

A STUDY ON FERTILIZER PRODUCT TRAFFIC PERFORMANCE OF MAJOR PORTS IN INDIA

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Abstract: *In this paper, explains the present production and consumption of fertilizer product in with it direct relationship with food grain production in India and world. Agriculture sector contribute about one seventh of GDP and it provides sustenance to nearly two third populations in India. In particularly Fertilizer finished product and raw material handling performance of all the major ports. In addition it reveals that India is mainly importing fertilizer from China, Saudi Arabia and Qatar presently and \$3.5 billion, \$729.9 million and \$23.3 million. The demand of fertilizer product is increased continuously in India but the performance of fertilizer handling by the major ports is fluctuating over the previous year. Hence the researcher conclude that the government of India established separate fertilizer handling berth with competing price in all major ports and also it need independency for improvement of fertilizer cargo handling in Indian ports.*

Key Words: *Fertilizer, Imports, Production, Consumption, Cargo Traffic, Agricultural sector.*

I. Introduction

India is emerging as a current economy and become globally competitive particularly the port sector. India's International trade is carried on through the maritime transport and twelve major ports are playing the vital role in the overall economic development of the country. International trade of cargo normally carries with maritime transport. Cargo can be defined as the articles, products or the goods that are being transported for import and export via ship. However, this term is now being used to define commercial transportation of goods. In terms of goods international trade, seaway transportation is the cheapest and most effective transportation system compared to other systems. Industries require a protected and economical means of exporting finished goods and importing raw materials. The importing and exporting of goods in Indian ports are classified as petroleum and petroleum products, Coal and coal product, Iron ore and iron products, fertilizer and raw fertilizer products, Food products and containerized products. However, the researcher wanted to study the Fertilizer and fertilizer product handled by the major ports in India.

II. Importance of Fertilizer Cargoes in India

Fertilizer is an essential component of modern agriculture and it is an important input to Indian agriculture for attainment of self-sufficiency of the food grain requirements of the growing population of the country. Fertilizers have a direct relationship with food grain production in India and world. Agriculture sector contribute about one seventh of GDP and it provides sustenance to nearly two third populations in India. The fertilizer industry has to cater to the needs of the farmers who are the most important consumers of the fertilizer industry. The fertilizer is main option available is increasing productivity in agriculture. The consumption of fertilizer in India is increasing over a period. India could manage its substantial requirement of fertilizer through import of raw fertilizer and finished fertilizer from various country.

III. Fertilizer Production and Consumption in India

Indian is the second populated country in the world and 60 to 70 per cent of these people depend on agriculture activities. Increasing the population may impact the requirement of food grains. The demand for fertilizer has grown along with the increasing demand of food grains. At present in India 30 large size Urea

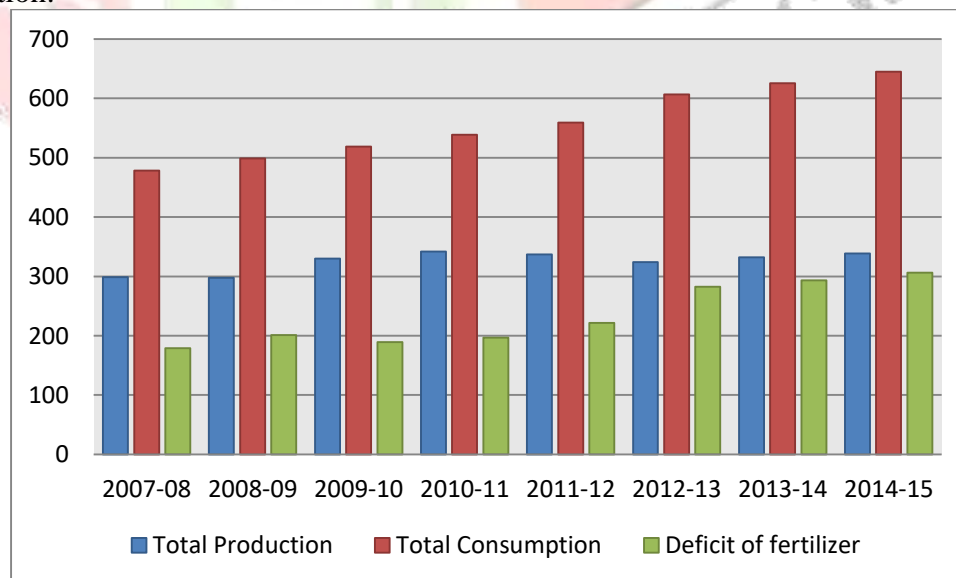
units are manufacturing urea, 21 units produce DAP and complex fertilizer and 2 units manufacture ammonium sulphate product.¹ Asia was the largest geographic market in the fertilizer market in 2015, accounting for \$20 billion or 20 per cent of the global market. Asia is the largest market because of the presence of a large farming community in China and India using fertilizers. The Americas was the second largest geographic market. Europe was the third largest geographic market of the global market. India is the third largest consumer and producer of fertilizer product. Indian manufacturer are not fulfil the demand of domestic consumption of fertilizer since Indian Government importing the fertilizer for requirement of farming sector. The actual production of fertilizer in India by above units is showing the table below. The table below shows that production and consumption of fertilizer and raw fertilizer in India during the study periods.

Table 1
Production and Consumption of Fertilizer in India
(in lakhs-tonnes)

Year	Total Production	Total Consumption	Deficit of fertilizer
2007-08	298.8	478.05	179.25
2008-09	297.76	498.65	200.89
2009-10	329.77	518.85	189.08
2010-11	341.96	538.55	196.59
2011-12	337.17	558.95	221.38
2012-13	324.02	606.8	282.72
2013-14	332.39	625.78	293.39
2014-15	338.61	644.75	306.14

Source: Working Group Report on Fertilizer Industry for Eleventh and Twelfth Five-Year Plan.

The above table shows that fertilizer production, consumption and deficit of fertilizer in India. According to the table production of fertilizer is increasing continuously up to 2010-11 and after wards it shows fluctuating with over the previous year. But it clearly explain over all fertilizer consumption is continuously increased over the all the years. Hence, the fertilizers are deficit because of consumption of fertilizer in India over the domestic production of fertilizer. So, importing of fertilizer is very essential in India to meet it demand of agriculture production.



Source: Compiled by the researcher.

Figure -1 Production, Consumption and Deficit of Fertilizer

¹ Annual Report 2016-17, Government of India, ministry of chemical and Fertilizers department of fertilizer.

A graph is showing the production, consumption and deficit of the fertilizer in lakhs tonnes from the periods of 2007—08 to 2014-15. It reveals that Total consumption of fertilizer in India is continuously increased but the production of fertilizer is not increased equivalent to consumption of fertilizer in India.

IV. Fertilizer Handling Performance by the Major Port

Importing of fertilizer includes finished fertilizer and raw fertilizer. India is mainly importing fertilizer from China, Saudi Arabia and Qatar presently and \$3.5 billion, \$729.9 million and \$23.3 million accordingly.² Currently India imports of raw fertilizer by Andhra Pradesh, Gujarat, and Odisha are the biggest importer of in Indian State. Kakinada, Mundra and kandra port is the largest finished fertilizer importing port in India. However the table below shows that fertilizer traffic from major ports in India.

Table 2
Fertilizer Traffic of Major Ports

(, 000 tonnes)

Year	KDS	HDC	PPT	VPT	ChPT	TPT	CPT	NMP _T	MoPT	MPT	JNPT	KPT	Total
2005-06	-	1420	2496	3624	815	1651	727	889	605	595	33	4137	16992
2006-07	15	1390	4262	3916	1034	1470	639	1258	620	473	2	3993	19072
2007-08	11	712	3878	5288	351	1730	354	840	192	231	-	4076	17663
2008-09	9	547	3570	4134	783	1824	458	918	182	346	-	5493	18264
2009-10	33	295	3567	3684	611	2081	346	833	125	442	-	5700	17717
2010-11	28	459	4362	4079	771	1901	429	788	232	455	870	6390	20764
2011-12	14	519	4783	4551	643	1965	430	825	93	404	4	6058	20289
2012-13	42	386	4146	2588	421	1059	353	536	78	512	-	4624	14745
2013-14	4	560	4054	2614	415	1178	367	504	179	302	-	3633	13810
2014-15	197	811	4429	2558	542	1491	446	701	227	448	-	4502	16352

Source: Compiled by the researcher from Indian Port Association Annual Report 2015-16.

The fertilizer handling performance of the Haldia dock port is felt down and fluctuate with the previous year since from 2007-08 to 2014-15. Another port of Kolkata dock fertilizer handling is 15 tonnes to 42 tonnes from 2006-07 to 2012-13 but in 2014-15 it is handled 197 tonnes. The Paradip port of Odisha is handled 2496 tonnes and 4262 tonnes in first two years of 2005-06 and 2006-07 accordingly. Further years of 2007-08 to 2014-15 it fertilizer handling performance is increased from 3878 tonnes to 4429 tonnes. However, during 2013-14 is declined with the previous year.

Visakhapatnam port is important port for handling of fertilizer product and it is number one port for handling of fertilizer among the east coast port. In 2005-06, 2006-07, and 2007-08, it handled 3624, 3916, and 5288 tonnes respectively. Subsequently, it is declined to 4134 tonnes and 3684 tonnes. From 2011-12 to 2014-15 it fertilizer performance is declined continuously 4551 tonnes to 2558 tonnes. The Chennai is one of the oldest ports in India performance during 2007-08 to 2014-15 is declined from 851 tonnes to 542 tonnes. The

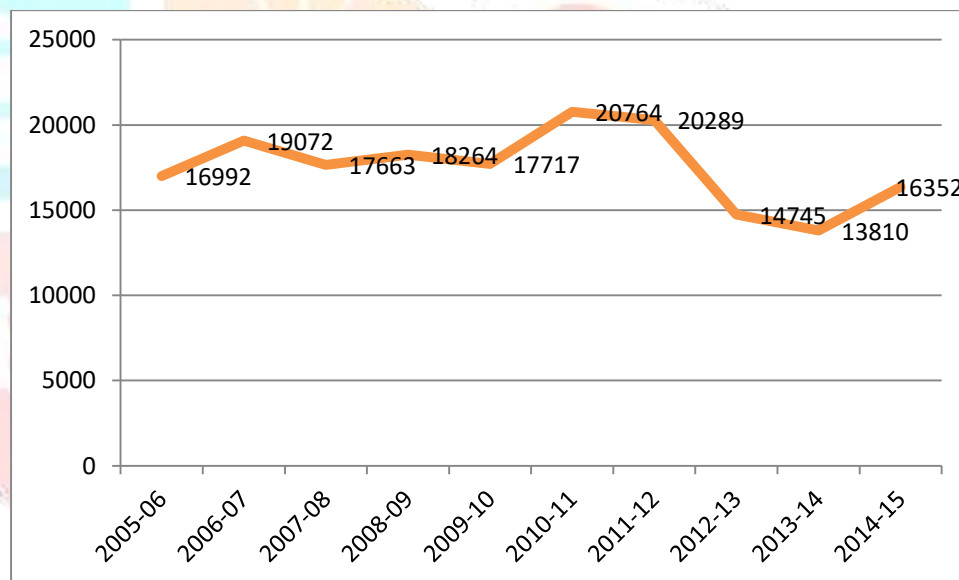
² Export and import statistics from Ministry of Commerce.

overall performance of Chennai port is decreasing trend except during 2006-07. Tuticorin, VOC port is another major port in Tamil Nadu. Fertilizer performance is increased 1681 tonnes to 2081 tonnes during 2011-12. Afterwards, from 2012-13 to 2014-15 fertilizer handling of the port is declined 1901 tonnes to 1491 tonnes.

Fertilizer handling performance of Cochin port is 727 tonnes during 2005-06 and it was declined to 639 tonnes and 354 tonnes accordingly in subsequent year of 2006-07 and 2007-08. But, remaining periods it is reveals that fluctuating trend between 346 tonnes to 458 tonnes by the port. The new Mangalore port is handling 889 tonnes of fertilizer during 2005-06 and it is increased to 1258 tonnes in the next year of 2006-07. However, the fertilizer handling by the port is declined trend from 2007-08 to 2014-15 of 840 tonnes to 701 tonnes. Murmagoa port fertilizer handling is 605 tonnes and 620 tonnes respectively in first two years of 2005-06 and 2006-07. Afterwards fertilizer handling performance by the port is fluctuating with previous year.

Fertilizer handling by the Mumbai port during 2008-09 to 2010-11 it shows that increasing trend of 346 tonnes to 455 tonnes. The last four years of 2011-12 to 2014-15 it is fluctuating trend with the previous year but it is not exceeding the performance of 2005-06. The researcher understood that JNPT is not focus on handling of fertilizer during the study periods because, it handled small amount of fertilizer compare with the other major ports.

Fertilizer handling performance of Kandla port is 4137 tonnes to 6390 tonnes during 2005-06 to 2010-11 and it is shows that increasing trend. From 2011-12 to 2014-15 it performance is declined from 6058 tonnes to 4502 tonnes. However fertilizer handling by the port is highest among the other major port during the study periods.



Source: Compiled by the researcher

Figure – 2
Fertilizer Traffic

The above trend analysis explains the performance of fertilizer traffic by the major port in India and it shows that fluctuating trend during the study period of 2005-06 to 2014-15.

V. Finding and suggestions

Consumption of fertilizer is increased or decreased purely on the basis of cultivation of crop patterns of the individual state and increase in area cultivation of high yield variety seeds and gross irrigated area. Location of Indian fertilizer company and service area of the port is major influencing factor for importing of fertilizer.

The major ports faced severe capacity constraint in handling high volumes of vessels is the reason for reducing the fertilizer handling by the major port and the improvement of minor port is connected with rail and road infrastructure and it can be upgraded. Therefore the minor port charged economical cost compare with the

major ports. So the major importer of the fertilizer importing is through minor ports. It is the cause of declining of fertilizer handling by the major ports.

The domestic consumption of fertilizer in India was decreased during 2012-13 and the international fertilizer prizes were increased during the period is lead to decreasing of fertilizer and raw fertilizer handling by the major ports. The development of Mundra Adani port private limited, Essar port India private limited and Krishnapatinam port is a competitive port and they charged to fluctuating handling charges for handling of fertilizer product. So, private fertilizer producers offer to import raw fertilizer through from private port.

VI. Conclusion

The demand of fertilizer product is increased continuously in India but the performance of fertilizer handling by the major ports is fluctuating over the previous year. It is due to handling charges of the major port is fixed and higher compare with the new private ports and the major ports always giving the importance to priority sector on the basis of government policy. Therefore fertilizer importer prefers to low handling charges private ports. Hence the researcher conclude that the government of India established separate fertilizer handling berth with competing price in all major ports and also it need independency for improvement of fertilizer cargo handling in Indian ports.

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