



“Amrit Kaal: Empowering India’s Farmers Through Strategic Fertilizer Policy”

August 3, 2025

Key Takeaways

- **Six new urea plants** were commissioned in the last **six years**, adding **76.2 LMT** production capacity.
- India remains the **second-largest consumer** and **third-largest producer** of Fertilizers globally.
- India recorded its **highest-ever domestic urea production** in **2023–24**, crossing **314 lakh metric tonnes**.
- **New international deals** with **Saudi Arabia, Nepal, Bhutan, and Sri Lanka** aim to secure long-term Fertilizer supplies.

Introduction

Fertilizers play a crucial role in enhancing agricultural productivity. Along with quality seeds and reliable irrigation, they are one of the key factors driving higher crop yields. The use of fertilizers has grown steadily over the years, particularly after the Green Revolution. Their impact has been significant in helping India move closer to self-reliance in food production.

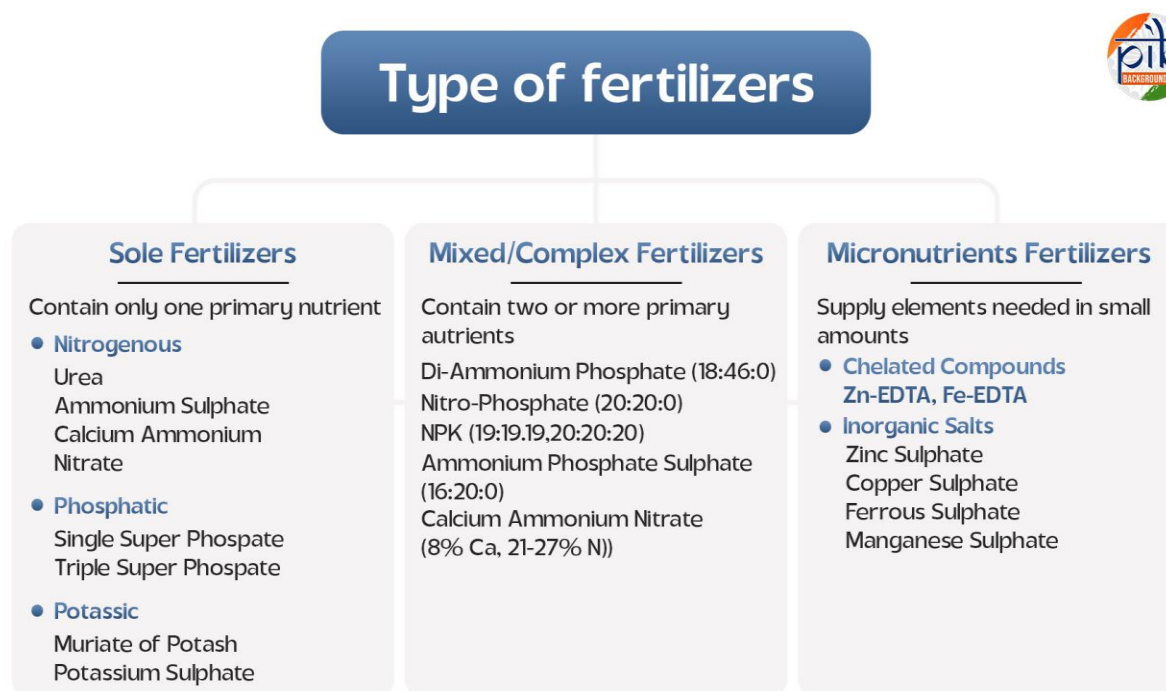
According to the **Economic Survey 2024–25**, agriculture and allied sectors contribute nearly **16% to India’s GDP** and supports over **46% of the population**. This makes agriculture a core pillar of the country’s economy, supporting not only food production but also employment and growth in related sectors.

For the financial year **2024–25**, the **Budget Estimate** for the **Department of Fertilizers** was revised to **₹1,91,836.29 crore** from **₹1,68,130.81 crore** through Supplementary Demands for Grants passed by Parliament. The allocation reflects the government’s strong support for the sector, taking into account expected fertilizer use, natural gas prices, and global fertilizer market trends. Today, **India stands as the second-largest user and the third-largest producer of fertilizers globally**. Studies have shown a clear link between increased fertilizer use and better crop yields. When fertilizer consumption rises, the productivity of major crops also improves. This underlines how important fertilizers are for farming success in India.

What are Fertilizers?

Fertilizers are concentrated plant nutrients made from inorganic chemicals. They are used to supply essential elements that plants need to grow well. Unlike organic manure, Fertilizers contain nutrients in higher amounts and are applied in smaller quantities.

Fertilizers are ready to use and are available in different forms. However, some of them may wash away with irrigation or rainfall. This means they can become unavailable to the plants before being absorbed. Depending on their composition, Fertilizers are classified as **sole Fertilizers**, **mixed Fertilizers**, or those that contain **micronutrients**.



Source: NCERT

Application of Fertilizers

The way Fertilizers are applied can affect how well plants absorb nutrients. Proper timing and method ensure better crop response and reduce losses from water runoff or chemical reactions in the soil. Fertilizers can be applied in **solid** or **liquid** forms depending on the crop, soil condition, and method of irrigation.

Timing of Application:

Chemical Fertilizers are applied just before sowing or soon after. The exact quantity and frequency depend on the type of crop, the fertility of the soil, and the season.

Application of fertilizers



Broadcasting

- Spreading fertilizer over soil surface
- Before or after planting

Basal Application

- Added at the time of planting
- Placed in root zone

Placement Techniques

- Single Band Placement
- Double Band Placement
- Deep Placement
- Ring Placement

Application of Liquid Form

Foliar Application

- Sprayed directly on leaves
- Dissolved nutrients applied
- Mainly for micronutrients or support

Fertigation

- Applied through irrigation water
- Suitable for drip irrigation system

Source: NCERT

Advantages of Fertilizers

- Fertilizers are easily available in the market
- Specific nutrients can be applied as needed
- Packaged products are easy to carry and store
- Application can be controlled and measured
- Different concentrations and formulations are available

Growth of Fertilizer Industry

Over the last decade, India's Fertilizer industry has seen steady growth. The total Fertilizer production has increased from **385.39 Lakh Metric Tonnes (LMT)** in **2014–15** to **503.35LMT** in **2023–24**. This progress reflects the impact of focused government reforms and investments in the sector.

Highest-Ever Domestic Urea Production

In the year **2023–24**, India recorded its **highest-ever domestic production of urea**, exceeding **314 lakh metric tonnes (LMT)**. This growth reflects the strong emphasis placed by the government on expanding the Fertilizer production base and reducing dependency on imports.

Over the past six years, **six new urea plants** have become operational across the country.

Together, these units have added **76.2 lakh metric tonnes** to India's domestic urea production capacity.

Sector-Wise Contribution

During **2023–24**:

- The **public sector** contributed about **17.43%** to total Fertilizer production.
- The **cooperative sector** accounted for **24.81%**.
- The **private sector** contributed the largest share at **57.77%**.

Fertilizer Consumption and Import Dependency

India's total annual consumption of Fertilizer in **2023–24** was around **601 LMT**. **503 LMT** was produced domestically in India while **177 LMT** came through **imports**.

Self-Reliance and Import Gaps

India has achieved near self-sufficiency in key Fertilizers:

- Around **87% of urea** consumption is **domestically** met.
- **90% of NPK Fertilizers** are also produced **within the country**.
- However, for **DAP**, only about **40%** comes from **local production**.
- In the case of **Muriate of Potash (MOP)**, **100%** is still imported.

Government's Initiatives in the Fertilizer Sector

a. Fertilizer Subsidy and Budgetary Support

For **2024–25**, the **Department of Fertilizers** received a **final budget of ₹1,91,836 crore**, a notable rise from the **₹1,68,131 crore** originally allocated. This increase was made possible through supplementary demands approved by Parliament.

Under the **Nutrient Based Subsidy scheme**, the allocation was raised from ₹45,000 crore in Budget Estimate (BE) 2024-25 to ₹54,310 crore, ensuring sustained support for **phosphatic and potassic** Fertilizers.

Nutrient Based Subsidy scheme

The Government introduced the **Nutrient Based Subsidy (NBS)** scheme on **1 April 2010** for **phosphatic and potassic Fertilizers**. Under this scheme, a fixed subsidy is provided for subsidised P and K Fertilizers, including di-ammonium phosphate, based on their nutrient content. The subsidy rates are decided on an **annual or bi-annual** basis. The P and K sector has been decontrolled, which allows Fertilizer companies to set the maximum retail price at reasonable levels. These prices are monitored by the Government, while the companies produce or import Fertilizers in line with market demand.

On **28 March 2025**, the **Union Cabinet** approved revised rates for the **Nutrient Based Subsidy scheme**. These subsidies apply to **phosphatic and potassic (P&K) Fertilizers**, including **NPKS** grades. The new rates are in effect for the **2025 Kharif season**, which runs from **1 April to 30 September 2025**. The total subsidy outlay for this season is **₹37,216.15 crore**. This amount is roughly **₹13,000 crore** more than what was provided during the previous Rabi season.

Urea is sold to farmers at a fixed price of **₹242** for a **45 kg** bag, a rate that has remained unchanged since March 2018. The government covers the cost difference via subsidy to the manufacturers.

Due to global market pressures, a one-time special subsidy of **₹3,500 per tonne** was extended for **DAP (diammonium phosphate)** from **April 2024 to March 2025**. This measure supports farmers by ensuring DAP remains affordable.

b. One Nation One Fertilizer (ONOF)

The **One Nation One Fertilizer** scheme was introduced to bring uniformity in branding and ensure transparency in the Fertilizer sector. It focuses on using a single brand name called '**Bharat**' for all subsidised Fertilizers across the country.

Under this scheme, whether it is **urea**, **DAP (Di-Ammonium Phosphate)**, **MOP (Muriate of Potassium)**, or **NPK**, all nutrient-based Fertilizers are sold under the same brand label. The packaging clearly displays the name '**Bharat Urea**', '**Bharat DAP**', or '**Bharat NPK**' along with the name of the Fertilizer company in a smaller font.

The idea is to reduce confusion among farmers. In earlier years, the same Fertilizer was sold under multiple brand names, which made it difficult for buyers to judge quality. This new branding approach ensures that farmers across states receive the same quality product with the assurance of government support.

c. Revival and New Investment in Fertilizer Plants (as of April 2025)

The revival and investment status of key Fertilizer plants under the **New Investment Policy (NIP) 2012**:

Plant Name	Location	Type	Status	Annual Capacity	Remarks
Ramagundam (RFCL)	Telangana	JVC (PSUs)	Reopened and operational	12.7 LMT (Lakh Metric Tonne)	Joint venture (JV) under NIP-2012
Gorakhpur (HURL)	Uttar Pradesh	JVC (PSUs)	Operational with IFL support	12.7 LMT	IFL of ₹350.55 crore sanctioned
Sindri (HURL)	Jharkhand	JVC (PSUs)	Operational with IFL support	12.7 LMT	IFL of ₹261.04 crore sanctioned
Barauni (HURL)	Bihar	JVC (PSUs)	Operational with IFL support	12.7 LMT	IFL of ₹283.21 crore sanctioned
Panagarh (Matix)	West Bengal	Private	Commissioned under NIP-2012	12.7 LMT	Set up by private company (Matix)
Gadepan III (CFCL)	Rajasthan	Private	Operational using latest technology	12.7 LMT	Run by Chambal Fertilizers (CFCL)
Talcher (TFL)	Odisha	JVC (PSUs)	Greenfield project under construction via coal gasification route	12.7 LMT	Exclusive policy approved for the revival, project under execution
Namrup-IV (BVFCL)	Assam	PSU-led JV	Cabinet approved on 19 March 2025 ; ₹10,601.40 crore investment sanctioned	12.7 LMT (Minimum)	Located within Brahmaputra Valley Fertilizer Corporation Limited (BVFCL) premises; to boost eastern region capacity

Summary

- **Total Added Capacity:** 76.2 Lakh Metric Tonnes per Annum (LMT) added through the above projects.
- **Funding:** ₹894.80 crore allocated as Interest Free Loan (IFL) for Gorakhpur, Barauni, and Sindri units.
- **Namrup-IV:** Latest project approved in **March 2025**, fully funded through a joint venture under NIP (New Investment Policy) 2012.

d. Viksit Bharat Sankalp Yatra

The **Viksit Bharat Sankalp Yatra (VBSY)**, launched on **15 November 2023** by the **Prime Minister Shri Narendra Modi**, promoted **drone use** in agriculture. The initiative focused on showing farmers how drones can spray **nano and water-soluble Fertilizers** effectively across various crops.

e. Namo Drone Didi Programme

- Launched by the **Prime Minister Shri Narendra Modi** during the **Viksit Bharat Sankalp Yatra**.

- Aims to provide **drones** to **15,000** women from **Self-Help Groups (SHGs)** between **2023–24** and **2025–26**.
- Promotes the use of drones in **agriculture**, particularly for spraying **nano Fertilizers** and **pesticides**.
- Enhances **efficiency**, increases **crop yield**, and helps reduce **operational costs** for farmers.
- These Drone Didis are linked to **PM KisanSamridhiKendras (PMKSKs)** for service delivery.

Promotion of Sustainable and Balanced Use of Fertilizers

Findings from the All India Coordinated Research Project on Long Term Fertiliser Experiments over five decades have shown that the continuous use of nitrogen-based fertilisers alone **harms soil health and crop productivity**. Such practice has led to **deficiencies of other major and micronutrients**. Even when recommended doses of NPK and more are applied, shortages of secondary and micronutrients eventually limit yields. These deficiencies can slow plant growth and trigger physiological disorders. Excessive use of nitrogenous fertilisers also increases the risk of nitrate contamination in groundwater, particularly in light soils, where levels may rise above the safe limit of 10 mg NO₃-N /L per litre. This poses serious risks to human and animal health when the water is consumed.

Recognising these dangers, the government has shifted focus to sustainable agriculture and following initiatives are being implemented.

1. Nano Fertilizer Initiatives

What Are Nano Fertilizers?

Nano Fertilizers are plant nutrients that are packed within very small particles called nanomaterials. This coating allows the nutrients to be released slowly and steadily into the soil. The controlled release ensures that plants absorb them more effectively and with less wastage.

Key Initiatives to Promote Nano Fertilizers

- The Department of Fertilizers is actively promoting nano Fertilizers through awareness campaigns like workshops, webinars, street plays, regional films, and field demonstrations.
- **Nano urea and nano DAP** are now available at **Pradhan MantriKisanSamridhiKendras (PMKSKs)** across the country.
- Nano urea is integrated into the department's monthly supply planning to ensure availability.
- The **Indian Institute of Soil Science** led a nationwide campaign to promote balanced Fertilizer use, including nano variants.
- A **"Maha Abhiyan"** for **nano DAP** is being conducted in all 15 agro-climatic zones, with field demos and farmer interactions.
- A **pilot project for nano urea** is running in **100 districts** to assess effectiveness and adoption.

- **Drone spraying and battery-operated sprayers** are being used for easy and cost-effective application, supported by trained village-level entrepreneurs.
- Fertilizer companies are encouraged to scale up **nano Fertilizer production**, although there is **no subsidy or PLI (Production Linked Incentive) scheme** currently.

These steps reflect the government's commitment to sustainable agriculture and precision farming through next-generation Fertilizer technology.

2. Neem Coated Urea (NCU)

Plants need nitrogen the most among all nutrients. Urea is the main source of nitrogen for crops. However, normal urea has low efficiency, with nearly half of the nitrogen getting lost through evaporation and leaching. This loss can be reduced by using better methods and neem-coated urea. Neem coating helps nitrogen stay in the soil longer, making it more useful for the plants.

What is Neem Coated Urea?

Neem-coated urea is regular urea Fertilizer coated with **neem oil**. This coating slows down the release of nitrogen into the soil. As a result, the plant receives nitrogen gradually, based on its need.

This **slow release** improves crop growth and reduces nitrogen loss. It also helps **prevent overuse of Fertilizer**. Farmers need about ten percent less neem-coated urea than normal urea to get the same results.

Overall, it makes farming more efficient and supports better soil health.

Benefits of Neem-Coated Urea



Source: Department of fertilizer

3. PM-PRANAM Scheme

The **PM-PRANAM Scheme (Prime Minister Programme for Restoration, Awareness, Nourishment and Amelioration of Mother Earth)** is a government initiative aimed at **reducing the use of chemical Fertilizers** and encouraging **balanced nutrient application**. It promotes the use of eco-friendly alternatives such as **organic manure, bioFertilizers, and compost**. The scheme offers incentives to states that successfully reduce their chemical Fertilizer consumption compared to past usage levels.

4. BioFertilizer and Organic Nutrient Promotion

The government is actively promoting **bioFertilizers and organic nutrients** to encourage sustainable agriculture. Approved strains like **Rhizobium, Azotobacter, and PSB** are being made more accessible. **ICAR institutions** are leading research and extension efforts. These measures aim to reduce reliance on chemical Fertilizers and improve soil health.

5. Soil Health Card Scheme

A **Soil Health Card** is a **printed report** given to farmers for each of their land holdings. It shows the condition of the soil by **testing 12 key parameters, namely Nitrogen, Phosphorus, Potassium, pH (Acidic or Basic), EC (Electrical Conductivity), Organic Carbon, Sulphur, Zinc, Boron, Iron, Manganese and Copper**. The scheme helps farmers understand what their soil needs through regular testing and provides guidance every **2 years**.

Technological and Digital Interventions

The government has introduced key technological tools to improve Fertilizer delivery and monitoring. These efforts aim to make the supply chain more efficient and farmer-centric.

1. iFMS (Integrated Fertilizer Management System)

This system **tracks the entire Fertilizer supply**—from production to retailer. It helps the Department of Fertilizers monitor movement in real time and manage stock availability across states.

2. mFMS (Mobile Fertilizer Management System)

The **Mobile Fertilizer Management System (mFMS)** is a digital platform that improves Fertilizer distribution by offering online services such as **dealer registration, real-time stock tracking, and access to MIS (Management Information System) and DBT (Direct benefit Transfer) reports**. It helps farmers find nearby dealers and check availability.

International Fertilizer Deals & Supply Agreements

India continues to deepen its global cooperation in the Fertilizer sector through long-term agreements and strategic investments with neighbouring countries. Key developments include:

a. Saudi Arabia: Securing Long-Term DAP Supply

Union Minister **Shri J.P. Nadda** visited **Riyadh and Dammam** from 11 to 13 July 2025 to strengthen cooperation in the Fertilizer sector. During the visit, long-term agreements were signed between **Saudi Arabia's Maaden** and **Indian companies IPL, KRIBHCO, and CIL**. These agreements ensure the supply

of **3.1 million metric tonnes** of **Diammonium Phosphate (DAP)** annually for **five years** starting from the financial year **2025–26**, with an option for further extension. DAP imports from Saudi Arabia have already seen a **17% increase**, rising from **1.6 million tonnes** in **2023–24** to **1.9 million tonnes** in **2024–25**. Both sides also discussed expanding their cooperation to include other key Fertilizers such as urea.

b. Fertilizer Support to Bhutan

The **Royal Government of Bhutan** has requested **India** to supply **5,000 metric tonnes** of Fertilizers annually for a period of five years. The requested Fertilizers include **Urea, Suphala(NPK), Single Super Phosphate (SSP), Muriate of Potash (MOP), and Borax**. Bhutan has sought to procure these Fertilizers at subsidised rates, similar to those provided to Indian farmers. To facilitate this, the Department of Fertilizers has nominated the **Brahmaputra Valley Fertilizer Corporation Limited (BVFCL)** to manage the supply. BVFCL is currently in discussions with Bhutan's National Seed Centre to finalise the import arrangements.

c. Investment Proposal in Sri Lanka

FCI Aravali Gypsum and Minerals India Limited (FAGMIL) has proposed a joint venture with **Lanka Phosphate Limited** to set up a **Single Super Phosphate (SSP) plant** with a daily capacity of **800 tonnes**. Under the proposal, **FAGMIL** would hold a **90% stake** and invest approximately **USD 25 to 30 million** over the next three to four years. To facilitate the progress of this project, the Department of Fertilizers has reached out to the **Ministry of External Affairs (MEA)** to initiate engagement with the **Sri Lankan** authorities.

d. Fertilizer Supply to Nepal

A **Memorandum of Understanding (MoU)** was signed on **28 February 2022** between the **Governments of India and Nepal**. The agreement outlines the **supply of Urea and Diammonium Phosphate (DAP)** from India to support Nepal's agricultural requirements.

Conclusion

India's Fertilizer strategy during the Amrit Kaal focuses on balanced use of nutrients, sustainable practices, affordability, and innovation. The government has introduced advanced options such as nano and neem-based Fertilizers while also reviving major production plants across the country. Smart monitoring systems are being adopted to improve efficiency and transparency. These efforts are designed to empower farmers, protect the environment, and reduce dependency on imports. The aim is to ensure that Indian agriculture remains strong and self-reliant while contributing to food security and economic progress.

References

India Budget

<https://www.indiabudget.gov.in/economicsurvey/doc/echapter.pdf>

Ministry of Chemicals and Fertilizers

https://www.fert.nic.in/sites/default/files/2020-082025-04/Annual_Report_Fertilizer_English.pdf

Ncert

<https://ncert.nic.in/vocational/pdf/kefc105.pdf>

IFFCO

<https://www.iffco.in/en/nano-Fertilizers>

Rajya Sabha Question

https://sansad.in/getFile/annex/267/AU3387_9X9HAs.pdf?source=pqars

Soil Health Card Portal

<https://www.india.gov.in/spotlight/soil-health-card#tab=tab-1>

India.Gov

<https://v2.india.gov.in/services/details/integrated-Fertilizer-management-system>

Agriculture Department-Uttar Pradesh

<https://upagripardarshi.gov.in/staticpages/Rabifertilizeruse.aspx>

PIB Press Release- Ministry of Chemical and Fertilizers

<https://www.pib.gov.in/PressReleaseDetailm.aspx?PRID=2116214>

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2116176>

<https://www.pib.gov.in/PressReleaseDetailm.aspx?PRID=1886054>

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2100721>

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2144426>

PIB Press Release- Ministry of Agriculture and Farmers Welfare

<https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2080192>

<https://www.pib.gov.in/newsite/PrintRelease.aspx?relid=104064>

<https://www.pib.gov.in/Pressreleaseshare.aspx?PRID=1696465>

PIB Press Release- Others

<https://www.pib.gov.in/PressNoteDetails.aspx?NotelId=152048&ModuleId=3>

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