

GOVERNMENT OF INDIA
MINISTRY OF CHEMICALS AND FERTILIZERS
DEPARTMENT OF FERTILIZERS

LOK SABHA

UNSTARRED QUESTION NO. 3326 TO BE ANSWERED ON: 07.08.2026

Adoption of Nano Fertilizers

3326. Shri Dharambir Singh:

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

- (a) whether the Government has formulated any policy to promote large-scale adoption of Nano Fertilizers for improving nutrient-use efficiency and reducing conventional fertilizer consumption, if so, the details thereof;
- (b) whether scientific field demonstrations and farmer awareness programmes are being conducted under the said programme, if so, the details thereof;
- (c) the measures taken to encourage domestic manufacturing and research relating to Nano Fertilizers; and
- (d) whether farmers of Bhiwani–Mahendragarh Parliamentary Constituency in Haryana are likely to benefit under the said programme, if so, the details thereof?

ANSWER

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

(a) to (c) In order to promote the use and large scale adoption of Nano Fertilizers among farmers across the country, the following measures have been undertaken by the Government:

- Use of Nano Fertilizers is promoted through different activities such as awareness camps, webinars, field demonstrations, Kisan Sammelans and films in regional languages etc.
- Nano Fertilizers, like Nano Urea and Nano DAP, are made available at Pradhan Mantri Kisan Samridhi Kendras (PMKSKs) by concerned companies.
- For ease in application and utilization of Nano fertilizers, like Nano Urea and Nano DAP, through foliar application, initiatives such as innovative spraying options like 'Kisan Drones' and distribution of battery operated sprayers at retail points are undertaken. For this purpose, pilot training and custom hiring spraying services through Village Level Entrepreneurs are actively promoted.

Measures undertaken by the State Governments:

- Government of Gujarat provides a 50% subsidy on Nano Fertilizers to farmers under a special support initiative to encourage adoption of these advanced fertilizers.

- Government of Rajasthan provides a subsidy of 50% on spraying cost for spraying Nano Fertilizers.
- Government of Uttarakhand has mandated the use of Nano fertilizers in demonstrations under central sponsored schemes (ATMA, NFSM, and Soil Health & Fertility) and state sponsored schemes (Chief Minister's State Development Scheme and the State Millet Policy).
- Government of Odisha is providing a financial assistance for the use of Nano Fertilizers under the following State Government schemes:

SI No	Scheme	Area (in Ha)	Nano fertilizer	Incentives (Rs /ha)
1	NFSNM(Food grain) 2026-27	4126	Nano Urea	500
		2093	Nano DAP	1000
2	Mission for Aatmanirbharta in Pulses 2026-27	15625	Nano DAP	1000
3	Mukhyamantri Maka Mission (State Plan) 2026-27	9000	Nano DAP	1000
		1500	Nano Urea	1000
		50	Nano Urea	500
4	Technology Mission on Cotton (State Plan) 2026-27	5000	Nano DAP	1200
5	IAP Pulse (State Plan)	7590	Nano DAP	1000

Measures undertaken by the Nano Fertilizer Manufacturers:

- Nano Fertilizer Manufacturers have undertaken extensive awareness and promotional activities to encourage the adoption of nano fertilizers across major agricultural states. These include farmer meetings, crop seminars, field demonstrations, field days, and institutional trials to educate farmers on product usage, nutrient efficiency, cost benefits, and crop performance.
- The Nano Fertilizer Manufacturers have also partnered with ICAR institutes, Krishi Vigyan Kendras (KVKs), State Agricultural Universities, and State Agriculture Departments to conduct research, field trials, and training programmes for extension workers, retailers, and other stakeholders to promote the correct use of Nano fertilizers.
- To further increase awareness, companies have used television campaigns, Kisan Melas, agricultural exhibitions, wall paintings, hoardings, dealer displays, mobile campaigns, printed literature, and digital platforms such as YouTube and Facebook. Special outreach programmes, including Kisan Goshthis, Viksit Bharat Sankalp Yatra activities, and village-level campaigns, have also been organized.
- Manufacturers such as IFFCO and Coromandel International Limited (CIL) have informed that farmer feedback has been collected through interactions and testimonials. According to the companies, farmers have generally reported positive experiences with nano fertilizers and have shown willingness to continue using them.

IFFCO has undertaken more than 120 'On Station (Main Experimental Station)' research trials of Nano Urea and more than 97 'research trials of Nano DAP in collaboration with Indian Council of Agricultural Research (ICAR) and State Agricultural Universities (SAUs) on major crops. Additionally, over 2.2 lakh Farmer Farmers Field Demonstrations of Nano fertilisers have also been conducted by covering major crops during Kharif & Rabi seasons across the country.

Research and Development (R&D) studies have been undertaken with funding support from the Department of Fertilizers and fertilizer companies as below:

- i. NPC has undertaken two studies in collaboration with the Department of Fertilizers to assess the performance and adoption of Nano Urea. The first study, under an MoU signed on 5 March 2024, evaluated the efficacy, utility and impact of Nano Urea in comparison to Conventional Urea across ten States. The second study, under an MoU signed on 14 November 2025, is evaluating the extent to which Nano Urea can replace Conventional Urea in the same ten States.
- ii. ICAR has undertaken two studies in collaboration with the Department of Fertilizers. The first study evaluates the impact of Nano Fertilizers on crop growth, soil health and nutrient uptake across diverse agro-ecological zones. The project involves several collaborating agricultural institutions across the country. Whereas, the second study evaluates the impact of Nano Urea on crop productivity, nitrogen use efficiency, crop yield and quality, nitrogen uptake, and its long-term effect on soil nitrogen balance and biological activity across diverse agro-ecological zones of India.

In addition to this, ICAR has also conducted a short-term multi-location evaluation across its institutes and Krishi Vigyan Kendras (KVKs) to assess the agronomic efficiency of nano urea and its potential to supplement conventional chemical fertilizers.

(d) Haryana Agriculture and Farmers Welfare Department has informed that the farmers of Bhiwani–Mahendergarh Parliamentary Constituency are adopting Nano Fertilizers. Since inception (February 2021) up to 31.07.2026, a total of 73,844 bottles (500 ml equivalent) of Nano Urea and 11,411 bottles (500 ml equivalent) of Nano DAP have been sold in Bhiwani district. During the same period, 70,608 bottles (500 ml equivalent) of Nano Urea and 13,332 bottles (500 ml equivalent) of Nano DAP have been sold in Mahendragarh district.
