

Frank Notes

Fertilizer Marketing under Changing Environment

Fertilizer is a vital input for ensuring the food and nutritional security of our country. The Bengal famine of 1943, which claimed millions of lives, underscored the critical need for food security. Post-independence, bold initiatives were essential to safeguard our nation's food supply. The advent of High Yielding Variety (HYV) crop seeds transformed Indian agriculture, making the country self-sufficient in food production in 1968.

Fertilizer has played a key role in ensuring our nation's food security. Today, India is the second-largest producer and consumer of fertilizers globally, after China. Over the past five years from 2019-20 to 2023-24, consumption of Urea, DAP, NP/NPK complexes, and SSP grew by 6.2%, 7.1%, 12.3%, and 3.2%, respectively due to increase in demand of fertilizers. However, consumption of MOP decelerated by 41% during the period. Decline in MOP consumption is largely due to a reduction in subsidy, making it less attractive compared to other fertilizers. Production of Urea, SSP, and NP/NPK complexes showed an increase of 28.4, 4.4, and 10.2%, respectively. However, production of DAP declined by 5.6%. The growth in Urea production is mainly due to the commissioning of new plants and enhanced capacity utilization. In contrast, DAP production declined due to volatile input prices, resulting in higher production costs that were not fully offset by market realizations and subsidies.

Despite a significant increase in Urea demand, imports declined sharply by 22.8% over the last five years due to increased domestic production. However, there had been increase in import of DAP by 14.3% and NP/NPK complexes by 197.2%, driven by rising demand and constraint in domestic production due to volatile input prices in the international market.

The fertilizer market size, in value terms, is determined by considering both the market realization from MRP and the government's subsidy component. In recent years, selling prices to farmers have remained largely unchanged, leading to fluctuations in market size due to variations in subsidy amounts, influenced by sharp changes in the prices of raw materials, intermediates, and finished goods. In 2023-24, the market size was valued approximately at Rs.3 lakh crore.

While increasing fertilizer use has significantly boosted agricultural production, its imbalanced application has adversely impacted soil, water, and

air quality. Urea remains outside the Nutrient Based Subsidy (NBS) policy, with no retail price increase for the last two decades. The low price of Urea compared to P&K fertilizers has distorted the NPK use ratio, leading to issues such as low nutrient use efficiency (NUE), reduced soil organic carbon, multi-nutrient deficiencies, and declining crop response to fertilizer application. Climate change further emphasizes the need for climate-resilient, sustainable agricultural production systems.

Before implementation of the One Nation One Fertilizer (ONOF) policy, fertilizer marketing strategies focused on brand building and reducing marketing costs to remain competitive. Logistics management is crucial to ensure timely availability of the right fertilizer at the right place and price. Challenges include under-recovery of freight costs, price fluctuations in imported fertilizers, and issues with handling, warehousing, and infrastructure. The new Quality Control Order (QCO) IS 9755:2021 on fertilizer bag standardization may increase packaging costs and add more plastic to the environment. Revised guidelines on P&K fertilizers have also disallowed rebates and discounts, affecting liquidity and sales promotion efforts.

Given the changing market scenario, there is a need to revisit marketing strategies to stay competitive. Integrating cutting-edge technologies, sustainable practices, and responsive policies will be pivotal in shaping the future of fertilizer logistics. Enhancing the efficiency of bulk and container movement, multimodal transport, demand sensing, and infrastructure development will improve supply chain visibility and efficiency. Policy interventions must incentivize multimodal transport, bulk transfers, fertilizer logistics parks, and cross-sector collaboration to drive positive transformation.

To address soil health issues, marketers must strategize their product offerings to promote an integrated approach, creating awareness at the distribution and use levels. The strategy should shift from mere advisory services to offering solutions to farmers' challenges. The PM Programme for Restoration, Awareness Generation, Nourishment, and Amelioration of Mother-Earth aims to reduce use of chemical fertilizer by promoting alternate fertilizers alongside bio-fertilizers and organic fertilizers. Pradhan Mantri Kisan Samridhi Kendra aims to provide one-stop solutions for farmers' agricultural input needs and services. Companies should realign

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their marketing strategies to support sustainable farming through the right mix of plant nutrient solutions and knowledge-based support systems to the farmers.

There is also a growing demand for organic food, which is perceived as healthier. This trend pressures the farming community to adopt organic and bio-based fertilizers. A shift from traditional fertilizers to organic and bio alternatives, where suitable, is essential. Fermented organic manure, potash derived from molasses, PROM, bio-stimulants, and other organic/bio-fertilizers can help address soil health issues. Integrating bio-organics with chemical fertilizers will improve soil health, NUE, and agricultural productivity while reducing environmental impact and promoting sustainability.

In recent years, the fertilizer industry has undergone significant transformations driven by technological advancements, regulatory changes, and shifting consumer demands. These changes necessitate a re-evaluation of marketing strategies to remain competitive and sustainable. Increasing environmental awareness and stringent regulations have prompted companies to develop eco-friendly products. Marketing strategies now emphasize sustainability and compliance with environmental standards. Fertilizer companies are adapting their approaches to capture a larger share of this evolving market.

Continuous innovation in fertilizer formulations, such as slow-release nutrients and micronutrient-enriched blends, addresses evolving agricultural needs. Marketing efforts highlight these innovations to differentiate products in a crowded market. Given the complexity of modern farming practices, there is a growing emphasis on educating the farmers about optimal fertilizer usage and the benefits of new technologies. Webinars, workshops, and demonstrations play a vital role in this educational outreach. Collaborating with agricultural universities, research institutions, and governmental bodies enhances credibility and facilitates market access. Joint initiatives also foster innovation and regulatory compliance.

The Urea-SSP complex fertilizer, with a composition of 5:15:0:10, shows promise as an effective NP fertilizer, providing essential nutrients such as nitrogen, phosphorus, calcium, and sulphur. This innovative

solution is positioned as an alternative to imported DAP, with a similar NP ratio of 1:3, reducing dependency on imports.

India pioneered the introduction of the world's first Nano Urea (liquid) and Nano DAP. The increased use of Nano fertilizers is expected to reduce the Government of India's subsidy burden while positively enhancing nutrient use efficiency and reducing the environmental foot prints. The combination of Nano fertilizers and drone spraying technology is set to revolutionize plant nutrient application and spray technology, resulting in subsidy savings.

Digital platforms are becoming crucial for marketing and sales. Fertilizer companies are investing in online platforms, social media marketing, and e-commerce to reach farmers directly and provide information on product benefits and usage. Digital technologies, including data analytics and IoT, are revolutionizing agriculture by enabling precision farming techniques. Fertilizer companies are leveraging these technologies to offer customized solutions tailored to farmers' specific needs. Globalization has opened up new markets while intensifying competition. Companies are expanding their global footprint through strategic partnerships and acquisitions, requiring adaptable marketing approaches. Market segmentation-based on crop type, geography, and farming practices allows for targeted marketing campaigns that resonate with specific customer segments.

Given the evolving environment, there is a need for corrective measures at the policy level to address issues such as price disparity, freight under-recovery, distribution margins, urea out of ambit of NBS policy and MRP flexibility for better NPK use ratio, balanced fertilizer use, soil health, and company's profitability. Companies must also reorient their distribution channels to offer one-stop solutions for farmers' agri-input needs and services while educating and training trade partners. Providing a better user experience with products and technologies will enhance farm productivity and profitability. Digital interventions, including AI, will increase the efficiency across marketing operations and reduce costs. The real test of a company's marketing strategy will be delivering convenience to customers at an affordable price.

The Annual Review of Fertilizer Production and Consumption 2023-24 is being published in this issue. This marketing special issue includes eight papers covering important areas of fertilizer marketing, including logistics. It is hoped that all those involved in the fertilizer and agriculture sectors will find the content of this special issue and annual review useful. ■