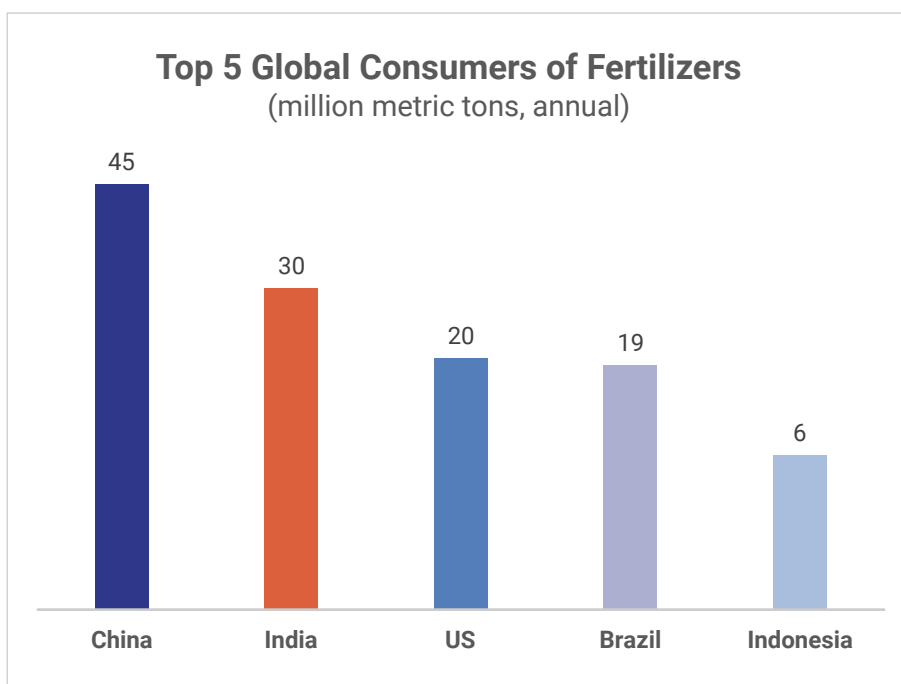


# Fertilizer Industry : A Deeper Look



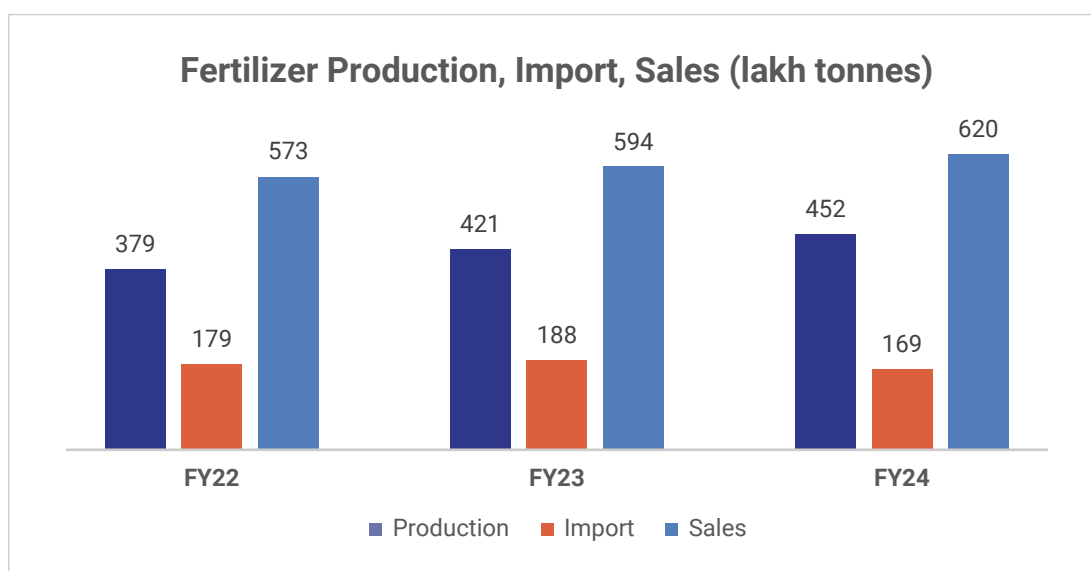
Fertilizer is a substance used to provide essential nutrients that may be deficient in the soil, such as nitrogen, phosphorus, and potassium, which are essential for plant growth and productivity. It is essential for ensuring food security and driving rural employment. India is the second largest consumer of fertilizers around the world followed by China.

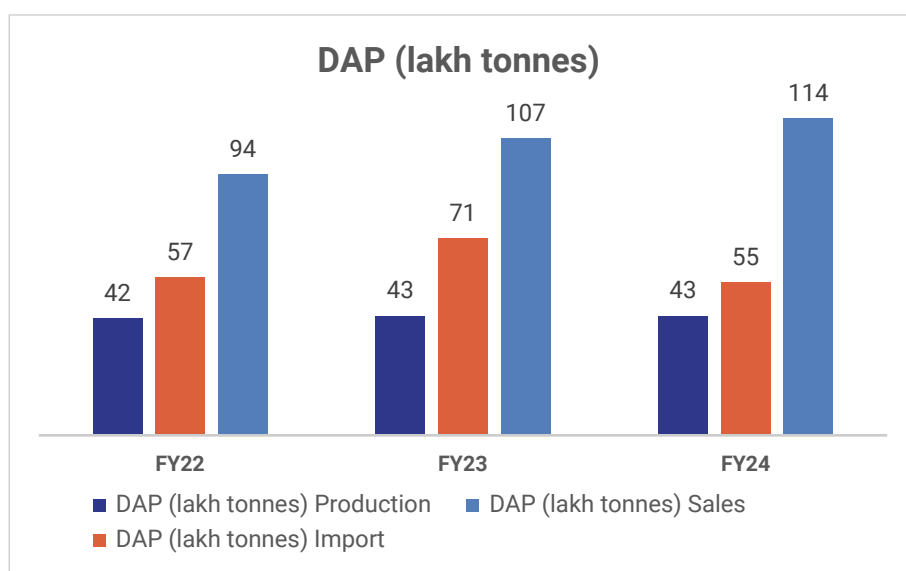
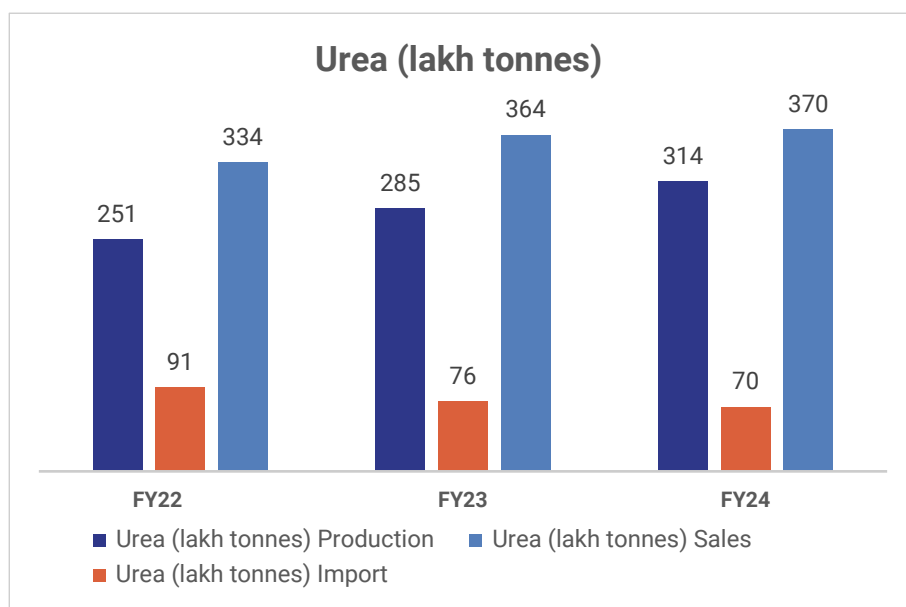


Fertilizer products are divided into two categories – Biofertilizers and Chemical Fertilizers. Biofertilizers are derived from natural sources such as compost, manure, and plant residues, and promote soil health and sustainability. Chemical or synthetic fertilizers are manufactured to provide precise nutrient composition and faster results. Fertilizers are available in varied forms like granules, powders, and liquids in the market.

Product-wise, fertilizers are classified into Urea, Diammonium Phosphate (DAP), Single Super Phosphate (SSP), Muriate of Potash (MOP) and other Complex fertilizers like Calcium Ammonium Nitrate (CAN) and various grades of NPK Fertilizers (Fertilizers having different grades of Nitrogen (N), Phosphorus (P), and Potassium (K)).

Urea dominates the total fertilizer production in the country, accounting for ~60-70% of the output. It is an inexpensive form of nitrogenous fertilizer and is synthetically produced in large quantities in India. It offers the highest nitrogen at the lowest price in the Indian market due to heavy government subsidies. In FY24, the total fertilizer production in the country stood at 452 lakh tonnes, of which, urea production stood at 314 lakh tonnes followed by NPK (95 lakh tonnes) and DAP (43 lakh tonnes).





## Import dependence

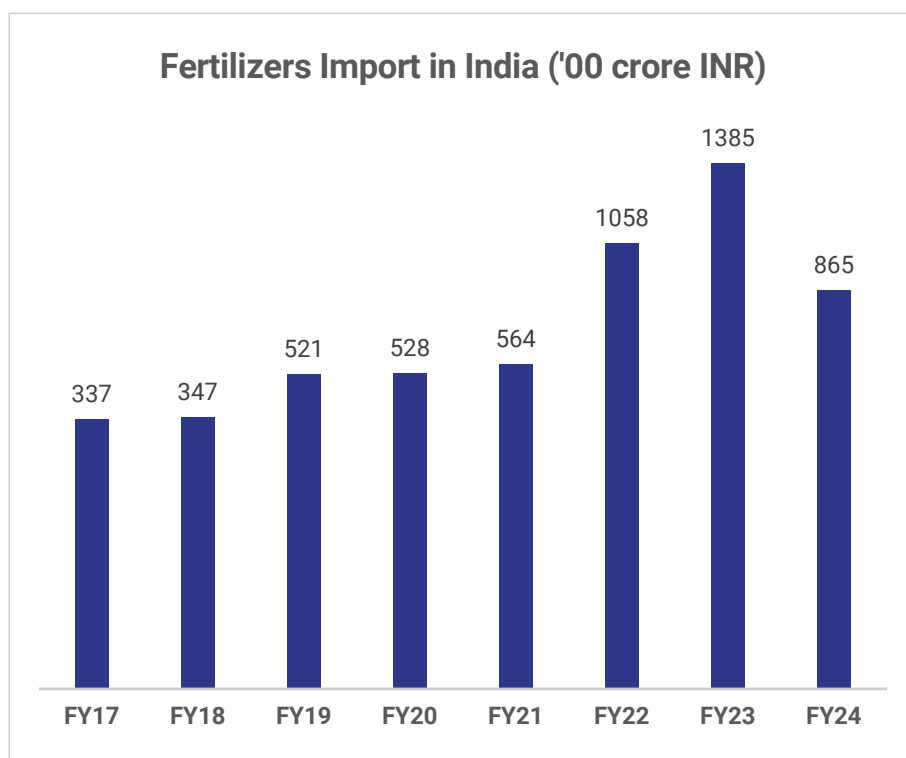
India is heavily dependent on imports for finished fertilizers. A significant amount of urea consumed in the country is, in fact, imported (accounted for ~41% of total fertilizer imports in FY24). Apart from importing finished fertilizers, India also depends on importing crucial raw materials for fertilizer production like rock phosphate, ammonia, and phosphoric acid.

Apart from urea, India depends entirely on imports for its MOP consumption. In FY24, India imported 22 lakh tonnes of MOP, up 57% YoY. The country does not produce MOP domestically due to a lack of mineable potash reserves. Hence, the country meets its potash requirement entirely by imports from countries such as Canada, Russia, Jordan, Israel, Turkmenistan, and Belarus.

However, the Centre is keen on reducing its heavy import dependence for fertilizers in line with its Atmanirbhar Bharat initiative. For instance, the government is exploring potash mining in Rajasthan and Punjab to reduce its import dependence. Rajasthan is currently holding substantial potash reserves (about 89% of total reserves) in India after Punjab. The Centre has implemented policies to promote its domestic production via initiatives like the Potash Derived from Molasses (PDM) project.



FY24 was a year depicting India's success in reducing import dependence. The total value of imports declined 37.5% YoY to INR 86,500 crore in the year. Urea imports fell 8%, DAP 22.5%, and NPKs 21% during the fiscal year (by metric tonnes).



## Unit economics

The unit economics in the fertilizer industry is largely a function of government subsidies and regulations that impact the profitability and efficiency of fertilizer producers. The fertilizer industry in India is highly regulated and monitored by the government of India.

It is via subsidies that the government controls prices of urea (for agricultural uses) and non-urea-based fertilizers on nutrients like nitrogen, phosphate, potash, sulphur under the Nutrient-based Subsidy (NBS) regime implemented since 2010. The NBS deals with 22 grades of decontrolled fertilizers namely DAP, MAP, TSP, DAP Lite, MOP, SSP, ammonium sulphate, and 15 grades of complex fertilizers. Under the NBS scheme, subsidies to farmers based on their fertilizer requirements are directly transferred to their bank accounts.

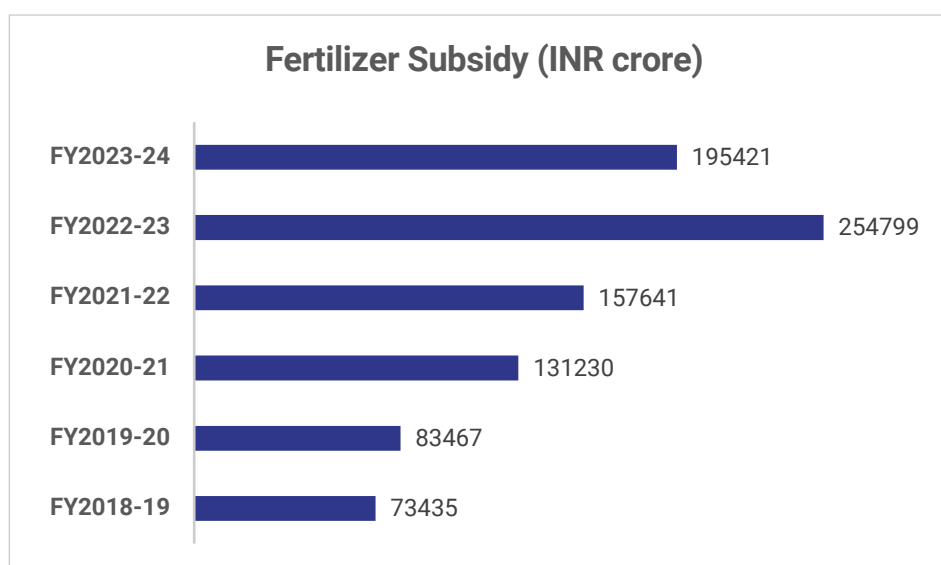
However, NBS fertilizers, unlike urea whose MRP is fixed by the government, are technically decontrolled. Under NBS, the MRP of fertilizers is set to be market-determined and decided by the companies selling them. The government pays a fixed per-tonne subsidy on each of these fertilizers, linked to their nutrient content or a specific percentage of nitrogen (N), phosphorous (P), potassium (K), and sulphur (S).

But, effective from April 1, 2023, the Department of Fertilizers (DoF) implemented guidelines on the “reasonableness” of the MRPs for all non-urea fertilizers covered under NBS. Under the guidelines, DoF has set maximum profit margins for fertilizer companies – 8% for importers, 10% for manufacturers, and 12% for integrated manufacturers (producing finished fertilizers as well as intermediates such as phosphoric acid and ammonia). Any company earning “unreasonable profit”, which exceeds the stipulated percentages, in a particular fiscal year will have to refund the same to the DoF by October 10 of the following fiscal year.



Despite the benefits, fertilizer subsidies in India gave rise to several issues such as

- Prices of the other decontrolled fertilizers have gone up leading farmers to use more urea and DAP than earlier.
- It is causing nutrient imbalance due to the disproportionate use of other expensive fertilizers. The recommended ratio of fertilizer usage is 4:2:1 for nitrogen (N), phosphorus (P), and potassium (K) fertilizers. However, the actual ratio is much higher for N (due to excessive consumption of urea) and lower for P and K which could cause nutrient deficiencies, soil degradation, and lower crop yields.
- It has led to financial stress for the government due to the increasing consumption of fertilizers.



Source: Union Budget documents, Fertilizer Ministry

In the 2025 Union Budget, the Centre has lowered the allocation for fertilizer subsidies for FY26 to INR 1.67 lakh crore compared to the revised estimate of INR 1.71 lakh crore in FY25 and INR 1.95 lakh crore allocated in the previous fiscal year. The reduction in allocation is driven by the expectation of higher domestic production of essential fertilizers like urea lowering the need for subsidies.

## Need for debt financing

The need for debt financing in the fertilizer industry is critical due to the sector's high capital-intensity production and the government's role in providing subsidies. Fertilizer producers often rely on debt financing for both fixed and working capital requirements.

The debt financing needs for fixed capital mainly originates from the continuous pressure from the government to boost domestic production and improve operating efficiencies. Booting domestic production requires increasing investments in plants for urea and DAP which demands a substantial amount of capital. On the other hand, improving operating efficiencies demands higher investments in energy and cost-efficient equipment.

The debt financing needs for working capital emanate from delays in subsidy payments from the government and fluctuations in the fertilizer demand due to the vagaries of monsoon. These two factors amplify the working capital burden on fertilizer producers due to higher inventory requirements. Notably, the working capital intensity of urea producers is higher compared to other producers as subsidy forms a higher portion (70-80%) of their gross realization.



## Conclusion

The fertilizer industry in India was valued at over INR 94,000 crore in 2023 and it is estimated to grow at an annual rate of ~4% to INR 1.4 lakh crore by 2032. The catalysts of growth include a growing population, rapid urbanization, rising consumption of food, emerging technological advancement, and the implementation of favorable government initiatives. However, the future growth of the fertilizer industry in India requires sustainable and efficient solutions which include:

- **Promoting balanced fertilization:** Farmers need to be encouraged to use a balanced mix of nutrients to optimize productivity.
- **Strengthening domestic production:** High reliance on imports should be reduced by enhancing domestic production capacities to make the industry more self-reliant.
- **Push for organic fertilizers:** Organic fertilizers should be promoted as a sustainable alternative to chemical fertilizers mitigating environmental hazards.

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