3699.01	5040

Source: Pakistan Bureau of Pakistan





# Types of Fertilizer used in Pakistan

Types of Fertilizer	Nitrogen (N)	Phosphorous (P)	Potassium (K)
Urea	✓	x	x
Calcium Ammonium Nitrate (CAN)	✓	x	x
Ammonium Sulphate (AS)	✓	x	x
Nitro Phosphate (NP)	✓	✓	x
Nitrogen-Phosphorous-Potassium (NPK)	✓	✓	✓
Di-Ammonium Phosphate (DAP)	x	✓	x
Single Super Phosphate (SSP)	x	✓	x
Triple Super Phosphate (TSP)	x	✓	x
Nitro Phosphate (NP)	✓	✓	x
Monoammonium Phosphate (MAP)	✓	✓	x
Sulphate of Potash (SOP)	x	x	✓
Nitrogen-Phosphorous-Potassium (NPK)	x	x	✓
Muriate of Potash (MOP)	x	x	✓

Source : Transaction department Analysis





These are classified into three categories according to their element (nutrient) structure:

1. **Nitrogen (N):** Increases the protein content of plants, gives them color and accelerates growth
2. **Phosphorous (P):** Promotes strong, healthy root development and helps plants mature more rapidly and thus aids in blooming and seed formation. It is critical for the synthesis of energy regulating substances in plants
3. **Potassium (K):** Raises the resistance of plants to diseases and promotes growth from root to stack. It increases the plumpness of grains and seeds, and provides winter hardiness to legumes and other crops.

These fertilizer which come in a myriad of mixes and composition, are regularly applied according to soil conditions, weather conditions, crop type and the desired productivity. There are eleven types of fertilizers that are used in Pakistan.

- **Urea** - More than 90% of the world's production is destined for use as a nitrogen-release fertilizer. Urea has the highest nitrogen content of all solid nitrogenous fertilizers in common use (46.7%).
- **Di-Ammonium Phosphate (DAP)** - It contains 46% P<sub>2</sub>O<sub>5</sub> and 18% N. it is water soluble. It is a good source of P fertilizer for all crops. Good source for problem soils. Overall, it suits to about 90% soil of the country.
- **Calcium Ammonium Nitrate (CAN)** – It contains 27% N and 20% of ground limestone. This has a rapid as well as permanent effect. The granulation of this fertilizer ensures a quick and exact dosing
- **Ammonium Sulphate (AS) - (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>** is an inorganic salt. It is used largely as an artificial fertilizer for alkaline soils. It lowers the pH balance of the soil, while contributing essential nitrogen for plant growth
- **Single Super Phosphate (SSP)** - Superphosphate is a fertilizer produced by the action of concentrated sulfuric acid on powdered phosphate rock.
- **Triple Super Phosphate (TSP)** - Triple Super Phosphate (TSP) fertilizer is composed of inorganic nutrients that are used to restore soil components essential for farming.
- **Nitro phosphate (NP)** - It provides 22% nitrogen, and 20% phosphorus. Nitrogen is a primary nutrient that really makes plants "grow". Phosphorus is a primary nutrient that encourages rooting, blooming and fruit production in plants.
- **Sulphate of Potash (SOP)** - Potassium Sulphate (K<sub>2</sub>SO<sub>4</sub>) is a non-flammable white crystalline salt which is soluble in water. This chemical is commonly used in fertilizers, providing both potassium and sulphur.
- **Nitrogen-Phosphorus-Potassium (NPK)** - NPK fertilizer is a complex fertilizer comprised primarily of the three primary nutrients required for healthy plant growth. The agriculture industry relies heavily on the use of NPK fertilizer to meet global food supply and ensure healthy crops.
- **Muriate of Potash (MOP)** - used extensively for fertilizing pastures, sugar cane, fruit trees, vegetables, and other field crops.
- **Monoammonium Phosphate (MAP)** - is a widely used source of phosphorus (P) and nitrogen (N). It's made of two constituents common in the fertilizer industry and contains the most phosphorus of any common solid fertilizer

Source : Transaction department Analysis

# Fertilizer Nutrients

Fertilizer is the most important and expensive input contributing 30 to 50 %, on average, to the crop yield.

The domestic production of fertilizers during 2017-18 (July-March) decreased slightly by 5.4 % over the corresponding period last year due to diversion of domestic piped natural gas from small scale urea producers, while imported fertilizer increased by 21.1 %.

Total off take of fertilizer nutrients witnessed a decline by 3.6 %. *Nitrogen* off take decreased by 5.0 % and *phosphate* by 1.4 %. *Potash* off take recorded a significant increase of 31.5 % during 2017-18 (July-March).

## Historical Comparison - YOY

### **Nutrients Productions**

Domestic industry witnessed a positive trend in fertilizer production in nutrient terms. The production in nutrient terms increased from 3675 thousand tonnes during 2015-16 to 3775 thousand tonnes during 2016-17 showing an increase of 2.7 %. Nitrogen production was 3206 thousand tonnes and recorded an increase of 2.7 % (84.9 % share in total nutrients production), phosphate 556 thousand tonnes (14.7 % share in total nutrients production), which increased by 2.8 %. Potash production (in NPKs) was about 12 thousand tonnes (0.3 % share in total nutrients production) and recorded decrease of 0.4 %, over the same time frame of last year 2015-16.

### **Off-take**

Overall, nutrient off-take during fiscal year 2016-17 was 5040 thousand tonnes, which represented an increase of 36.2 % over the previous year 2015-16. Nitrogen Off-take registered an increase of 39.6 % while phosphate Off-take increased by 26 %. Potassium Off-take also witnessed an increase of 106.7 %.

### **Nutrients Availability (includes imports)**

Overall fertilizer nutrients availability during 2016-17 was 5925 thousand nutrient tonnes, which witnessed an increase of 21.2 % over last year 2015-16. Total availability of nitrogen, phosphate and potash was 4429, 1443 and 53 thousand nutrient tonnes respectively.

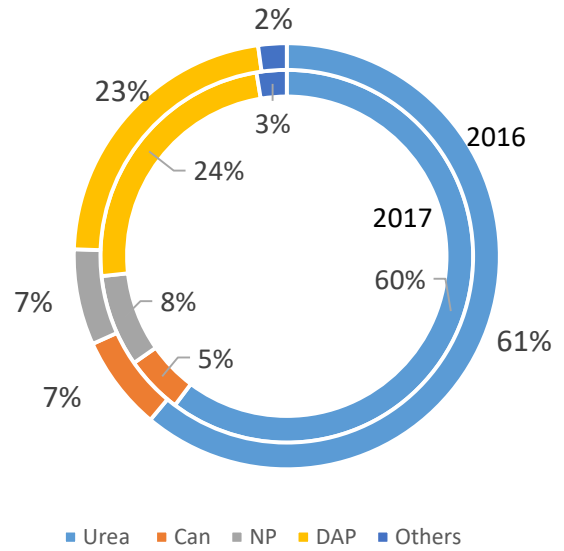


Source: Economic Survey of Pakistan 2017-18



Nutrient Availability						
(000' Tonnes)	Nitrogen		Phosphate		Potash	
	2016-17	2015-16	2016-17	2015-16	2016-17	2015-16
Opening Balance	958	175	219	127	12	12
Domestic Production	3,206	3,121	556	541	12	12
Imports	264	337	668	556	29	8
Total Availability	4,428	3,633	1,443	1,224	53	32
<b>Off-take</b>	<b>3,730</b>	<b>2,672</b>	<b>1,269</b>	<b>1,007</b>	<b>41</b>	<b>20</b>
Exports	58	-	-	-	-	-
Adjustment	(1)	-	4	-	-	-
National Inventory	640	958	178	219	12	12

Production-Wise Fertilizer Off take during 2015-16 and 2016-17



Source: Pakistan Bureau of Statistics



# Province Wise Nutrients Off-Take (YOY comparison)

(000' Tonnes)

Province	Years					% Change YOY				Percentage Change in 2016-17 over 2015-16	Provincial Share (%) 5year	NP ratio
	2012-13	2013-14	2014-15	2015-16	2016-17	2013-14	2014-15	2015-16	2016-17			
<b>Nitrogen</b>												
<b>Punjab</b>	1,988	2,164	2,252	1,772	2,537	9%	4%	-21%	43%	43%	68.00%	
% Change- Value		176	88	-480	765							
<b>Sindh</b>	523	731	788	715	924	40%	8%	-9%	29%	29%	23.40%	
% Change- Value		208	57	-73	209							
<b>KP</b>	213	177	168	133	173	-17%	-5%	-21%	30%	30%	5.50%	
% Change- Value		-36	-9	-35	40							
<b>Balochistan</b>	130	112	101	52	96	-14%	-10%	-49%	85%	85%	3.10%	
% Change- Value		-18	-11	-49	44							
<b>Total</b>	<b>2,854</b>	<b>3,184</b>	<b>3,309</b>	<b>2,672</b>	<b>3,730</b>	<b>12%</b>	<b>4%</b>	<b>-19%</b>	<b>40%</b>	<b>39.60%</b>		
<b>Phosphate</b>												
<b>Punjab</b>	537	623	714	718	930	16%	15%	1%	30%	30%	72.20%	
% Change- Value		86	91	4	212							
<b>Sindh</b>	123	187	182	227	255	52%	-3%	25%	12%	12%	20.00%	
% Change- Value		64	-5	45	28							
<b>KP</b>	51	48	54	39	50	-6%	13%	-28%	28%	28%	5.00%	
% Change- Value		-3	6	-15	11							
<b>Balochistan</b>	36	23	26	23	34	-36%	13%	-12%	48%	48%	2.90%	
% Change- Value		-13	3	-3	11							
<b>Total</b>	<b>747</b>	<b>881</b>	<b>976</b>	<b>1,007</b>	<b>1,269</b>	<b>18%</b>	<b>11%</b>	<b>3%</b>	<b>26%</b>	<b>26%</b>		
<b>Potash</b>												
<b>Punjab</b>	15	17	23	13	31	13%	35%	-43%	138%	138%	72.30%	
% Change- Value		2	6	-10	18							
<b>Sindh</b>	3	4	6	5	7	33%	50%	-17%	40%	40%	18.20%	
% Change- Value		1	2	-1	2							
<b>KP</b>	2	1	2	1	2	-50%	100%	-50%	100%	100%	5.80%	
% Change- Value		-1	1	-1	1							
<b>Baluchistan</b>	1	1	1	1	1	0%	0%	0%	0%	0%	3.60%	
% Change- Value		-	-	-	-							
<b>Total</b>	<b>21</b>	<b>23</b>	<b>32</b>	<b>20</b>	<b>41</b>	<b>10%</b>	<b>39%</b>	<b>-38%</b>	<b>105%</b>	<b>105%</b>		
<b>Pakistan</b>												
<b>Punjab</b>	2,540	2,804	2,989	2,503	3,498	10%	7%	-16%	40%	40%	69.00%	2.73
% Change- Value		264	185	-486	995							
<b>Sindh</b>	649	922	976	947	1,186	42%	6%	-3%	25%	25%	22.50%	3.62
% Change- Value		273	54	-29	239							
<b>KP</b>	266	226	224	173	225	-15%	-1%	-23%	30%	30%	5.40%	3.46
% Change- Value		-40	-2	-51	52							
<b>Baluchistan</b>	167	136	128	76	131	-19%	-6%	-41%	72%	72%	3.10%	2.82
% Change- Value		-31	-8	-52	55							
<b>Total</b>	<b>3,622</b>	<b>4,088</b>	<b>4,317</b>	<b>3,699</b>	<b>5,040</b>	<b>13%</b>	<b>6%</b>	<b>-14%</b>	<b>36%</b>	<b>36%</b>		<b>2.94</b>

Source: National Fertilizer Development centre, Data



# Fertilizer Off Take Province Wise (Per Hectare)

## Province-wise Off take/Shares

During 2016-17, in overall nutrient off take, the Punjab's share was 69 per cent, Sindh 22.5 %, Khyber Pakhtunkhwa 5.4 % and Baluchistan 3.1 %. The overall provincial share remained more or less the same as was during the preceding years.

## Per Hectare Off take

At national level, average off take of all nutrients per hectare of gross cropped area was 222 kg during 2016-17 (163 kg/ha during 2015-16).

Average fertilizer use in Sindh province was the highest at 368 kg/ha of gross cropped area, followed by Punjab 212 kg/ha. The off take in KP and Baluchistan was 120 and 124kg/ha, respectively during 2016-17.

Province	Cropped Area (m HA) 2016-17	Total off take 2016-17 (000 Tonnes)				Urea rate in nutrients during 2016-17			
		Nitrogen	Phosphate	Potash	Total	Nitrogen	Phosphate	Potash	Total
Punjab	17	2,537	930	31	3,498	154	56	2	212
Sindh	3	924	255	7	1,186	287	79	2	368
KP	2	173	50	2	225	92	27	1	120
Baluchistan	1	96	34	1	131	91	32	1	124
Pakistan	23	3,730	1,269	41	5,040	623	194	6	823

## Fertilizer / (Nutrients) Use Ratios

The recommended level of fertilizer use in Pakistan for Nitrogen (N), Phosphate (P) & Potash (K) is 2:1:0.5. Current fiscal year 2017-18 estimates shows that Nitrogen (N) and Phosphate Off-take has decreased by 5 and 1.4 % respectively. Nitrogen to phosphate use ratio was 2.94 during 2016-17. Potash use is still not developed and needs promotional activities with improved availability efforts. To support the domestic fertilizer industry, the government has allowed the export of 459 thousand tonnes of urea fertilizer up to March 2018.

Source: Annual Fertilizer Review 2016-17

# Seasons Wise Balance Sheet (Nutrients)

There was a substantial increase of 22.8 % in nutrients off-take during Kharif 2016 and an increase of 15.7 % during Rabi 2016-17 over the preceding seasons. Among major products, urea off-take during Rabi 2016-17 went up by 18.8 %, while DAP Off-take increased by 11.1 per cent as compared with Rabi 2015-16.

In nutrient terms, fertilizer production increased by 6.1 per cent from 1806 to 1917 thousand tonnes during Kharif 2016. While in nutrient terms, it increased by 0.4 per cent from 1812 thousand tonnes to 1819 thousand tonnes. In Rabi 2016-17.

*Note: Balance Sheet includes opening balance, domestic production and imports which after consolidating is considered as total availability of each nutrient during the season. Furthermore the national inventory at the end of each season is calculated by deducting Off-take and exports of that season.*

Nutrient-wise supply/demand situation during Rabi FY 2015-16 & FY 2016-17						
Rabi Season	Nitrogen		Phosphate		Potash	
	Rabi2015-16	Rabi 2016-17	Rabi 2015-16	Rabi 2016-17	Rabi 2015-16	Rabi 2016-17
Opening Balance	539	935	300	273	15	13
Domestic Production	1,538	1,549	265	265	8	5
Imports	175	150	386	380	2	16
Total Availability	2,252	2,634	951	918	25	34
<b>Off-take</b>	<b>1,527</b>	<b>1,807</b>	<b>774</b>	<b>847</b>	<b>14</b>	<b>24</b>
Exports	-	15	-	-	-	-
Adjustment	(0)	1	-	3	0	(0)
National Inventory	725	813	177	74	11	10

Nutrient-wise supply/demand situation during Kharif FY 2015-16 & FY 2016-17						
	Nitrogen		Phosphate		Potash	
	Kharif 2015-16	Kharif 2016-17	Kharif 2015-16	Kharif 2016-17	Kharif 2015-16	Kharif 2016-17
Opening Balance	140	725	76	177	9	11
Domestic Production	1,506	1,637	296	274	5	6
Imports	204	89	174	223	12	8
Total Availability	1,850	2,451	546	674	26	25
<b>Off-take</b>	<b>1,312</b>	<b>1,512</b>	<b>246</b>	<b>402</b>	<b>11</b>	<b>12</b>
Exports	-	-	-	-	-	-
Adjustment	(1)	(4)	-	1	0	-
National Inventory	539	935	300	273	15	13



Source: Annual Fertilizer Review 2016-17



# Local Outlook/Forecast of 2017-18

Fertilizer forecasting is a regular core activity of National Fertilizer Development Centre (NFDC). It includes updating the current demand projections in the light of actual performance and estimating future demand keeping in view the production targets of various crops, demand elasticity, the prevailing climatic conditions of the country for fertilizer, the availability of domestic gas supply to local producers and impact of subsidy etc. This center also employs econometric as well as agronomic techniques for demand forecast.

The Rabi 2017-18 season started with opening inventory of 796 thousand tonnes of urea. With the estimated domestic production of 2675 thousand tonnes, the total availability of urea would be around 3471 thousand tonnes. The estimated off-take of urea will be around 2927 thousand tonnes during Rabi 2017-18.

The available quantity of DAP in Rabi 2017-18 would be 1384 thousand tonnes, which comprises 367 thousand tonnes of opening inventory, 367 thousand tonnes domestic production and 650 thousand tonnes of imported supplies. The expected off-take of DAP during the season would be 1410 thousand tonnes. Hence, supply / demand gap for DAP will be filled through imported supplies by private sector.

The other fertilizer products such as AS, NPKs, NP, SSP, SOP, MOP and CAN would also be available in the market to meet the rising demand.

Fertilizer Demand Estimates						
Year	Nitrogen	Phosphate	Potash	Total Nutrients	Urea	DAP
2015-16 (Actual)	2617.9	1007.3	20	3645.2	4558	1823
2016-17 (Provisional)	3729.8	1268.9	41.5	5040.2	6371.9	2328.6
Growth Percent	42.5%	26.0%	107.5%	38.3%	39.8%	27.7%
2017-18 (Forecast)	3597.7	1297.4	51.7	4946.8	6056	2403.9
Growth Percent	-3.5%	2.2%	24.6%	-1.9%	-5.0%	3.2%

Source: Annual Fertilizer Review 2016-17



# Global Fertilizer Consumption

Global fertilizer demand grew firmly in 2016-17 to an estimated 185.8 million tonnes nutrient, a 2.4% rise due to favorable weather, strong El Nino event and prospects for improving returns from farming in countries with supportive exchange rates.

During Fiscal Year 2016-17, total demand is estimated to rose by 2.4 %, to 185.8 million tonnes. Demand for nitrogen and phosphate would increase by 2.0 and 2.8 %, respectively. Potash demand is seen to increased by 3.1 %. With optimistic outlook, would fertilizer consumption in 2017-18 is projected to grow modestly by 1.2 per cent, to 188 million tonnes, while growth rates for nitrogen (N) and phosphate (P) demand are seen as marginally i.e. + 0.9 % for N and 1.0 % for P, whereas potash (K) demand would increase modestly at a level of 2.3 %.

In the medium term, global fertilizers demand would show moderate annual growth of 1.5% to reach 199 million tonnes nutrients in 2021-22. Demand for all three major nutrients are expected to surge with annual growth rates of 1.2% for nitrogen, 1.5% for phosphorus and 2.1% for potassium.

The medium-term outlook for world agriculture remains mixed overall, with flat real prices for agricultural commodities and tight market conditions. The prevailing market fundamentals would moderately support fertilizer use in coming two to three years.

Year	Nitrogen	Phosphate	Potash	Total
2015-16 (Actual)	104.2	43.7	33.5	181.4
2016-17 (Provisional)	106.3	44.9	34.6	185.8
Growth Percent	2.0%	2.7%	3.3%	2.7%
2017-18 (Forecast)	107.3	45.3	35.4	188
Growth Percent	0.90%	1.00%	2.30%	1.20%

Source: Annual Fertilizer Review 2016-17





# Global Fertilizer Outlook

## Global fertilizer demand forecast to remain slightly below 200 Mt by 2021/22

Under the baseline scenario, global fertilizer demand is seen as growing on average by 1.5% per annum (p.a.) between the base year (average of the three-year period 2014/15 to 2016/17) and 2021/22.1 Aggregate world demand is projected to reach 199 Mt at the end of the outlook period. Reflecting the progressive adoption by farmers of best management practices that result in N use efficiency improvements, as well as the increasing recycling of organic nutrient sources, K demand is forecast to grow more firmly (2.1% p.a.) than demand for P (1.5% p.a.) and N (1.2% p.a.).

The highest growth rate is anticipated in Africa, followed by Eastern Europe & Central Asia and Latin America. These three regions have the greatest agricultural growth potential in the decade to come. Demand in South Asia is seen as rising below the historical trend, as neem coated urea, up scaling of Direct Benefit Transfer to farmers, and rapid adoption of water-soluble fertilizers will influence the outlook. West Asian demand growth is very speculative, as it is highly dependent on the evolution of regional geopolitical tensions. In East Asia fertilizer usage is forecast to expand modestly, as Chinese N and P demand is seen as reaching a plateau during the outlook period. Demand growth in developed regions is seen as weak, with better prospects in Oceania than in North America and Western & Central Europe. In volume terms, Latin America, South Asia and East Asia together would account for three-fourths of the projected increase in global fertilizer demand in the next five years.

Source: World fertilizer trends and Outlook to 2018

## Global Fertilizer Supply Modest growth rate of fertilizer nutrient demand up to 2021

In 2021 world total nutrient sales are projected at 266 Mt nutrients, for an average annual growth rate of about 1.4%. Nutrient fertilizer sales in 2021 would total 198 Mt nutrients, growing at 1.3% p.a. and representing 74% of total sales. The near future appears to show a growing imbalance between rapidly increasing supply and moderate demand growth. Massive new capacity additions will be commissioned over the next five years, driven by investment decisions made four to eight years ago. Supply will be ample, if not abundant, at least up to 2021.

Other challenges confronting the fertilizer sector include more stringent environmental regulations, increasingly volatile energy prices, competing uses of feedstock, and rising trade protectionism. In response to these, the fertilizer industry is actively seeking new markets, diversifying product ranges and striving for operational excellence.

## Large capacity expansions in 2017-2021

Between 2017 and 2021 the fertilizer industry will invest close to US\$ 110 billion in more than 65 new production units, increasing global capacity by 90 million tonnes products. Based on current market conditions and a modest 1.4% demand growth projection during the next five years, the industry will face a supply driven market, with growing structural imbalances.

# Fertilizer Products

Fertilizer industry is important for economic development and the prosperity of farming community. The industry produce, imports and distributes fertilizer throughout the country. As fertilizer is an important input for agriculture growth; the government's intervention in the shape of subsidy and tax relaxations has improved the performance of the agriculture sector.

## Fertilizer Products/ Local Production

There are **ten** urea manufacturing plants, one DAP, three NP, three SSP, two CAN and one plant of blended NPKs having a total production capacity of 8,983 thousand product tonnes per annum. Although, the installed production capacity for all products has attained the level of 8,983 thousand tonnes per annum, the actual production for year 2016-17 for all products remained at 8,245 thousand production tonnes. The estimated production for 2017-18 is about 7866 thousand products tonnes. The entire fertilizer products are manufactured by the private sector.

The total domestic production of all fertilizer products during 2016-17 was 8245 thousand tonnes compared to 8015 thousand tonnes during 2015-16, showing an increase of 2.9 %. Urea production during 2016-17 was 5916 thousand tonnes (5770 thousand tonnes in 2015-16) followed by DAP 802, NP 703, CAN 674, SSP 78 and NPK of various grades 72 thousand tonnes respectively.

## Fertilizer Availability (includes imports)

Product-wise availability was; urea 7588, DAP 2644, and Nitrophos 809 thousand product tonnes. Domestic production met about 80 % of the country's requirements during 2016-17. The deficit of 20 % between production and off take was met through imports and carry over inventory.

Source: Annual Fertilizer Review 2016-17

Fertilizer-wise Demand and Supply during FY 2015-16 & FY 2016-17						
	UREA		DAP		Nitrophos	
	2016-17	2015-16	2016-17	2015-16	2016-17	2015-16
Opening Balance	1,672	213	391	223	106	59
Domestic Production	5,916	5,770	802	788	703	647
Imports	-	253	1,450	1,201	-	5
Total Availability	7,588	6,236	2,643	2,212	809	712
<b>Off-take</b>	<b>6,372</b>	<b>4,558</b>	<b>2,329</b>	<b>1,823</b>	<b>759</b>	<b>605</b>
Exports	115	-	-	-	-	-
Adjustment	(5)	-	8	-	(1)	-
<b>National Inventory</b>	<b>1,096</b>	<b>1,672</b>	<b>4,980</b>	<b>389</b>	<b>49</b>	<b>106</b>
National Fertilizer Development centre, Data						

## Fertilizer Off take

The off take of urea increased from 4558 thousand tonnes in 2015-16 to 6372 thousand tonnes in 2016-17, registering an increase of 39.8 per cent. The off take of DAP increased from 1823 thousand tonnes in 2015-16 to 2329 thousand tonnes in 2016-17 registering a growth of 27.7 per cent over last year. The off take of other products during 2016-17 was: CAN 750, NP 759, NPK's 70, SSP 84, SOP 25, MOP 28 and AS 18 thousand tonnes. <sup>22</sup>



# Fertilizer Products (Contd.)

## Balance Sheet of Fertilizer in crop seasons

### UREA

Total availability of **urea** during Kharif 2017 was 4,445 thousand tonnes comprising of 1,489 thousand tonnes of opening inventory and 2,956 thousand tonnes of domestic production. Urea Off-take was about 3,234 thousand tonnes, leaving inventory of 796 thousand tonnes for Rabi 2017-18.

Rabi 2017-18 started with an opening balance of 796 thousand tonnes of urea. Domestic production during Rabi 2017-18 was estimated around 2,698 thousand tonnes. Urea Off-take during current Rabi 2017-18 is projected around 3,003 thousand tonnes, against 3,494 thousand tonnes of total availability, leaving a closing balance of 307 thousand tonnes for next season.

Total availability of urea during Kharif 2018 will be around 3,229 thousand tonnes comprising of 307 thousand tonnes of opening balance and 2,922 thousand tonnes of domestic production. Urea Off-take is expected to be around 2,959 thousand tonnes, reflecting a closing balance of 270 thousand tonnes.

### DAP

Availability of **DAP** was 1,360 thousand tonnes comprising of 59 thousand tonnes of opening inventory, 867 thousand tonnes of imported supplies and 434 thousand tonnes of local production. DAP Off-take was 992 thousand tonnes leaving an inventory of 367 thousand tonnes for upcoming Rabi 2017-18. About 422 thousand tonnes of urea was exported during Kharif 2017.

DAP availability during Rabi 2017-18 will be around 1,531 thousand tonnes, which include 367 thousand tonnes of opening inventory, 787 thousand tonnes of imported supplies and domestic production of 377 thousand tonnes. Off-take of DAP during Rabi season is estimated at 1,403 thousand tonnes, leaving a balance of 135 thousand tonnes for next season.

Total availability of DAP will be 557 thousand tonnes against the expected Off-take of 782 thousand tonnes. Thus, there is a gap of 225 thousand tonnes of DAP which will be met through imports by private sector.

*Note: Balance Sheet includes opening balance, domestic production and imports which after consolidating is considered as total availability of each Product during the season. Furthermore the national inventory at the end of each season is calculated by deducting Off-take and exports of that season.*

(000 Tonnes)

Description	Kharif (Apr-Sep) 2017		Rabi (Oct - Mar) 2017-18		Kharif (Apr-Sep) 2018	
	Urea	DAP	Urea	DAP	Urea	DAP
Openting Stock	1489	59	796	367	307	135
Imported Supplies	0	867	0	787	0	0
Domestic Production	2956	434	2698	377	2922	422
Total Availability	4445	1360	3494	1531	3229	557
Off-take/Demand	3234	992	3003	1403	2959	782
Export	422	0	184	0	0	0
Write on/ off	7	-0.6	0	7	0	0
Closing stock	796	367.4	307	135	270	-225

Source: Pakistan Bureau of Statistics

# Province Wise Fertilizer Products (YOY comparison)

Province-wise off take of Urea and DAP during 2016-17 compared with previous years							(000 Tonnes)
	2012-13	2013-14	2014-15	2015-16	2016-17	Percentage Change in 2016-17 over 2015-16	Provincial Share (average 5 years)
UREA							
Punjab	3607	3854	3971	2949	4233	43.5%	67%
Change %		247	117	-1022	1284		
Sindh	933	1334	1458	1271	1646	29.5%	24%
Change %		401	124	-187	375		
KP	410	338	313	251	323	28.7%	6%
Change %		-72	-25	-62	72		
Balochistan	248	221	194	87	171	96.6%	3%
Change %		-27	-27	-107	84		
Pakistan	5198	5747	5936	4558	6373	39.8%	0%
Change %		549	189	-1378	1815		
DAP							
Punjab	971	1149	1320	1296	1723	32.9%	72%
Change %		178	171	-24	427		
Sindh	203	342	333	415	462	11.3%	20%
Change %		139	-9	82	47		
KP	99	86	97	70	84	20.0%	5%
Change %		-13	11	-27	14		
Balochistan	72	46	51	43	60	39.5%	3%
Change %		-26	5	-8	17		
Pakistan	1345	1623	1801	1824	2329	27.7%	0%
Change %		278	178	23	505		

Source: National Fertilizer Development centre, Data



# Seasons Wise Balance Sheet Fertilizer Products

## Seasons

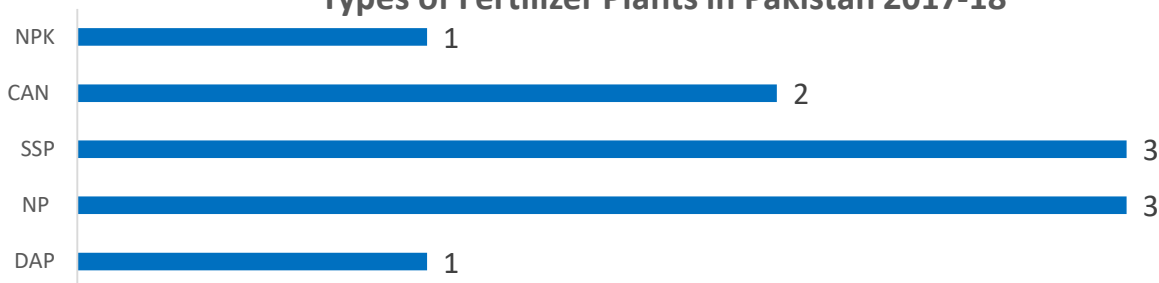
In product terms, fertilizer production increased from 3967 thousand tonnes to 4165 thousand tonnes during Kharif 2016 compared with Kharif 2015.

Fertilizer industry experienced positive growth during Rabi 2016-17 as compared to Rabi 2015-16. In product terms fertilizer production increased by 0.3 % from 3967 thousand tonnes to 3979 thousand tonnes

*Note: Balance Sheet includes opening balance, domestic production and imports which after consolidating is considered as total availability of each Product during the season. Furthermore the national inventory at the end of each season is calculated by deducting Off-take and exports of that season.*

Nutrient-wise supply/demand situation during Rabi 2016						
(000 Tonnes)	Urea		DAP		Nitrophos	
	Rabi 2015-16	Rabi 2016-17	Rabi 2015-16	Rabi 2016-17	Rabi 2015-16	Rabi 2016-17
Opening Balance	769	1,575	525	485	188	142
Domestic Production	2,817	2,849	369	377	339	338
Imports	50	-	833	824	-	5
Total Availability	3,636	4,424	1,727	1,686	532	480
<b>Off-take</b>	<b>2,435</b>	<b>2,892</b>	<b>1,447</b>	<b>1,608</b>	<b>364</b>	<b>392</b>
Exports	-	31	-	-	-	-
Adjustment	(1)	(0)	-	7	-	-
National Inventory	1,202	1,501	280	85	168	89
Source : National Fertilizer development centre, DATA						

## Types of Fertilizer Plants in Pakistan 2017-18



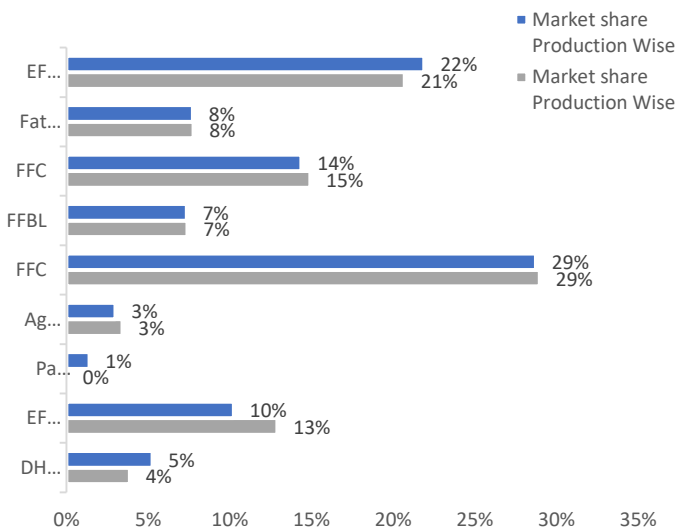
Source : Economic Survey of Pakistan of FY 17-18

Nutrient-wise supply/demand situation during Kharif 2016						
(000' Tonnes)	Urea		DAP		Nitrophos	
	Kharif 2015-16	Kharif 2016-17	Kharif 2015-16	Kharif 2016-17	Kharif 2015-16	Kharif 2016-17
Opening Balance	212	1,202	141	280	12	168
Domestic Production	2,686	3,085	420	416	404	297
Imports	294	-	376	484	-	-
Total Availability	3,192	4,287	937	1,180	416	465
<b>Off-take</b>	<b>2,424</b>	<b>2,703</b>	<b>413</b>	<b>697</b>	<b>217</b>	<b>323</b>
Exports	-	-	-	-	-	-
Adjustment	(3)	(9)	(1)	2	(11)	-
National Inventory	769	1,575	525	485	188	142

# Products Vs. Capacity “ UREA ”

- Out of total fertilizer Products Urea has the highest market share in Production i.e. 72%.
- Among largest player in Urea Production FFC leads the market with 29%.
- Importantly FFC is also has the highest capacity utilization and exceed maximum production capacity 100%

Market Share Production Wise (FY 2016 & 2017)

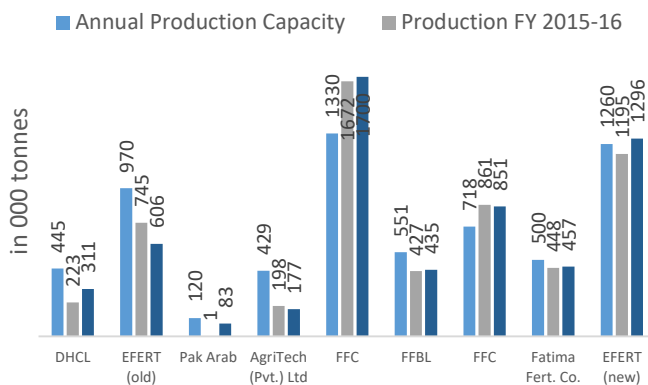


Urea: 72% share in total local production (5,916 Vs 8,245 '000 Tons (FY 2016-17)

Production Capacity Utilization  
 Total UREA:  
 Fauji Fertilizer company : 128%  
 Engro Fertilizer: 62%  
 Fauji fertilizer Bin Qasim: 79%

Growth in Production: 2.5%  
 (YOY-2015-16, 2016-17)

## Total Urea Production in Pakistan



Largest Market Share:  
 Fauji Fertilizer company :29%  
 Engro Fertilizer: 22%  
 Fauji fertilizer Bin Qasim: 14%

Source: National Fertilizer Development Corporation

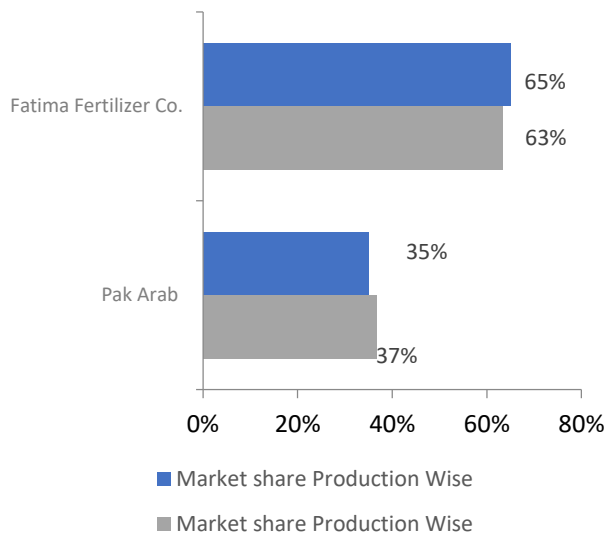
Source: National Fertilizer Development Centre, DATA



# Products Vs. Capacity “CAN”

- Out of total fertilizer Products CAN has the highest market share in Production i.e. 8%.
- Among largest player in Urea Production Fatima Fertilizer Limited leads the market with 63%.
- Importantly Fatima Fertilizer Limited is also has the highest capacity utilization and exceed maximum production capacity 100%

Market Share Production Wise (FY 2016 & 2017)



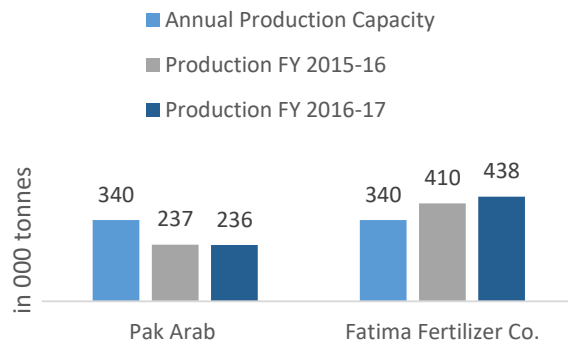
CAN: 8 % share in total local production (5,916 Vs 8,245 '000 Tons FY 2016-17)

## Production Capacity Utilization

Total CAN :  
Pak Arab : 69%  
Fatima Fertilizer company : 129%

Growth in Production: 4.2 %  
(YOY-2015-16, 2016-17)

## Total CAN Production in Pakistan



Source: National Fertilizer Development Corporation

## Largest Market Share in FY 2016-17:

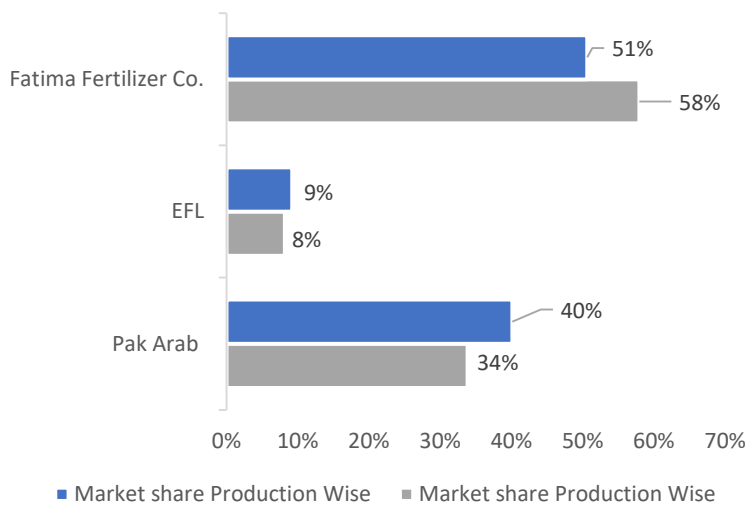
Fatima Fertilizer company : 63 %  
Pak Arab : 37 %

Source: National Fertilizer Development Centre, DATA

# Products Vs. Capacity “ NP ”

- Out of total fertilizer Products NP has the highest market share in Production i.e. 9%.
- Among largest player in Urea Production Fatima Fertilizer Limited leads the market with 51%.
- Importantly Fatima Fertilizer Limited is also has the highest capacity utilization and exceed maximum production capacity 100%

Market Share Production Wise (FY 2016 & 2017)



NP: 9 % share in total local production (703 Vs 8,245 '000 Tons FY 2016-17)

## Production Capacity Utilization

Total NP:

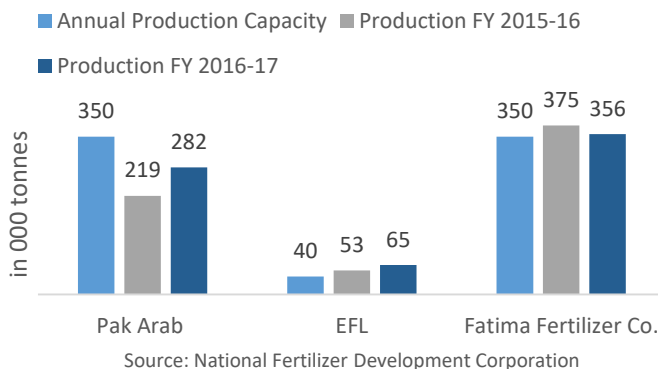
Pak Arab : 81%

EFL : 163%

Fatima Fertilizer company : 102%

Growth in Production: 8.7 % (YOY-2015-16, 2016-17)

## Total NP Production in Pakistan



## Largest Market Share:

Fatima Fertilizer company : 51 %

Pak Arab : 40 %

Source: National Fertilizer Development Centre, DATA

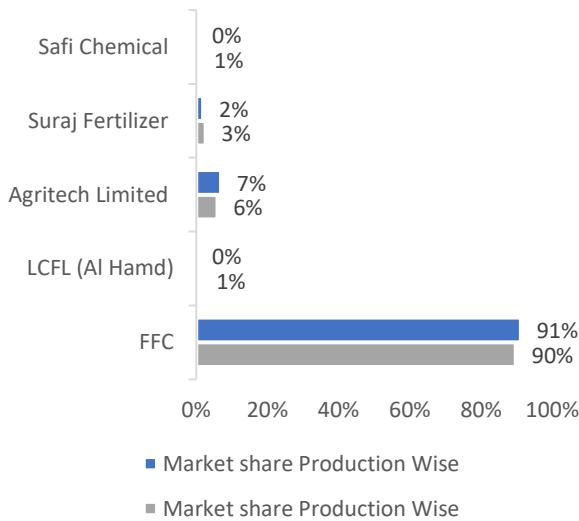


# Products Vs. Capacity

## “ DAP & SSP ”

- Out of total fertilizer Products DAP & SSP has the highest market share in Production i.e. 11%.
- Among largest player in Urea Production Fauji Fertilizer Limited leads the market with 63%.
- Importantly Fauji Fertilizer Limited is also has the highest capacity utilization.

Market Share Production Wise (FY 2016 & 2017)



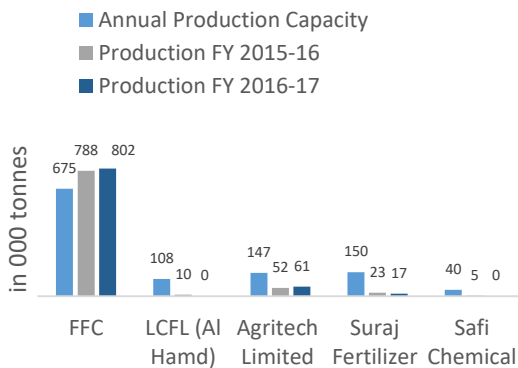
DAP & SSP : 11 % share in total local production (880 Vs. 8,245 '000 Tons FY 2016-17)

### Production Capacity Utilization

Total DAP & SSP:  
FFC : 119%  
Agritech Limited : 41%

Growth in Production: 0.2 %  
(YOY-2015-16, 2016-17)

### Total DAP Production in Pakistan



### Largest Market Share in FY 2016-17:

FFC : 90%  
Agritech : 7%

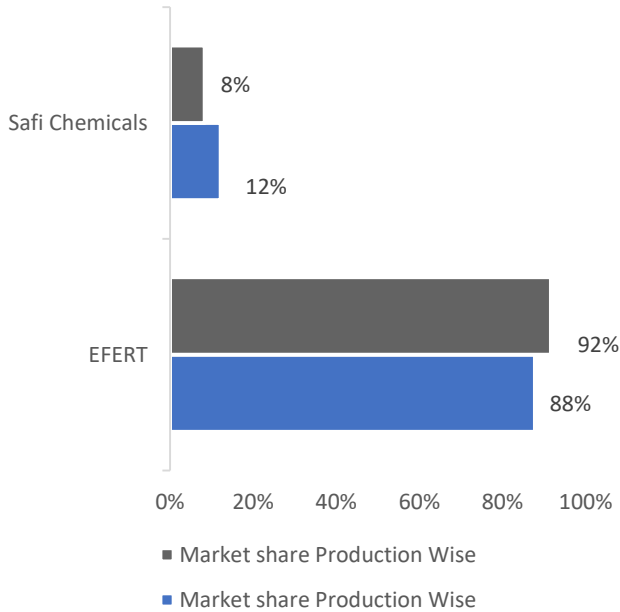
Source: National Fertilizer Development Corporation

Source: National Fertilizer Development Centre, DATA

# Products Vs. Capacity



Market Share of Production Wise of FY 2016 & 2017



NPK: 1 % share in total local production (72 Vs. 8,245 '000 Tons FY 2016-17)

## Production Capacity Utilization

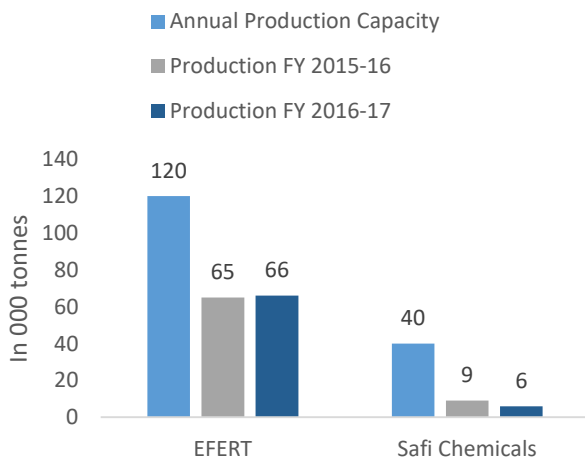
Total DAP & SSP:  
EFL : 55%  
Safi Chemicals : 15%

Growth in Production: 1 % (YOY-2015-16, 2016-17)

## Largest Market Share in FY 2016-17:

EFL : 92%  
Safi Chemicals : 8%

Total NPK Production in Pakistan



Source: National Fertilizer Development Centre, DATA

# Agriculture Credit / Fertilizer Sector Share

Agricultural credit is one of the most important instruments to achieve higher productivity. Its availability at the time when needed is crucial for gaining maximum benefits. Credit requirements of the farming community have been increasing continuously over the period of time. This might be due to rise in the prices and use of costly agricultural inputs. State Bank of Pakistan is the main governing body in the country, which ensures the availability of agricultural credit to farmers. Zari Taraqiati Bank Limited (ZTBL), Commercial banks, Cooperatives and Domestic private banks are providing credit facility to the farmers for meeting their credit needs.

Supply of institution-wise agricultural credit disbursement during 2015-16 and 2016-17 is presented. Agricultural loans of Rs. 704.5 billion were disbursed during 2016-17 as against Rs. 598.3 billions during the last year (2015-16), thereby registering an impressive increase of 17.8 %. The share of commercial banks and ZTBL was 48.6 and 13.1 %, whereas the share of private Banks was 19.7 %. Share Micro Finance Banks, Islamic Banks and Rural Support Programmes was 12.5, 1.7 and 2.8 % respectively.

It may be observed that out of the total disbursement during 2016-17, 92 per cent was for production loan and 8 % for development loan. Production loan is for short term of 6 to 18 months for farm inputs seed, fertilizer, pesticides, POL, Labour and Poultry feed chick's etc. Of the total production loan, about 40 % goes to fertilizer. Therefore, it is estimated that about Rs. 260 billion have been provided for fertilizer sector. The data presented also indicate that almost the all banks have achieved their targets. Overall target achievement was 100.6 %.

Source: National Fertilizer Development Centre, DATA

Institution-wise Agriculture Credit Disbursements During FY 2015-16 & 2016-17				
(Million PKR)	Disbursement			
Description	2015-16	2016-17	% Change	Share %
<b>Total Commercial Bank</b>	311,401	342,068	9.0%	48.6%
ZTBL	90,977	92,450	2.0%	13.0%
PPCBL	10,335	10,880	5.0%	1.5%
<b>Total Domestic Private Banks</b>	123,097	139,061	11.0%	19.7%
<b>Total Mirco Finance</b>	53,938	87,772	39.0%	12.5%
<b>Total Islamic Banks</b>	8,540	12,326	31.0%	1.7%
<b>Total MFIs/RSPs</b>	-	19,930	100%	2.80%
<b>Grand Total</b>	598,288	704,487		100%



# Gas Supply To The Fertilizer Sector

Natural gas is a major contributing fuel in country's energy mix. The country has a huge network of gas pipelines providing natural gas to domestic, industrial, commercial and transport sectors. The use of natural gas as a fuel of choice has also contributed in controlling environmental degradation. There is a significant rise in demand/consumption of gas by residential/domestic consumers owing to price differential vis-a-vis other competing fuels, i.e. LPG, fire wood and coal. On average, during the last 5 years, more than 0.3 million consumers were added/connected to gas network annually by the Gas Utility Companies. The positive growth of sectors, such as power, commercial, residential and fertilizer has resulted in natural gas availability constraint. The increase in demand of natural gas will amplify further in the next coming years.

During the period under review, power sector (including captive power) has remained the main consumer of gas, accounting for around 43 % share followed by residential and fertilizer sectors with a share of 21 % each.

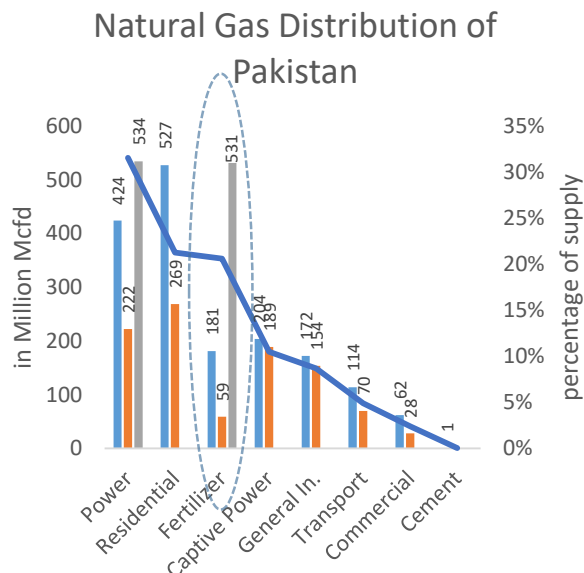
It is forecasted that due to ever increasing demand for gas, Pakistan will face an increasing deficit in gas supply. The shortfall in gas is expected to reach 3,999 MMcfd by FY 2019-20 and the gap will reach 6,611 MMcfd without imported gas by FY 2029-30. The Government of Pakistan (GoP) has initiated various measures to bridge the gap between demand and supply which includes incentivizing of local gas production, import of natural gas in the form of Liquefied Natural Gas (LNG) and cross country pipelines from Iran and Turkmenistan.

During FY 2016-17, total supply of natural gas in the country, including imported RLNG, has reached 4,131 MMcfd.

The share of Regasified Liquid Natural Gas (RLNG) in the gas supply was 16 percent.

Natural gas demand in the country has been increasing day by day. Some 20 years back, in 1996-1997, overall consumption of natural gas in the country was around 1,700 MMcfd whereas the same has increased to 4,131 MMcfd in FY 2016-17.

During FY 2016-17, the Power Sector consumed the highest volume, i.e. 1,180 MMcfd of natural gas while the residential sector consumed about 796 MMcfd of natural gas. However fertilizer sector at third in the total country consumption with volume 771 MMcfd of national gas.



Source: Annual Fertilizer Review 2016-17

# Gas supply to the fertilizer sector

in (MMCFY)

Company	Consumption	FY15-16	FY16-17
<b>Sui Northern gas Pipelines Limited</b>			
<b>Pak- Arab</b>	Feed	-	222
	Fuel	-	674
	Total	-	896
<b>Dawood Hercules</b>	Feed	1,881	189
	Fuel	437	570
	Total	2,318	759
<b>Pak- American</b>	Feed	4,881	4,310
	Fuel	920	895
	Total	5,801	5,205
<b>EFERT (new)</b>	Feed	33,536	34,257
	Fuel	2,420	2,935
	Total	35,956	37,192
<b>Hazara Phosphate</b>	Feed	-	-
	Fuel	61	-
	Total	61	-
<b>Oil &amp; Gass Development Company Limited</b>			
<b>EFERT</b>	Feed	-	-
	Fuel	-	3,710
	Total	-	3,710
<b>Liquefied Nqtural Gas (LNG)</b>			
<b>Pak- Arab</b>	Feed	170	9,829
	Fuel	349	2,535
	Total	519	12,364
<b>Dawood Hercules</b>	Feed	4,227	8,251
	Fuel	849	1,380
	Total	5,076	9,631
<b>Sui Northern Gas Pipelines Limited</b>			
<b>FFC Jordon</b>	Feed	19,240	17,755
	Fuel	4,470	3,807
	Total	23,710	21,562
<b>Mari Gas Pipelines Limited</b>			
<b>EFERT- 1 &amp; 2</b>	Feed	54,525	31,145
	Fuel	5,442	3,898
	Total	59,967	35,043
<b>FFC - 1&amp; 2</b>	Feed	49,736	50,449
	Fuel	11,505	12,096
	Total	61,241	62,545
<b>FFC 3 (MM)</b>	Feed	28,054	27,903
	Fuel	4,579	4,446
	Total	32,633	32,349
<b>Fatima Fertilizer</b>	Feed	29,227	30,385
	Fuel	6,938	5,498
	Total	36,165	35,883
<b>Grand Total</b>		263,386	257,159

Source: Annual Fertilizer Report 2016-17

# Fertilizer Prices In Pakistan

## Domestic retail prices during Kharif 2016

Fertilizer market is deregulated and prices vary from place to place. Generally prices are higher in North of the country than South due to transport charges. The following table presents the average fertilizer market prices collected from 12 cities of the country during 2016-17. The average market prices of all fertilizer products decreased during Kharif 2016. Urea (sona), and urea (other) prices witnessed a decrease of 25.8 and 23.5 per cent, respectively. DAP and NP prices also decreased through out the season. Price of DAP decreased by 11.9 per cent while that of NP decreased by 8.6 per cent. Prices of CAN and SOP decreased by 21.3, and 13.2 per cent, respectively.

## Domestic retail prices during Rabi 2016-17

Prices of all fertilizer products decreased during Rabi 2016-17. Average prices of sona urea decreased by 0.3 per cent while prices of other brands of urea decreased by 1.2 per cent. The average prices of DAP and NP also decreased by 2.8 and 6 per cent, respectively. Average prices of CAN and SOP decreased by 0.4 and 7.1 per cent during Rabi 2016-17.

## Domestic prices during 2016-17

Prices of all the fertilizers decreased significantly during current fiscal year 2016-17. The average price of urea (other) decreased by 11.1 per cent, while that of urea sona decreased by 10.7 per cent. The prices of DAP, NP, CAN and SOP (G) decreased by 6.2, 6, 10.4 and 15.8 per cent, respectively.

Average Fertilizer Retail Prices from April 2016 to June 2017								
(Rs. Per 50 Kg bag)								
Month	Urea Sona	Urea (other)	DAP	NP	CAN	SOP	SSP(G)	NPK
Apr-16	1,855	1,827	3,011	2,140	1,537	4,970	927	2,804
Sep-16	1,377	1,398	2,654	1,956	1,210	4,315	894	2,579
<b>Kharif Avg Price</b>	1,603	1,599	2,816	2,023	1,377	4,608	927	2,804
<b>% Change</b>	-26%	-24%	-12%	-9%	-21%	-13%	-4%	-8%
Oct-16	1,371	1,387	2,603	1,925	1,188	4,226	888	2,559
Mar-17	1,367	1,370	2,531	1,810	1,183	3,928	879	2,490
<b>Rabi Avg Price</b>	1,369	1,379	2,544	1,827	1,176	4,101	881	2,508
<b>% Change</b>	0%	-1%	-3%	-6%	0%	-7%	-1%	-3%
Jul-16	1,482	1,476	2,771	1,976	1,314	4,489	896	2,638
Jun-17	1,323	1,312	2,598	1,857	1,178	3,778	883	2,536
<b>Fiscal Year 2017</b>	1,376	1,379	2,596	1,869	1,198	4,100	886	2,533
<b>% Change</b>	-10.7%	-11.1%	-6.2%	-6.0%	-10.4%	-15.8%	-1.5%	-3.9%

Source : Annual Fertilizer Review 2016-17



# International Fertilizer Prices in Pakistan

The average fertilizer prices of urea, DAP and TSP prevalent in international markets during Kharif 2016, Rabi 2016-17 and FY 2016-17.

## Kharif 2016

Urea prices in international market during Kharif 2016 decreased by 8.3 % in Middle East. DAP prices in international market decreased by 12.7 % in US Gulf and decreased 9.6 % in China market. The prices of TSP also witnessed a decrease by 11.2 %.

## Rabi 2016-17

During Rabi 2016-17, average monthly urea prices in Middle East market ranged between US \$ 201.6 to 256.3/t fob while China market ranged between US \$ 203.9 to 242.5 fob/t. Urea prices in Middle East increased by 17.8 per cent while in China market, it increased by 13.9 %. DAP prices in US Gulf increased by 4.4 %. The prices of TSP, in Tunisia also increased by 1.8 % during Rabi 2016-17.

## Fiscal year 2016-17

During 2016-17, urea fob prices fluctuated between US \$ 192.5 to 256.3/t in Middle East and US\$ 192.5 to 242.5/t in China market. DAP prices witnessed an increase of 1.8 per cent in US Gulf and quoted prices for DAP increases from US \$ 296.9 in December 2016 to US \$ 331.5/t fob in February 2017 in US Gulf. TSP prices decreased slightly by 1.6 per cent. DAP price in China market increased by 3.1 %.

Average International fertilizer prices During 2016-17					
(FOB Prices US \$/ton)					
	Urea (Mid. East)	Urea China	DAP Us Gulf	DAP China	TSP Tunisia
Apr-16	209.9	215.9	366.6	334.6	312.5
Sep-16	192.5	195.3	320.1	320.6	277.5
Kharif Avg Price	200	203.6	333.4	330	286.8
% Change	-8.3%	-9.6%	-12.7%	-4.2%	-11.2%
Oct-16	201.6	203.9	309.1	301	277.5
Mar-17	237.5	232.3	322.8	367.5	282.5
Rabi Avg Price	233.1	229.9	311.7	333.1	278.8
% Change	17.8%	13.9%	4.4%	22.1%	1.8%
Jul-16	193.8	194.6	305.6	329.8	287
Jun-17	205	226.9	311	340	282.5
Fiscal Year 2017	217.1	218.3	312.2	335.2	279.4
% Change	5.8%	16.6%	1.8%	3.1%	1.6%

Source : Annual Fertilizer Review 2016-17

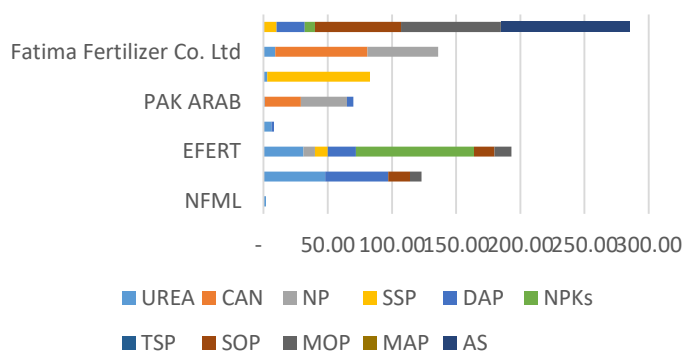
Source : Food and Agriculture Organization

# Marketing agencies in Pakistan for Fertilizer

During 2016-17, a total quantity of about 10435 thousand tonnes of various products domestically produced as well as imported, were handled by marketing agencies. The private sector manufacturing/marketing agencies (including importers) share was 99 per cent in total fertilizer distribution (98 per cent during 2015-16). FFC, EFERT, Pak-Arab, DHCL, Agritech Limited and Fatima market share was 40, 25, 7, 4, 3 and 14 per cent, respectively. The share of other private importers was 5 per cent (Figure 16). Public sector agency (NFML) share was 1 per cent (2 per cent during 2015-16) in total fertilizer quantities handled.

Private sector handled about 98 per cent of urea (97 per cent during 2015-16). FFC, EFERT, DHCL, Fatima and Agritech shares in urea marketing were 48, 31, 6, 9 and 3 per cent, respectively. The shares of FFC, EFERT, Pak-Arab and DHCL in DAP off take were 49, 22, 5 and 2 per cent, respectively. CAN was moved by Pak Arab (28 per cent) and Fatima Fertilizer Company (72 per cent). Market shares of the various fertilizer distributing agencies and the detailed product-wise and agency-wise market shares. The share of Regasified Liquid Natural Gas (RLNG) in the gas supply was 16 percent.

Market share of various agencies in fertilizer offtake during 2016-17



Source : Annual Fertilizer Review 2016-17



# Financial Highlights/Company Analysis of the sector

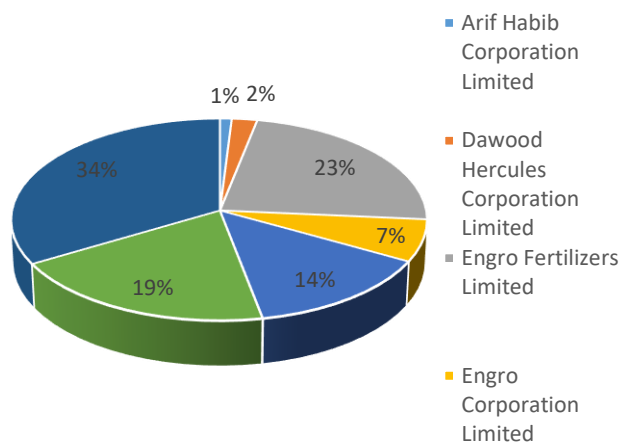
The sector comprises 7 companies with the total paid up capital was Rs 71,004.69 million and market capitalization is Rs 561,170.4 million. The profit after tax of this sector is Rs. 50,072.09 million.

Among fertilizer manufacturing companies, top 2 players represents more than 50% of the sales in 2016-17 (FFCL 34% & EFL 23%).

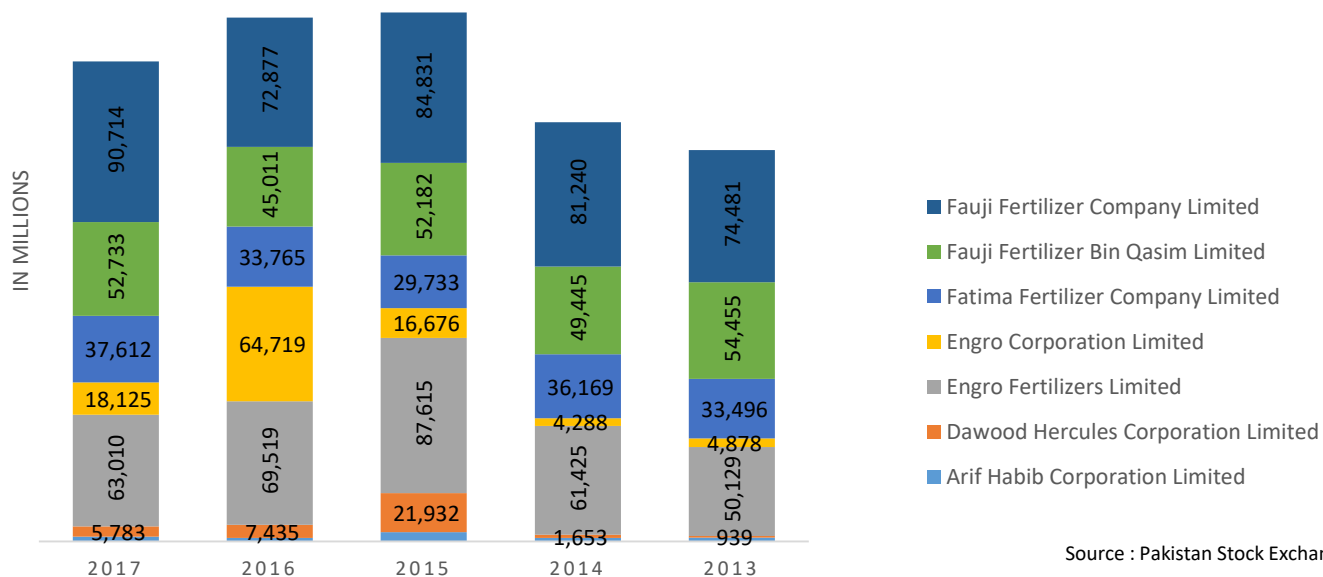
## List of Market Players in Pakistan

1. Arif Habib Corporation Limited
2. Dawood Hercules Corporation Limited
3. Engro Fertilizer Limited
4. Engro Corporation Limited
5. Fatima Fertilizer Company limited
6. Fauji Fertilizer Bin Qasim Limited
7. Fauji Fertilizer Company Limited

Industry Share according to Revenue in FY 2016-17



## REVENUE TREND OF THE FERTILIZER SECTOR



Source : Pakistan Stock Exchange



# Financial Highlights of the Sector

## Engro Fertilizer Limited

**Revenue in 2017 : PKR 77B**  
**Sales Growth YOY: 11%**  
**Improved from previously**



**Profit Margins: 14.46**  
**Growth in revenue (+ ly correlated)**  
**improved**



**Interest Coverage: 7.3Times**  
**Higher the better(improved over**  
**the period) 2017 vs. 2016**



**Financial Leverage: 42.1**  
**lower the better (Debt**  
**decreasing YOY)**



Year	EFL		
	2017	2016	2015
Gross Profit	23%	17%	0%
Net profit to sales	15%	13%	17%
Return on Equity (PAT)	27%	22%	39%
Return o capital employed	26%	22%	33%
Interest Coverage Ratio	7.3 Times	5.3 Times	5.6 Times
EPS	8.4	7.0	11.1
Sales (PKR- million)	77,129.0	69,537.0	88,033.0
Operating Profit (PKR- million)	19,312.0	16,821.0	25,694.0
Net Profit (PAT) (PKR- million)	11,156.0	9,283.0	14,818.0
Net Profit (PBT) (PKR- million)	16,664.0	13,634.0	21,067.0
Other Income (PKR- million)	5,866.0	8,143.0	1,781.0
Total Assets (PKR- million)	111,816.0	102,803.0	-
Long term Debt (PKR- million)	32,411.0	370,976.0	-

# Financial Highlights of the Sector

Fauji Fertilizer Bin Qasim Limited

**Revenue : PKR 52B**  
**Sales Growth YOY: 17.2%**  
**improve**



**Profit Margins: 1.9%**  
**Improved (2017 Vs 2016)**



**Interest Coverage: 1.74 times**  
**(Higher the better) Decreased**  
**over the period 2017 vs. 2016**  
**due to increase in debt**



**Financial Leverage: 2.17**  
**(lower the better)**  
**Debt has increased over**  
**the period**



	FFBQL		
	2017	2016	2015
Gross Profit	11%	3%	14%
Net profit to sales	2%	3%	8%
Return on Equity (PAT)	8%	10%	28%
Return o capital employed	3%	5%	17%
Interest Coverage Ratio (times)	1.74	1.74	3.88
EPS	1.1	1.4	4.4
Sales (PKR- million)	52,733.0	45,011.0	52,182.0
Net Profit (PAT) (PKR- million)	1,004.0	1,338.0	-
Net Profit (PBT) (PKR- million)	1,441.0	1,601.0	-
Other Income (PKR- million)	4,377.0	8,726.0	
Total Assets (PKR- million)	65,652.0	63,795.0	59,407.0
Long term Debt (PKR- million)	15,858.0	18,027.0	12,109.0

Source : [Fauji Fertilizer Bin Qasim Limited](#) Annual Report 2017-18

# Financial Highlights of the Sector

## Fauji Fertilizer Company

**Revenue : 90B**  
**Sales Growth YOY: 24.5%**  
**improve**



**Profit Margins: decreased over the period.25%**



**Interest Coverage: 7.37 Times**  
**(Higher the better) Decreased**  
**over the period 2017 vs. 2016**  
**due to increase in debt**



**Financial Leverage: 0.82**  
**lower the better (Debt**  
**decreasing YOY)**



	FFC		
	2017	2016	2015
Gross Profit	20%	25%	34%
Net profit to sales	12%	16%	20%
Return on Equity (PAT)	35%	42%	39%
Return o capital employed	41%	44%	60%
Interest Coverage Ratio	7.37	8.23	17.61
EPS	8.4	9.3	13.2
Sales (PKR- million)	90,714.0	72,877.0	84,831.0
Operating Profit (PKR- million)	9,519.0	10,896.0	22,068.0
Net Profit (PAT) (PKR- million)	10,711.0	11,782.0	16,766.0
Net Profit (PBT) (PKR- million)	15,741.0	17,394.0	24,503.0
Other Income (PKR- million)	10,324.0	10,665.0	6,194.0
Total Assets (PKR- million)	49,621.0	49,676.0	47,804.0
Long term Debt (PKR- million)	15,572.0	16,653.0	15,893.0

Source : [Fauji Fertilizer Company](#) Annual Report 2017-



# Financial Highlights of the Sector

Fatima Fertilizer Company Limited

**Revenue : 37B**  
**Sales Growth YOY: 11.4%**  
**improve**



**Profit Margins: 28.1% decreased**  
**over the period.**



**Interest Coverage: 1.31Times**  
**(Higher the better) Decreased**  
**over the period 2017 vs. 2016**  
**due to increase in debt**



**Financial Leverage: 76%**  
**lower the better (Debt**  
**decreasing YOY)**



	FatFCL		
	2017	2016	2015
Gross Profit	54%	53%	56%
Net profit to sales	28%	29%	31%
Return on Equity (PAT)	20%	3%	23%
Return o capital employed	16%	15%	17%
Interest Coverage Ratio	6.79	5.40	5.85
EPS	5.0	4.7	4.4
Sales (PKR- million)	37,612.0	33,765.0	30,226.0
Operating Profit (PKR- million)	12,736.0	11,626.0	11,548.0
Net Profit (PAT) (PKR- million)	10,576.0	9,782.0	9,254.0
Net Profit (PBT) (PKR- million)	168.0	107.0	(142.0)
Other Income (PKR- million)	526.9	702.6	683.8
Total Assets (PKR- million)	78,380.0	78,327.0	73,409.0
Long term Debt (PKR- million)	19,005.0	31,188.0	25,948.0

Source : **Fatima Fertilizer Company Limited** Annual Report 2017-18

# SOURCES

- Pakistan Economic Survey 2017-18
- Pakistan Bureau of Statistics
- National Fertilizer development center
- Business Recorder
- Annual Fertilizer Report 2016-17 (Pakistan)
- FAO: World Fertilizer Trends and Outlook To 2018

# ABOUT US

Punjab board of investment & trade is a provincial trade and investment promotion agency established by the Government of Punjab in 2009. In today's global economy, trade and investment play an increasingly important role in generating means for transformative change. At PBIT, we strive to ensure that this transformative change is sustainable and more impactful. PBIT is committed to enhancing the global competitiveness of Punjab and its business. To this end, we work to attract new investments in the region and strengthen the existing ones by promoting local investment opportunities, facilitating businesses and highlighting the distinct advantages of Punjab as a business location.

Incorporated under Section 42 under the Companies Ordinance of 1984, Punjab Board of Investments & Trade (PBIT) assists companies which intend to invest in the manufacturing and services sectors of Punjab. The wide range of services provided by PBIT include providing information on the opportunities for investments, as well as facilitating companies which are looking for joint venture partners. PBIT acts as Punjab's marketing arm and actively promotes the province worldwide as one of the best investment hubs in Asia. PBIT as Special Economic Zone Authority Punjab also evaluates the applications/proposals from Developers to declare their Industrial Parks as Special Economic Zones. For granting one time import duty exemption on machinery, equipment, spare parts, consumables in Special Economic Zones, PBIT is responsible to issue a confirmation Letter on the status of the applicant prior to seeking the permission from the relevant department/agencies to claim for the exemption. Investors are always encouraged to discuss their project interests with PBIT officers, wherein Information can be obtained on major public/private projects, prevailing sectoral policy framework, existing incentive regime, financing options, trade statistics etc. Punjab Board of Investment & Trade is a Steering Committee Member and the Director of South Asia at the World Association of Investment Promotion Agencies (WAIPA) - a prestigious world association of organizations similar to PBIT created by UNCTAD.

## Projects and Policy Research Department

Punjab Board of Investment and Trade targets a socio-economic growth through its P&PR. The department plans to fortify its deep roots, both locally and internationally, by reaching out to leading businesses for discussing the panoramic commercial opportunities. As per the initiative of inventiveness, the department plans to provide a transaction advisory as defined in its role to bring-in the investments and establish new businesses. For this purpose, Pitch books of different identified sectors are a new resourcefulness of this department which would target to develop the in-house capacity of production by connecting the local and international market players. This would not only ensure the technology transfer but also create several jobs in the province. The department plans to connect through the regional IPAs, financial institutions, the embassies in different countries and local chambers as well so as to fast-track the process of economic growth and industrialization in Punjab in regard to its recognition as 'The Land of Opportunities

Punjab Board of Investment &  
Trade  
23 – Aikman Road, GOR 1, Lahore.  
Pakistan  
PABX: +92 (042) 9920 5201-06  
Fax: +92 (0) 42 9920 5171  
Web: <https://www.pbit.gop.pk>

