



PM PRANAM (Promotion of Alternate Nutrients for Agriculture Management Yojana)

For Prelims: PM PRANAM (Promotion of Alternate Nutrients for Agriculture Management Yojana), iFMS (Integrated Fertilizers Management System), Urea, DAP (Di-ammonium Phosphate), MOP (Muriate of potash), NPKS (Nitrogen, Phosphorus and Potassium), Neem Coating of Urea, New Urea Policy (NUP) 2015.

For Mains: Impacts of Subsidy on Fertilizers on Indian Economy.

Why in News?

To reduce the use of chemical fertilisers the Government is Planning to Launch the **PM PRANAM (Promotion of Alternate Nutrients for Agriculture Management Yojana)** Scheme.

What do we Know About PRANAM Scheme?

- **Objectives:**
 - To encourage the balanced use of fertilisers in conjunction with biofertilisers and organic fertilisers.
- **Aim:**
 - To bring down the subsidy burden on chemical fertilisers, which is estimated to reach Rs 2.25 lakh crore in 2022-23 — 39% higher than 2021 figure of Rs 1.62 lakh crore.
- **Features of the Proposed Scheme:**
 - The scheme will have no separate budget and will be financed through the “savings of existing fertiliser subsidy” under schemes run by the Department of Fertilizers.
 - 50% of subsidy savings will be passed on as a grant to the state that saves the money.
 - 70% of the grant provided under the scheme can be used for asset creation related to the **technological adoption of alternate fertilisers** and alternate fertiliser production units at the village, block and district levels.
 - The remaining 30% grant money can be used for **rewarding and encouraging farmers, panchayats, farmer producer organisations** and self-help groups that are **involved in the reduction of fertiliser use and awareness generation.**
 - The calculation of reducing chemical fertiliser use of urea in a year will be **compared to the average consumption of urea during the last three years.**
 - For this purpose, data available on a Fertilizer Ministry dashboard, **IFMS (Integrated Fertilizers Management System)** will be used.

What was the Need for this Scheme?

- **Subsidy Burden on Government:**
 - Farmers **buy fertilisers at Maximum Retail Prices (MRP) below their normal supply-and-demand-based market rates** or what it costs to produce/import them.
 - For example, the MRP of neem-coated urea is fixed by the government at Rs.

5,922.22 per tonne, whereas its average cost-plus price payable to domestic manufacturers and importers comes to around Rs. 17,000 and Rs. 23,000 per tonne, respectively.

- The **difference**, which varies according to plant-wise production cost and import price, is **footed by the Centre as a subsidy**, which goes to the companies.
- The **MRPs of non-urea fertilisers are decontrolled or fixed by the companies**. However, the **Centre pays a flat per-tonne subsidy on these nutrients** to ensure reasonable prices.
 - The per-tonne subsidy ranges from Rs. 10,231 to Rs. 24,000 for different types of fertilisers.
- The Centre pays subsidy on urea to fertiliser manufacturers on the basis of cost of **production** at each plant and the units are required to sell the fertiliser at the government-set Maximum Retail Price (MRP).

What is the Present Status of Fertilizer Usage in India?

- The expenditure on fertiliser subsidy was 1.62 lakh crore in 2020-21 and could cross Rs 2.25 lakh crore during 2022.
- The total requirement of four fertilisers — **Urea, DAP (Di-ammonium Phosphate), MOP (Muriate of potash), NPKS (Nitrogen, Phosphorus and Potassium)** — in the country **increased by 21%** to 640.27 lakh metric tonnes (LMT) in 2021-22 from 528.86 lakh metric tonnes in 2017-18.
 - **The maximum increase** — 25.44% — has been recorded in the **requirement of DAP**. It went up from 98.77 LMT in 2017-18 to 123.9 LMT in 2021-22.
 - **Urea, the most used chemical fertiliser in the country**, recorded an increase of 19.64 per cent — from 298 LMT in 2017-18 to 356.53 in 2021-22 — in the last five years.

What are the Other Related Initiatives taken by the government?

- **Direct Benefit Transfer:** The Centre introduced a Direct Benefit Transfer system **in fertilizers** with effect from October 2016 under which a **100% subsidy on various fertiliser grades is released to the fertiliser companies on the basis of actual sales** made by the retailers to the beneficiaries.
- **Incorporation of new Nutrients:** The government had incorporated new nutrients like **Nano urea** and **“bio-stimulants” in the Fertilizer Control Order-1985 (FCO)**.
- **Neem Coating of Urea:** The **Department of Fertilizers (DoF)** has made it mandatory for all the domestic producers to produce **100% urea as Neem Coated Urea (NCU)**.
 - The benefits of use of NCU are as under:-
 - Improvement in soil health.
 - Reduction in usage of plant protection chemicals.
 - Reduction in pest and disease attack.
 - An increase in yield of paddy, sugarcane, maize, soybean, Tur/Red Gram.
- **New Urea Policy (NUP) 2015**: Objectives of the policy are-
 - To maximize **indigenous urea production**.
 - To promote energy efficiency in the urea units.
 - To rationalize the subsidy burden on the Government of India.
- **Use of Space Technology in Fertilizer Sector:** DoF commissioned a three-year Pilot Study on **“Resource Mapping of Rock Phosphate using Reflectance Spectroscopy and Earth Observations Data”** by National Remote Sensing Centre under ISRO, in collaboration with Geological.

UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims

Q. Why does the Government of India promote the use of ‘Neem-coated Urea’ in agriculture? (2016)

- (a) Release of Neem oil in the soil increases nitrogen fixation by the soil microorganisms.
- (b) Neem coating slows down the rate of dissolution of urea in the soil.
- (c) Nitrous oxide, which is a greenhouse gas, is not at all released into atmosphere by crop fields.
- (d) It is a combination of a weedicide and a fertilizer for particular crops.

Ans: (b)

Exp:

- **Ordinary Urea:** It is a fertiliser used to provide Nitrogen to the soil, which is necessary for the development of plants. Only 30-40% of Nitrogen present in the urea is utilised by crops. The rest gets degraded. Ordinary urea gets converted to Ammonium Carbamate. Some of this gets converted to Ammonia Gas in a process called ammonia volatilisation, while the rest of the Ammonium Carbamate undergoes a chemical transformation and Nitrates are formed. Some of these are absorbed by the plants. The rest is either leached into the underground water or are denitrified to gaseous Nitrogen and Nitrous Oxide under anaerobic conditions (absence of Oxygen).
- **Neem Coated Urea: Neem has properties that check nitrogen loss at each stage.** It slows down the process of nitrate formation and hence excess nitrate is not available for denitrification. Thus, it helps in countering the degradation of soil and underground water and also any subsequent air pollution by slowing down the rate of dissolution of urea in the soil. **Therefore, option (b) is the correct answer.**

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