

## Achieving self-reliance in fertilizer production

### Why in news?

With the crisis continuing in Ukraine and Gaza, experts and policymakers are concerned about further increase in the prices of the components used for making petroleum-based chemical fertilizers.

### What are the challenges in fertilizer imports in India?

- **Geopolitical tension** - The rising conflicts such as in Russia - Ukraine and Gaza have disrupted fertilizer imports.
- **Price volatility** - Fluctuation in crude oil prices, could increase fertilizer production costs.
- **Rise in import bill** - When fertilizer cost increases it further burdens exchequer on budgetary allocations.

*The Centre allocated Rs 1.79 lakh crore as fertilizer subsidy under the Budget estimates for 2023-24.*

- **Supply chain vulnerabilities** - Delays in shipments due to geopolitical tensions directly affect India's agricultural sector.

### Status of fertilizer production in India

- **India's fertilizer production** - In FY24 India produced **435.95LMT** of fertilizer which led to decline in fertilizer import.
- The Indian fertilizer industry is expected to grow at CAGR of 4.2% from 2024 to 2032.
- The country imports 20-25% of its overall fertilizer needs.
- **Major import partners** - India's fertilizer imports were mostly from countries such as China, Russia, Saudi Arabia, UAE, Oman, Iran and Egypt.
- **Declining imports** - Fertilizer imports dropped by nearly 10% in 2024.
  - Urea imports declined by 7%
  - DAP by 22%
  - NPKs by 21%

#### Indigenous fertilizer production (435.95LMT)

- Urea - 250.72 LMT
- NPK - 89.67 LMT
- Diammonium Phosphate (DAP) - 42.22 LMT
- Single Super Phosphate (SSP) - 53.34 LMT.

#### Imported fertilizer (143.72LMT)

- Urea - 20%
- DAP - 50-60%
- **Muriate of Potash (MOP) - 100%**

**Total fertilizer  
consumption  
(579.67LMT)**

- Urea - 341.73 LMT
- DAP - 92.64 LMT
- MOP - 23.93 LMT
- NPK - 121.37 LMT

### **What are the measures taken to achieve self-sufficiency in fertilizers?**

- **Upgrading fertilizer plants** - Plants in regions like Gorakhpur and Ramagundam have been revitalized with advanced, energy-efficient technology.
- **Self-sufficiency in urea** - The Union government has set 2025-26 as the deadline by which the country will end all urea imports.

*Urea accounts for about 70% of the overall fertiliser subsidy bill.*

- **Nano urea production** - Six Nano Urea plants and four Nano DAP plants have been set up in the country

*The Indian Farmers Fertiliser Cooperative (IFFCO) has sold about 3.3 million tonnes of locally produced nano urea worth about ₹7 crore between August 2021 to February 2024.*

- **Organic farming** - Paramparagat Krishi Vikas Yojana (PKVY) promotes organic farming and offers Rs 50,000 per hectare for three years, with Rs 31,000 directly allocated to farmers for organic inputs.
- **Sustainable agriculture** - National Mission for Sustainable Agriculture (NMSA) implements strategies to make Indian agriculture more resilient to climate change.
- **Neem coated fertilizer** - 100% Neem coating of subsidized urea is mandated to enhance efficiency and prevent misuse.
- **One Nation, One Fertiliser** - Pradhan Mantri Bhartiya Jan Urvarak Pariyojana scheme aims to implement One Nation One Fertilizer by introducing Single Brand for Fertilizers and Logo.
- **Alternate fertilizers** - PM Promotion of Alternative Nutrients for Agriculture Management (PM PRANAM) promotes balanced and sustainable use of chemical fertilisers, adopting alternative options like organic, nano, and bio-fertilisers, and encouraging natural and organic farming.

### **What measures can be taken to achieve self-sufficiency in fertilizer production?**

- **Revival and modernization of plants** - Focus on reopening defunct plants and *modernizing existing ones* to increase production capacity.
- **Research and innovation** - Promote nano fertilizers to precise delivery of nutrients with increased efficiency and reduced wastage.
- **International collaborations** - Encourage collaboration of Indian companies with global fertilizer producers to integrate cutting-edge technology.
- **Policy reforms and incentives** - Increase public, co-operatives, private participation

in fertilizer production by providing various incentives, including subsidies, tax relief, and funding support.

- **Import diversification** - Diversify the import sources to mitigate risks associated with over-reliance on a single supplier.
- **Eco-friendly alternatives** - Promotes eco-friendly and organic fertilizers to reduce the environmental impact of chemical fertilizers.
- **Organic farming promotion** - Initiatives such as bio-waste and compost-based fertilizers aim to reduce dependency on chemical fertilizers, fostering sustainable agricultural practices and helping preserve soil health.
- **Promotion of bio-fertilizer** - It is an eco-friendly alternative to chemical fertilizers that can help India achieve self-sufficiency.

## References

1. [The Hindu | Challenges for India in Fertilizer Imports](#)
2. [Hindustan Times | Fertilizer Imports Fall On Higher Local Output](#)

