



Analysis of Urea Fertilizer Production, Pricing, and Distribution in India in 2023: A Global and Domestic Perspective

Shivam Satyawar Madrewar^{1*}, Snehal Sathe², Shlok Dongare³, Swapnil Subhash Bade⁴, Payal Navnath Bandgar⁵, Sakshi Sharad Jagadale⁶, Anuja Raghunath Gamane⁷

RCSM College of Agriculture, Kolhapur

Corresponding Author: Shivam Satyawar Madrewar

shivammadrewar@gmail.com

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ABSTRACT

This research paper analyzes the trends in urea fertilizer production, pricing, and distribution in India throughout 2023, with a focus on international market dynamics. The study highlights the fluctuations in global urea prices, domestic production and import figures, state-wise fertilizer requirements, and the performance of listed fertilizer companies. The paper also examines the impact of these factors on domestic prices, sales, and availability across various Indian states. This research aims to provide valuable insights for policymakers, industry stakeholders, and agricultural planners, ensuring efficient fertilizer management and availability. The analysis draws from government reports, industry data, and market trends, offering a comprehensive understanding of the urea fertilizer sector's performance in India amidst changing global fertilizer prices

INTRODUCTION

Urea fertilizer plays a vital role in sustaining India's agricultural productivity, which accounts for a significant portion of the nation's GDP. The global fertilizer market, including urea, has witnessed considerable fluctuations in pricing and availability due to geopolitical tensions, supply chain disruptions, and changing agricultural demands. In 2023, these factors impacted both the international market and India's domestic fertilizer sector.

India, being one of the largest consumers of urea, faced challenges related to domestic production, import requirements, and distribution efficiency. Urea prices in the international market showed a sharp decrease from January 2022 to January 2023, impacting the cost of imports and domestic pricing strategies. The Indian government regulates urea prices, but the demand-supply gap requires constant adjustments in imports to meet the agricultural sector's needs.

This paper analyzes the key trends in urea fertilizer pricing, production, and distribution within India. It also examines the impact of global price fluctuations on domestic availability, with a particular focus on state-wise fertilizer requirements and sales. Additionally, the study evaluates the performance of listed fertilizer companies, offering insights into the financial dynamics within the sector.

LITERATURE REVIEW

Several studies and reports have examined the impact of fertilizer prices on agricultural productivity and the economy. According to research published by the Indian Ministry of Chemicals and Fertilizers (2022), fluctuations in global fertilizer prices directly influence India's domestic fertilizer sector. The report highlighted how global supply chains, influenced by natural gas prices and political instability, impact the cost of production and import of urea fertilizers. Similarly, studies by economists like Pradeep Kumar (2021) have emphasized the dependency of Indian agriculture on urea and other fertilizers, noting that government interventions and subsidies play a significant role in maintaining price stability.

Global reports such as those by Argus Media and the Food and Agriculture Organization (FAO) also provide detailed insights into international price trends and supply-demand dynamics. The research shows a pattern of rising fertilizer prices globally from 2021 to 2022, followed by a significant decline in 2023. These findings are corroborated by multiple sources on government websites, including data from the Ministry of Chemicals and Fertilizers and the National Fertilizers Limited (NFL), which provide monthly updates on fertilizer production, imports, and sales trends.

Objectives

The objective of this research is to examine the trends in the urea fertilizer market in India and globally in 2023. The key objectives are:

1. To analyze the fluctuations in international urea prices and their impact on India's fertilizer sector.
2. To assess the production, import, and availability of urea fertilizers in India in 2023.
3. To evaluate state-wise urea requirements and sales across India in 2023.

4. To examine the share price movement of major fertilizer companies in India.
5. To suggest policy recommendations for optimizing fertilizer distribution in India.

METHODOLOGY

This research employs a mixed-methods approach, utilizing both qualitative and quantitative data.

- **Quantitative Data:** The study uses data from government publications, including the Ministry of Chemicals and Fertilizers' monthly bulletins, and industry reports from sources like Argus Media. Statistical analysis is used to evaluate the trends in urea prices, production, and state-wise distribution.
- **Qualitative Data:** Expert opinions and case studies from government reports and fertilizer companies are analyzed to provide deeper insights into the impact of government policies and market dynamics.
- **Data Collection:** Secondary data is gathered from published government reports, industry data, and academic journals.
- **Analysis:** Descriptive statistics and comparative analysis techniques are used to evaluate the data and identify key trends.

Observation:

Table 1: International Urea Prices from January 2022 to January 2023 (for 12 Months)

Month	Urea Price (USD/MT)
Jan-22	897
Feb-22	672
Mar-22	596
Apr-22	631
May-22	722
Jun-22	691
Jul-22	549
Aug-22	593
Sep-22	661
Oct-22	665
Nov-22	614
Dec-22	576

This table shows the monthly fluctuation of international urea prices from January 2022 to January 2023. Urea prices decreased significantly by 44.26% from January 2022 to January 2023, reflecting global market trends and supply-demand dynamics.

Table 2: Production and Sales of Urea in India for the Year 2023 (Monthly Data)

Month	Production (LMT)	Sales (LMT)	Availability (LMT)
Jan-23	28.11	39.31	40.83
Feb-23	27.65	38.5	39.25
Mar-23	29.2	40.1	41.5
Apr-23	30	41.8	43.2
May-23	28.5	38	39.5
Jun-23	29	39.5	41
Jul-23	28	38.7	40
Aug-23	29.5	40	42
Sep-23	30	41.2	43
Oct-23	29.3	40.5	42.5
Nov-23	28.8	39.9	41.2
Dec-23	29.5	40.3	42.1

The table provides monthly data on the production, sales, and availability of urea in India throughout 2023. The production remained relatively steady with slight variations, while sales and availability were in alignment, indicating stable supply management.

Table 3: Urea Price in India for the Year 2023 (Monthly Data)

Month	Urea Price (INR/MT)
Jan-23	5360
Feb-23	5360
Mar-23	5360
Apr-23	5360
May-23	5360
Jun-23	5360
Jul-23	5360
Aug-23	5360
Sep-23	5360
Oct-23	5360
Nov-23	5360
Dec-23	5360

The price of urea remained fixed at Rs. 5360 per MT throughout 2023. The consistent pricing policy helped stabilize costs for farmers, though it also indicated reliance on government subsidies.

Table 4: State-wise Urea Availability and Sales in January 2023 (Top 10 States)

State	Availability (MT)	Sales (MT)
Uttar Pradesh	9,44,775.82	9,12,794.85
Maharashtra	5,00,000	4,72,534.26
Andhra Pradesh	2,37,424.18	1,78,669.20

Bihar	547,49.6	280,19.45
Madhya Pradesh	249,78.08	69,25.5
Gujarat	746,50.52	38,354.96
West Bengal	99,930.20	84,884.90
Rajasthan	2,45,139.61	2,43,350.87
Tamil Nadu	1,02,080.62	61,124.90
Uttaranchal	3166.9	1515.75

This table highlights the top 10 states in terms of urea availability and sales in January 2023. Uttar Pradesh recorded the highest availability and sales, indicating its critical agricultural demand.

Table 5: Share Price Movement of Fertilizer Companies in 2023 (Top 10 Companies)

Company	Opening Price (INR)	Closing Price (INR)
Rashtriya Chemicals	132.25	120.85
Madras Fertilizers	74.4	62.85
National Fertilizers	75.15	68.2
Fertilizers and Chemicals	354.7	297.6
Chambal Fertilizers	180.5	160.4
Coromandel International	875.2	825.3
Indian Farmers Fertilizer	307.7	289
Gujarat State Fertilizers	82.6	76.3
Deepak Fertilizers	600.5	567.9
Nagarjuna Fertilizers	45.5	39.1

The share price movement of fertilizer companies in 2023 indicates a downward trend, reflecting concerns about profitability amidst global price volatility and domestic production challenges.

Table 6: State-wise Urea Requirement for 2023 (Top 10 States)

State	Urea Requirement (MT)
Uttar Pradesh	7,00,000
Maharashtra	2,60,000
Andhra Pradesh	1,70,450
Bihar	2,40,000
Madhya Pradesh	1,50,000
Gujarat	2,60,000
West Bengal	1,57,920
Tamil Nadu	63,000
Rajasthan	1,00,000
Punjab	1,50,000

RESULT AND DISCUSSION

The analysis of urea fertilizer trends in India and international markets throughout 2023 reveals several key insights. The international price of urea showed a dramatic decline of 44.26% from January 2022 to January 2023, dropping from USD 897/MT to USD 500/MT. This reduction in international prices had a mixed impact on India's fertilizer sector. Despite the drop in global prices, India continued to rely on imports to meet the domestic demand for urea due to insufficient local production. The production, sales, and availability of urea remained relatively stable across most months in 2023, indicating efficient management of urea supply within the country.

The monthly price of urea in India remained fixed at Rs. 5360/MT, demonstrating the effectiveness of the government's price control policies, which ensured affordability for farmers. However, state-wise analysis revealed significant regional variations in urea requirements, with Uttar Pradesh, Maharashtra, and Bihar showing the highest demand. The performance of major fertilizer companies, as seen in their share price movements, reflected investor concerns over price volatility and profitability in the sector. The data presented emphasizes the importance of ensuring consistent supply management and exploring sustainable solutions to minimize dependency on imports while maintaining price stability.

In conclusion, the urea fertilizer market in India faced both challenges and opportunities in 2023. While global urea prices declined significantly, domestic production levels did not always meet the country's agricultural demands, leading to a continued reliance on imports. The Indian government's price control measures helped stabilize domestic urea prices at Rs. 5360/MT, ensuring that farmers had access to affordable fertilizers. However, the variations in state-wise urea requirements highlighted the importance of efficient distribution strategies to meet regional demands effectively.

Additionally, the performance of fertilizer companies reflected the challenges of operating in a volatile global market. The overall market dynamics suggest that while the Indian government's regulatory interventions have been effective in maintaining price stability, further steps should be taken to reduce dependency on imports by enhancing local production capabilities. To address these challenges, future strategies must focus on sustainable practices, improving domestic production infrastructure, and maintaining a balanced supply chain.

CONCLUSIONS AND RECOMMENDATIONS

The findings from this research highlight critical challenges faced by India's urea fertilizer sector in 2023. While the reduction in global urea prices provided some relief, India's continued dependence on imports remains a vulnerability. State-wise variations in urea requirements underline the complexities of distribution, where states like Uttar Pradesh and Maharashtra require disproportionately large amounts of fertilizer, demanding tailored strategies for supply chain management.

Moreover, the stability of urea prices due to government regulation has been crucial in protecting farmers, but it may not be sustainable in the long run

without addressing the underlying issues of production and import reliance. The performance of fertilizer companies, marked by declining share prices, reflects concerns over the sector's long-term profitability amid fluctuating global prices. To improve resilience, it is essential for India to invest in increasing local production capacity, improving fertilizer efficiency, and diversifying sources of supply. Addressing these challenges can ensure a more sustainable and self-reliant fertilizer sector in the future.

FURTHER STUDY

This research is still delayed, so further research is needed related to the topic of SAnalysis of Urea Fertilizer Production, Pricing, and Distribution in India in 2023: A Global and Domestic Perspective to improve this research and add insights for readers

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