

GOVERNMENT OF INDIA
MINISTRY OF CHEMICALS AND FERTILIZERS
DEPARTMENT OF FERTILIZERS

LOK SABHA

UNSTARRED QUESTION NO. 828 TO BE ANSWERED ON: 07.02.2025

Promotion of Nano Urea and Nano DAP

828: SHRI VISHALDADA PRAKASHBAPU PATIL:

Will the Minister of **CHEMICALS AND FERTILIZERS** be pleased to state:

- (a) whether the Government is promoting nano urea and nano DAP as alternatives to conventional fertilizers;
- (b) if so, the details of the expected reduction in fertilizer subsidy through the adoption of Nano Urea and Nano DAP and the methodology used to calculate these projections;
- (c) whether farmers were coerced into purchasing Nano Urea products;
- (d) if so, the corrective measures taken by the Government regarding the same;
- (e) whether the Government has conducted/plans to conduct independent, long-term studies on the effectiveness of Nano Fertilizers before their large-scale promotion; and
- (f) whether there is any plan of the Government to review the approval for Nano Urea plus production and use in light of the concerns raised by agricultural experts and farmers' experiences?

ANSWER

THE MINISTER OF STATE IN THE MINISTRY OF CHEMICALS & FERTILIZERS
(SMT. ANUPRIYA PATEL)

(a): Yes,.

(b): Nano Fertilizers are still in the initial state of experimentation and the increase in sales and subsequent impact of Nano Fertilizers on conventional Urea depends on the level of adoption of Nano Fertilizers by the farmers. Therefore, the potential reduction in fertilizer subsidies through the adoption of Nano Urea and Nano DAP, cannot be accurately estimated at this stage.

(c) & (d): Department of Fertilizers is actively encouraging its fertilizer companies and state governments to promote the adoption of Nano Fertilizers among farmers.

(e) & (f): The Department of Agriculture & Farmers Welfare (DA&FW) has provisionally notified Nano Urea as Nano Nitrogen Fertilizers under the Fertilizer Control Order

(FCO), 1985, based on bio-efficacy trials conducted at multiple locations by Indian Council of Agricultural Research (ICAR) institutions and State Agricultural Universities (SAUs), along with bio-safety test results. These trials, conducted on crops such as paddy, wheat, mustard, maize, tomato, cabbage, cucumber, capsicum, and onion across different agro-climatic zones, demonstrated that two foliar sprays of Nano Urea, when applied as a top dressing along with the recommended basal dose of nitrogen, resulted in comparable yields to those obtained with a full recommended nitrogen dose. This led to a yield advantage of 3-8% and a urea saving of 25-50% in various crops.

Similarly, Government of India has also notified Nano DAP under the Fertilizer Control Order (FCO), 1985, based on the bio-efficacy trials and toxicology tests. Companies like M/s Coromandel International Limited (CIL), M/s Rashtriya Chemical and Fertilizers Limited (RCF), M/s Zuari Farm Hub Limited, and M/s Indian Farmers Fertiliser Cooperative Limited (IFFCO) have been granted permission to manufacture Nano DAP. Preliminary field trials conducted at selected ICAR institutes involved its use for seed treatment and two foliar applications. The study indicated that Nano DAP can be effectively used as a foliar spray instead of conventional Urea/DAP for top dressing (33% of the recommended dose) without significant yield penalty.

Moreover, an MoU was signed on 5th March, 2024 between National Productivity Council (NPC) of India and Department of Fertilizers to undertake the study of Nano Urea so that its efficacy, impact and potential to replace the conventional Urea can be ascertained. Further, ICAR is conducting a study to evaluate the impact of Nano Urea and DAP on crop growth, soil health, and nutrient uptake across various agro-ecological zones in India.
