



An Economic Analysis of Fertilizer Subsidy Pattern in India

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Fertilizer subsidy remains a cornerstone of India's agricultural policy, aimed at ensuring affordable nutrient access, boosting productivity and safeguarding food security. This article traces the evolution of India's fertilizer subsidy regime from the Retention Price Scheme (1977-2003) to the Nutrient Based Subsidy (NBS) Policy introduced in 2010 highlighting the persistent dichotomy between price-controlled urea and market-linked phosphatic and potassic (P&K) fertilizers. Using secondary data from the Department of Fertilizers and Ministry of Finance, the study examines subsidy trends across 2022-23 to 2025-26, revealing a decline followed by resurgence in outlay, alongside a widening price gap between urea and NBS-covered nutrients. Findings indicate that incomplete reform has deepened the nitrogen-phosphorus-potassium (N:P:K) imbalance, strained fiscal and soil health outcomes. The article underscores the urgent need for urea's inclusion under NBS, rationalized pricing and strengthened Direct Benefit Transfer mechanisms to achieve balanced fertilization and fiscal sustainability.

Keywords: Fertilizer subsidy, PBS, NBS, Urea, India

Introduction

Fertilizers: Fertilizers are substances, either natural or manufactured, that supply one or more essential plant nutrients to the soil in order to enhance soil fertility, promote crop growth and increase agricultural productivity.

Fertilizer Subsidy: Fertilizer subsidy refers to the financial support extended by the Government of India to fertilizer manufacturers/importers, enabling farmers to purchase fertilizers at prices lower than their actual cost of production or import, thereby promoting agricultural productivity and food security.

History of Fertilizer Subsidy in India

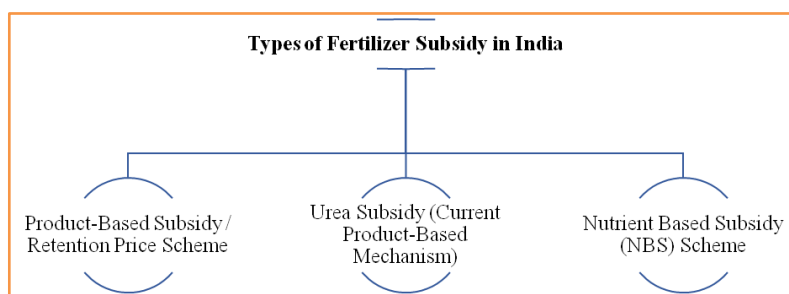
- 1973: The Fertilizer Control Order was passed, laying the regulatory groundwork for the fertilizer sector, though no direct subsidy was extended to fertilizers at this stage. No subsidy was paid on fertilizers till 1977 except potash, for which subsidy was paid only for one year in 1977. (Mistary 2022).
- 1976: The Government of India introduced a flat subsidy of Rs. 1,250 per tonne of P₂O₅, marking one of the earliest forms of financial support to the fertilizer sector. (Chander 2009, FAI).
- 1976-77: Fertilizer subsidy formally began at Rs. 60 crore, with potash being the only fertilizer to receive a one-year subsidy in 1977, as no other fertilizer had received subsidy support until this point. (Chander 2009, FAI).
- November 1977: Based on the recommendations of the Marathe Committee, the Retention Price Scheme (RPS) was introduced for nitrogenous fertilizers (excluding ammonium chloride), marking the beginning of the product-based subsidy system in India. (Chander 2009, FAI).

- February 1979: RPS for complex fertilizers was introduced in February 1979, discontinuing the fixed subsidy of Rs. 1,250 per tonne of P₂O₅ on complex fertilizers, which was replaced by RPS. (FAI, Fertiliser Policy – 1944 to 2024).
- May 1982: Single Super Phosphate (SSP) was brought under the ambit of RPS, extending the product-based subsidy coverage further across the phosphatic fertilizer segment. (Chander 2009, FAI).
- 1991: When India's New Economic Policy of 1991 was instituted, cuts in fertilizer subsidies were part of the package. In the summer of 1991, Finance Minister Manmohan Singh announced a 40% price hike for fertilizer, which was met with protest farmers in Andhra Pradesh raided warehouses and looted trucks carrying fertilizers. (MoCF, GoI).
- December 1991 – August 1992: In December 1991, the Government set up a Joint Parliamentary Committee (JPC) on fertilizer pricing to review the existing methods of computation of retention prices and to suggest measures for reducing fertilizer prices without straining the exchequer. The JPC submitted its report on 20th August 1992. (Mistary 2022).
- 1992: Fearing imbalanced fertilization of the soil and unaffordability by farmers due to increases in phosphatic and potassic fertilizer prices, the Government of India announced an ad-hoc Concession Scheme for phosphatic and potassic fertilizers from Rabi 1992 to cushion the price hike and encourage balanced fertilizer consumption. (Mistary 2022).
- 1997-98: During 1997-98, the Department of Agriculture & Cooperation also started indicating an all-India uniform Maximum Retail Price (MRP) for DAP, NPK and MOP.
- 2003: The Retention Price Scheme (RPS) was formally discontinued and replaced by the New Pricing Scheme (NPS), which aimed to make urea manufacturing units internationally competitive while bringing greater transparency and simplification to the pricing mechanism.
- 1 April 2010: The Nutrient Based Subsidy (NBS) Policy was introduced for Phosphatic and Potassic (P&K) fertilizers, under which subsidy began to be calculated on the basis of nutrient content (Nitrogen, Phosphorus, Potassium and Sulphur) rather than the fertilizer product as a whole and manufacturers were given the flexibility to fix a reasonable Maximum Retail Price. (FAI, Fertiliser Policy – 1944 to 2024).
- 2018 onwards: Direct Benefit Transfer (DBT) was implemented for fertilizer subsidy disbursement, under which subsidy is released to manufacturers only after the actual sale of fertilizer to farmers is recorded through Point of Sale (POS) machines at the retailer level, aimed at plugging leakages and improving targeting. (FAI, Fertiliser Policy – 1944 to 2024).

Types of Fertilizer Subsidy in India

1. Product-Based Subsidy / Retention Price Scheme (1977–2003)

- The Product-Based Subsidy, operationalized through the Retention Price Scheme (RPS), was introduced by the Government of India in November 1977 on the recommendation of the Marathe Committee and remained in force until 31 March 2003.



- Under this scheme, a unit-specific retention price was determined for each manufacturing plant on a cost-plus basis, taking into account the capital-related charges, conversion cost, variable cost and selling expenses incurred by the unit, while guaranteeing a 12 per cent post-tax return on net worth. The subsidy payable to the manufacturer was computed as

the difference between the retention price so fixed and the statutorily notified retail selling price of the fertilizer.

- A distinguishing feature of this scheme was that the subsidy was extended to the fertilizer product in its entirety, without differentiation on the basis of its constituent nutrient content. Consequently, the scheme covered nitrogenous, phosphatic and complex fertilizers uniformly during its period of operation. However, the cost-plus nature of the RPS provided little incentive for manufacturing efficiency, as units with higher production costs were, in effect, compensated with correspondingly higher subsidies. This structural weakness, coupled with the consequent rise in fiscal burden, ultimately necessitated policy reform, leading to the discontinuation of the RPS in 2003.

2. Urea Subsidy (Current Product-Based Mechanism)

- Notwithstanding the reforms initiated in 2003 and 2010, urea continues to be governed under a product-based subsidy mechanism, distinct from the nutrient-linked approach subsequently adopted for phosphatic and potassic fertilizers.
- Under the prevailing arrangement, urea is made available to farmers at a statutorily fixed price of 266.50 per 45 kg bag and the Government of India reimburses the manufacturer or importer the difference between the actual cost of production or import and this notified farmer price.
- This mechanism is administered under the New Urea Policy, which is periodically revised with the objective of enhancing energy efficiency and incentivizing higher domestic production.
- Owing to the artificially suppressed retail price maintained under this scheme, urea continues to account for the largest proportion of the total fertilizer subsidy outlay in India. Furthermore, the disproportionate affordability of urea relative to phosphatic and potassic fertilizers has been widely identified in the literature as a contributing factor to the skewed nitrogen-phosphorus-potassium (N:P:K) consumption ratio observed across Indian agriculture.



3. Nutrient Based Subsidy (NBS) Scheme

- The Government of India has implemented the nutrient-based fertilizer subsidy scheme in India since April 1, 2010. The policy covers 22 deregulated fertilizer grades, including DAP, MAP, TSP, DAP Lite, MOP, SSP, Ammonium Sulphate and 15 other complex fertilizer grades. Farmers receive these fertilizers at subsidized rates, determined by the nutrients (N, P, K and S) they contain.
- According to the Fertilizer Control Order, additional subsidies are provided for fertilizers enriched with secondary and micronutrients like boron and zinc. The subsidies offered to enterprises are determined on an annual basis, taking into account the nutritional content of the fertilizers.

Nutrient-Based Subsidy (NBS) Rates per Kilogram of Nutrient, 2023–24 to 2025–26

Nutrients	Kharif 2022 (Rs/Kg)	Rabi 2022–23 (Rs/Kg)	Kharif 2023 (Rs/Kg)	Rabi 2023–24 (Rs/Kg)	Kharif 2024 (Rs/Kg)	Rabi 2024–25 (Rs/Kg)	Kharif 2025 (Rs/Kg)	Rabi 2025–26 (Rs/Kg)
N (Nitrogen)	91.96	99.27	76.49	47.02	47.02	43.02	43.02	43.02
P (Phosphate)	72.74	49.94	41.03	20.82	28.72	30.80	43.60	47.96
K (Potash)	25.31	25.70	15.91	2.38	2.38	2.38	2.38	2.38
S (Sulphur)	6.94	2.84	2.80	1.89	1.89	1.76	2.61	2.87

Source: Department of Fertilizers, Ministry of Chemicals & Fertilizers, Government of India

- An additional subsidy is also provided for subsidized P&K fertilizers covered under NBS Scheme fortified with Boron @Rs.300/MT and Zinc @Rs. 500/MT.



Objective of the Nutrient Based Subsidy (NBS) Scheme

- **Affordable Availability of Nutrients:** To ensure the availability of essential plant nutrients nitrogen, phosphorus, potassium and sulphur to farmers at reasonable and affordable prices.
- **Promotion of Balanced Fertilization:** To encourage balanced soil fertilization by linking subsidy to actual nutrient content, thereby correcting the historical overuse of nitrogenous fertilizers (particularly urea) relative to phosphorus and potassium.
- **Improved Nutrient Use Efficiency:** To improve the efficiency with which nutrients are utilized by crops, reducing wastage and enhancing agricultural productivity.
- **Increased Agricultural Productivity and Farmer Returns:** By promoting balanced soil fertilization, the scheme aims to increase agricultural productivity and, consequently, improve the economic returns received by farmers.
- **Assured Supply of P&K Fertilizers:** To ensure that farmers have access to an adequate and sufficient supply of phosphatic and potassic fertilizers at statutorily fixed rates, supporting overall agricultural growth.
- **Reduction of Subsidy Burden on the Government:** To reduce the fiscal burden of fertilizer subsidy on the government exchequer by allowing manufacturers greater pricing flexibility, rather than relying entirely on a government-fixed retention price.
- **Encouragement of Domestic Fertilizer Industry:** To support and encourage the growth of the domestic fertilizer manufacturing sector by providing a more market-linked and predictable subsidy mechanism.

Provisions of the Nutrient Based Subsidy (NBS) Scheme

- Farmers cultivating notified crops in notified areas are eligible to benefit from the scheme.
- Subsidy rates are determined by the government based on the nutrient content of fertilizers and are adjusted periodically according to changing market conditions.
- The subsidy amount is paid to fertilizer manufacturing units, which then sell the fertilizers to farmers at a reduced price.
- The government ensures that fertilizers sold under the scheme meet the quality standards specified by the Bureau of Indian Standards (BIS).
- The scheme's implementation is monitored by the government to ensure that the intended benefits reach the actual beneficiaries.
- Information about the scheme is disseminated to farmers through multiple channels, including print and electronic media, agricultural extension officers and mobile applications.
- The government conducts awareness campaigns to educate farmers on the importance of balanced fertilizer use, soil health management and crop diversification.

Features of the Nutrient Based Subsidy (NBS) Scheme

- Administrative responsibility for the scheme rests with the Department of Fertilizers, functioning under the Ministry of Chemicals and Fertilizers.
- The scheme's continuation has periodically required Cabinet-level approval for instance, the Cabinet Committee on Economic Affairs cleared its extension for the 2019-20 fiscal year based on a proposal from the Department of Fertilizers.
- By keeping the NBS framework running, the government aims to guarantee farmers a steady and adequate supply of phosphatic and potassic (P&K) fertilizers at government-regulated rates.
- The scheme's structure remained unchanged in the Union Budget of 2021, with no major revisions introduced that year.
- Urea stands apart as the only fertilizer in India still under direct price control, sold nationwide at a single, legally fixed retail price.
- Unlike urea, P&K fertilizers under NBS give manufacturers, marketers and importers the autonomy to set their own reasonable Maximum Retail Prices.
- This MRP is not arbitrary it is influenced by a combination of factors such as:
- Prevailing domestic and global prices of P&K fertilizers
- Stock/inventory levels available within the country
- Currency exchange rate fluctuations, given India's reliance on imports for potash and a share of phosphatic raw materials

Importance of the Nutrient Based Subsidy (NBS) Scheme

- Promotes balanced soil nutrition by linking subsidy to actual nutrient content, encouraging a well-proportioned mix of nutrients and supporting better crop output over time.
- Helps contain government subsidy expenditure by tying payouts to nutrient quantity rather than the product as a whole, making the overall subsidy bill more manageable.
- Minimizes wastage and environmental harm by guiding fertilizer application closer to actual crop nutrient demand, reducing excess use and its ecological impact.
- Introduces market-driven pricing and competition by allowing manufacturers to set their own reasonable retail prices, pushing companies toward better product quality and service.
- Supports long-term agricultural sustainability by maintaining soil productivity across cropping seasons while reducing the environmental footprint of fertilizer overuse.
- Simplifies and speeds up subsidy disbursal by paying manufacturers directly rather than computing costs unit-by-unit, reducing bureaucratic delays.
- Enables development of crop- and region-specific fertilizers, as the flexibility under NBS encourages customized nutrient blends suited to particular crops or local soil conditions.

Issues of the Nutrient Based Subsidy (NBS) Scheme

- Cross-border leakage: the price gap between India and neighboring countries leads to smuggling of subsidized urea into Bangladesh and Nepal, draining public subsidy funds.
- Incomplete reform: urea remains outside the NBS framework and tightly price-controlled, while phosphatic and potassic fertilizers were shifted to market-linked pricing, creating an uneven system.
- Growing price gap: since 2010, NBS-covered fertilizer prices have risen 2.5 to 4 times, while urea prices have increased by only about 11 percent.
- Deepening nutrient imbalance: this price disparity pushes farmers toward heavier urea use relative to phosphorus and potassium, worsening the N:P:K imbalance.
- Dual strain on economy and soil: as India's second-largest subsidy after food, this unresolved distortion strains both public finances and long-term soil health.

Economic Burden of Fertilizer Subsidy in India

The fertilizer subsidy expenditure in India exhibited a declining trend during the initial years, followed by an increase in 2025–26. The total fertilizer subsidy declined from 2,51,339.36 crore in 2022–23 to 1,88,291.62 crore in 2023–24 and further to 1,70,682.99 crore in 2024–25. This decline was accompanied by reductions in both NBS and urea subsidy expenditure. However, in 2025–26 (RE), the total fertilizer subsidy increased to 1,86,475.40 crore, mainly due to an increase in both NBS and urea subsidy allocations. Overall, the substantial level of fertilizer subsidy expenditure indicates the continued fiscal commitment of the Government of India to maintaining fertilizer affordability for farmers, while also representing a significant financial burden on public expenditure.

Financial Year	NBS Subsidy (crore)	Urea Subsidy (crore)	Total Fertilizer Subsidy (crore)	Status
2022–23	86,122.23	1,65,217.13	2,51,339.36	Actual
2023–24	65,199.58	1,23,092.04	1,88,291.62	Actual
2024–25	52,238.92	1,17,878.95	1,70,682.99	Actual
2025–26	60,000.00	1,26,475.40	1,86,475.40	Revised Estimate

Source: *Expenditure Profile 2023-24 to 2026–27, Ministry of Finance, Government of India.*

Conclusion

Fertilizer subsidy policy in India has progressively evolved from the cost-plus Product-Based Subsidy / Retention Price Scheme (1977–2003) to the Nutrient Based Subsidy (NBS) system introduced in 2010, reflecting efforts to balance farmer affordability, agricultural productivity and fiscal sustainability. Despite this progress, reform remains incomplete, as urea continues under rigid price control outside the NBS framework, creating a widening price disparity with NBS-covered fertilizers. This gap has encouraged disproportionate nitrogen use, worsened the N:P:K nutrient imbalance and fostered cross-border leakage of subsidized urea to neighbouring countries. On the fiscal side, total subsidy expenditure declined from 2,51,339.36 crore in 2022–23 to 1,70,682.99 crore in 2024–25, before rising to 1,86,475.40 crore (RE) in 2025–26. Addressing these challenges requires bringing urea under a nutrient-based or market-linked pricing mechanism, strengthening Direct Benefit Transfer implementation to curb leakages and periodically recalibrating subsidy rates in line with global input costs and domestic agronomic needs.

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