

GOVERNMENT OF INDIA
MINISTRY OF CHEMICALS AND FERTILIZERS
DEPARTMENT OF FERTILIZERS

RAJYA SABHA

STARRED QUESTION NO. 243 TO BE ANSWERED ON: 11.08.2026

Adoption of Nano Urea and Nano DAP in Odisha

243 Shri Subhasish Khuntia:

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

- (a) whether Government has reviewed the adoption of Nano Urea and Nano DAP in Odisha, if so, the findings thereof;
- (b) the consumption of Nano Urea and Nano DAP during the last three years, district-wise;
- (c) whether any constraints have been identified in their adoption, if so, the details thereof; and
- (d) whether additional awareness and distribution measures are proposed, if so, the details thereof, if not, the reasons therefor?

ANSWER

THE MINISTER IN THE MINISTRY OF CHEMICALS & FERTILIZERS
(SHRI JAGAT PRAKASH NADDA)

(a) to (d) A statement is laid on the table of the House.

STATEMENT REFERRED TO RAJYA SABHA STARRED QUESTION NO. 243 FOR 11.08.2026 REGARDING “ADOPTION OF NANO UREA AND NANO DAP IN ODISHA” TABLED BY SHRI SHRI SUBHASISH KHUNTIA:

(a) to (c): To review the adoption of Nano Fertilizers, research and development (R&D) studies have been undertaken with funding support from the Department of Fertilizers and fertilizer companies, as detailed below:

- i. 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 including State of Odisha, where ICAR-CRRI, Cuttack is one of the participating centres.
- ii. 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, namely Madhya Pradesh, Bihar, Uttar Pradesh, Assam, Karnataka, Andhra Pradesh, Maharashtra, Gujarat, Rajasthan and Haryana. 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.

The Government of Odisha has reviewed the adoption of Nano Urea and Nano DAP in Odisha and the district level officials have been directed to make awareness and demonstration trial programme through IFFCO with support of Krishi Vigyan Kendra (KVK) and Odisha University of Agriculture and Technology (OUAT). Odisha's Department of Agriculture and Farmers' Empowerment has informed that since Nano Fertilizers are largely meant for foliar application, its efficiency is better in maximum canopy stage, in comparison to basal application. The district-wise consumption of Nano Urea and Nano DAP during the last three years, as furnished by Government of Odisha is enclosed at **Annexure A**.

(d): 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.

The Department of Agriculture & Farmers' Empowerment, Government of Odisha has taken several initiatives to popularize the use of Nano fertilisers, such as:

- Creating awareness among farmers about the advantages of Nano fertilisers through various training programme, Kisan Melas, webinars, distributing leaflets.
- State has included Nano Urea and Nano DAP in cafeteria for crop demonstration programme under various schemes mentioned below as per the recommendation of State level Technical Committee.

The financial assistance provided for this purpose is as detailed below:

S. 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

In addition to this, Odisha State Government has informed that the State's major supplier, IFFCO, is conducting different awareness programme. The details of the awareness programme conducted by IFFCO in Odisha is enclosed at **Annexure B**.

Moreover, Nano Fertilizer Manufacturers have undertaken extensive awareness and promotional activities to encourage the adoption of nano fertilizers across major agricultural states, including State of Odisha. 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.

Annexure A

**Annexure referred to in reply to parts (a) to (c) of Rajya Sabha Starred Question No. 243 for
answering on 11.08.2026**

District wise Consumption of Nano Urea & Nano DAP from 2023-24 to 2026-27 as on 31.07.2026									
State-ODISHA								(Figure in Litres)	
Sl.No	District	Nano Urea				Nano DAP			
		2023-24	2024-25	2025-26	2026-27 as on 31.07.26	2023-24	2024-25	2025-26	2026-27 as on 31.07.26
1	Angul	4200	3276	5578	2789	1570	9118	5154	396
2	Balangir	15768	8580	20435	10217.5	1855.5	8532	13122.5	4500
3	Baleswar	26374	26712	35100	17550	2440	17496	23830	1116
4	Bargarh	10260	27180	30612	15306	4396	26366	29974	7512
5	Bhadrak	11496	9564	14544	7272	2800	9254	12900	3312
6	Boudh	6004	3432	5460	2730	624	6132	2404	756
7	Cuttack	9396	8268	15072	7536	1392	12734	4774	1248
8	Deogarh	3024	3156	4884	2442	278	6282	3036	0
9	Dhenkanal	4356	5976	5471.5	2735.75	1290	4573.5	5262.5	2208
10	Gajapati	3360	3000	5330	2665	960	3306	866	540
11	Ganjam	32412	14340	29364	14682	2476	6388	6634	4020
12	Jagatsinghapur	1968	3252	2964	1482	626	6766	5602	120
13	Jajpur	7740	10020	13320	6660	1068	14184	7612	480
14	Jharsuguda	4116	2844	4116	2058	264	7132	1164	432
15	Kalahandi	14063	21396	35496	17748	2882	15098	24514	4608
16	Kandhamal	420	300	1908	954	60	672	666	300
17	Kendrapara	2280	4272	7308	3654	432	9922	2376	156
18	Kendujhar	46512	4608	13533	6766.5	2532	8972	10254.5	3204
19	Khordha	7860	14582	10200	5100	1666	12343	5276.5	384
20	Koraput	25104	24756	41936	20968	2016	10146	16545	1272
21	Malkangiri	10632	5904	15264	7632	480	4316	4336	1140
22	Mayurbhanj	4980	7800	17544	8772	2724	5852	13378	2004
23	Nabarangapur	13764	20292	24084	12042	780	15058	21098.5	4656
24	Nayagarh	7224	7548	11952	5976	2280	4802	5644	264
25	Nuapada	16488	12659	19612	9806	1488	7944	6021.5	324
26	Puri	7356	9432	14046	7023	2290	9116	11866	1164
27	Rayagada	12480	7644	13020	6510	3864	11546.5	14816.5	3588
28	Sambalpur	14616	14280	28500	14250	2326	12084	13624	1404
29	Sonepur	14016	4212	14541	7270.5	870	8161	5329	2256
30	Sundergarh	14172	9612	16206.5	8103.25	552	2070	5426.5	612
Total		352441	298897	477401	238700.5	49281.5	276366	283507	53976

Annexure B

**Annexure referred to in reply to part (d) of Rajya Sabha Starred Question No. 243 for
answering on 11.08.2026**

Steps Taken to Promote the Use of Nano Fertiliser in Odisha During Last 3 Years (2023-24 to 2025-26)					
S.N	Programme	Activities/ Program (No.) 2023-24	Activities/ Program (No.) 2024-25	Activities/ Program (No.) 2025- 26	Total Activities (Last 3 Years)
1	Farmers Meeting / Field Day	745	315	826	1886
2	Retailers Meeting	233	156	134	523
3	Crop Seminar	5	6	20	31
4	Nano DAP Seed Treatment Campaign	-	293	531	824
5	Farmers Field Demonstration	11329	621	1280	13230
6	Agro-Climatic Zone Wise Trials (Kharif and Rabi)	-	130	131	261
7	Scientific Trials (ICAR-CRRI, OUAT, KVKs etc.)	6	6	8	20
8	Training Programmes (Online) / Webinar With Farmer Friends Club / eBAZAR / IFFDC Franchise	45	15	15	75
9	Workshop (State / District Agri. Officers / Ag. Dep't. Official / Agr. Students)	60	18	25	103
10	Publicity Van Campaign (Van Days)	900	760	970	2630
11	District Level Wall Paintings (Sq. Ft.)	71000sqft	25000 sqft	67987 sqft	163987 sqft
12	Hoardings at Strategic Locations	-	2	7	9
13	Radio Jingle / T.V. Advertisement / Railway Station Jingle/ Youtube Add	405850 sec	23960 secs	900190 secs	1330000 secs
14	Display Board / Banner / Standees / cut-outs / Face Lifting Board / Printed Danglers / Hanging (Nos.)	20,080	115	1325	21520
15	Kisan Mela / Fair / Exhibition stall	30	9	36	75
16	Wall Poster / Sticker / Car Sticker (Nos.)	18000	2000	2000	22000
17	Technical Literature / Leaflet (Nos.)	1290000	1140000	1000000	3430000
18	Agriculture Magazines Article	1	2	1	4
19	Newspaper (Article) / Press Coverage	55	42	57	154
20	Manual Sprayer Supplied at Subsidised Rate	7763	3652	4601	16016
21	Supply of Agricultural Drones and Electric Vehicles	-	72	-	72

