

GOVERNMENT OF INDIA  
MINISTRY OF AGRICULTURE AND FARMERS WELFARE  
DEPARTMENT OF AGRICULTURE AND FARMERS WELFARE

**RAJYA SABHA**  
**UNSTARRED QUESTION NO. 1627**  
TO BE ANSWERED ON THE 13/02/2026

**ADVERSE IMPACT OF NANO UREA ON PRODUCTION**

1627. SHRI YERRAM VENKATA SUBBA REDDY:

Will the Minister of AGRICULTURE AND FARMERS WELFARE be pleased to state:

- (a) the details of use of Urea and Nano Urea in the country since introduction of Nano Urea, year-wise, State-wise;
- (b) the manner in which Government looks at the recent research conducted by Punjab University where it concluded Nano Urea is no match to conventional Urea since use of Nano Urea resulted in reduced production and also protein content has come down;
- (c) whether it is a fact that DAP, Zinc and Nano Urea+ introduced by Government are also no match to conventional Urea; and
- (d) if so, the details thereof and the plan of action Government has with regard to Nano Urea?

**ANSWER**

MINISTER OF STATE FOR AGRICULTURE AND FARMERS WELFARE  
(SHRI RAMNATH THAKUR)

(a): The details of sale of the Urea and Nano Urea in the country since introduction of Nano Urea (i.e. year 2021-22), year wise, State-wise are at **Annexures I & II** respectively.

(b) to (d): The experiment conducted by Punjab Agricultural University (PAU), Ludhiana on Indian Farmers Fertiliser Cooperative Limited (IFFCO) Nano Urea during 2020-2024 along with on farm trials at 17 Krishi Vigyan Kendras (KVKs) of PAU and 10 farmers' fields, did not support the claims regarding yield improvement or nitrogen use efficiency with the use of nano urea.

However, based on the bio- efficacy trials at multiple locations by ICAR institutions and State Agriculture Universities (SAUs) and bio-safety test results, Government of India had provisionally notified Nano Urea as Nano Nitrogen Fertilizers in Fertilizer Control Order (FCO), 1985. These experimental trials of Nano Urea were conducted on different crops such as paddy, wheat, mustard, maize, tomato, cabbage, cucumber, capsicum and onion in different agro-climatic zones. The study indicated that two spray of nano urea as top-dressing alongwith recommended basal

dose of nitrogen gave comparable yield to that obtained with full recommended dose of nitrogen with yield advantage of 3-8% and urea saving of 25-50% in various crops. Similarly, the Government on the basis of positive result of crop trials conducted in SAUs / ICAR institutes has notified Nano DAP and Nano zinc under FCO. Studies conducted by ICAR institutes of Central Potato Research Institute of ICAR at Modipuram and Jalandhar confirmed 50% replacement of Phosphorus by 2 sprays @ 4 ml /litre of Nano DAP and tuber treatment @ 5 ml/litre resulted at par yield of potato.

All nano fertilizer manufacturers have been informed to conduct bio efficacy trials under the supervision of SAUs /ICAR in different agro-climatic zones. Indian Council of Agricultural Research (ICAR) has initiated a network project entitled “Evaluation of Nano urea on crop productivity and nitrogen use efficiency in diverse Agro-Ecological Zones of India” in November 2025 in 14 centres, 10 major Agro Ecological Zones (AEZs) for 12 major crops on important parameters such as the impact of long-term application of Nano urea on crop yield, produce quality and soil nutrient balance as well as working mechanism of nutrient from nano fertilizer in plant metabolism.

**Annexure I**

**The details of sale of the Urea in the country since introduction of Nano Urea (i.e. year 2021-22), year wise, State-wise**

(Figure in Lakh MT )

<b>S.No</b>	<b>State</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>	<b>2025-26 (Till 08.02.26)</b>
1	Andaman and Nicobar Islands	0.00	0.00	0.00	0.00	0.00
2	Andhra Pradesh	14.83	15.87	14.99	15.70	15.14
3	Arunachal Pradesh	0.00	0.01	0.01	0.01	0.01
4	Assam	3.60	3.56	3.73	4.10	3.80
5	Bihar	21.53	21.96	23.24	25.60	22.24
6	Chandigarh	0.00	0.00	0.00	0.00	0.00
7	Chhattisgarh	8.00	8.38	8.99	10.07	8.86
8	Dadra and Nagar Haveli	0.00	0.01	0.00	0.00	0.00
9	Daman and Diu	0.00	0.00	0.00	0.00	0.00
10	Delhi	0.26	0.28	0.32	0.40	0.19
11	Goa	0.02	0.02	0.02	0.02	0.02
12	Gujarat	21.90	24.73	24.30	24.23	21.37
13	Haryana	20.75	20.46	21.77	22.65	21.91
14	Himachal Pradesh	0.74	0.74	0.68	0.65	0.70
15	Jammu and Kashmir	1.67	1.60	1.45	1.36	1.28
16	Jharkhand	2.57	2.56	3.04	3.73	2.82
17	Karnataka	17.84	18.21	15.65	19.17	16.06
18	Kerala	1.15	1.12	0.96	1.15	1.00
19	Lakshadweep	0.00	0.00	0.00	0.00	0.00
20	Madhya Pradesh	29.18	32.39	34.37	38.09	40.76
21	Maharashtra	23.68	24.66	23.48	26.41	24.29
22	Manipur	0.14	0.31	0.25	0.14	0.17
23	Meghalaya	0.00	0.00	0.04	0.04	0.03
24	Mizoram	0.01	0.10	0.13	0.20	0.10
25	Nagaland	0.01	0.01	0.01	0.01	0.01
26	Odisha	5.53	5.60	5.84	6.67	6.26
27	Puducherry	0.15	0.17	0.13	0.15	0.12
28	Punjab	31.34	29.45	30.68	32.56	29.08
29	Rajasthan	22.59	25.17	25.39	26.40	27.16
30	Sikkim	0.00	0.00	0.00	0.00	0.00
31	Tamil Nadu	10.40	10.05	10.11	10.92	10.01
32	Telangana	17.12	18.83	19.03	20.08	17.71
33	Tripura	0.18	0.19	0.14	0.17	0.14
34	Uttarakhand	2.09	2.05	2.31	2.31	2.02
35	Uttar Pradesh	71.12	74.72	74.53	79.18	75.64
36	West Bengal	13.30	14.05	12.20	15.77	12.14
	<b>All India</b>	<b>341.73</b>	<b>357.26</b>	<b>357.81</b>	<b>387.92</b>	<b>361.03</b>

## Annexure II

**The details of sale of the Nano Urea in the country since introduction of Nano Urea (i.e. year 2021-22), year wise, State-wise**

(Figure in Lakh bottles of 500 ml)

S.No	State Name	2021-22	2022-23	2023-24	2024-25	2025-26
1	Andaman & Nicobar	0.000	0.000	0.000	0.000	0.000
2	Andhra Pradesh	5.801	4.798	3.241	3.014	6.426
3	Arunachal Pradesh	0.000	0.000	0.000	0.000	0.000
4	Assam	4.386	6.095	8.268	11.333	13.469
5	Bihar	14.840	28.559	12.817	12.151	6.265
6	Chandigarh	0.000	0.000	0.000	0.000	0.000
7	Chhattisgarh	5.234	11.017	4.326	3.558	3.284
8	Dadra and Nagar Haveli	0.000	0.000	0.000	0.000	0.000
9	Daman and Diu	0.000	0.000	0.000	0.000	0.000
10	Delhi	0.000	0.000	0.000	0.000	0.000
11	Goa	0.000	0.000	0.000	0.000	0.000
12	Gujarat	8.752	17.602	27.611	30.099	10.845
13	Haryana	16.287	12.695	8.474	10.209	9.672
14	Himachal Pradesh	1.501	1.268	1.532	1.729	1.339
15	Jammu and Kashmir	2.006	3.001	2.945	1.258	0.630
16	Jharkhand	1.552	3.661	2.218	3.936	4.088
17	Karnataka	8.182	19.645	9.594	15.566	16.069
18	Kerala	1.001	1.204	0.603	0.760	0.770
19	Lakshadweep	0.000	0.000	0.000	0.000	0.000
20	Madhya Pradesh	16.117	23.383	16.293	24.918	15.423
21	Maharashtra	16.512	25.041	14.976	35.641	15.095
22	Manipur	0.000	0.000	0.000	0.000	0.000
23	Meghalaya	0.000	0.000	0.000	0.000	0.000
24	Mizoram	0.000	0.000	0.000	0.000	0.000
25	Nagaland	0.000	0.000	0.000	0.000	0.000
26	Odisha	4.179	11.211	6.778	5.779	7.784
27	Puducherry	0.000	0.000	0.000	0.000	0.000
28	Punjab	17.774	22.710	22.788	24.801	13.729
29	Rajasthan	15.023	25.227	20.080	22.083	17.408
30	Sikkim	0.000	0.000	0.000	0.000	0.000
31	Tamil Nadu	12.067	10.019	4.638	7.203	6.610
32	Telangana	5.867	6.001	3.088	5.314	9.613
33	Tripura	0.000	0.000	0.000	0.000	0.000
34	Uttarakhand	1.400	2.340	1.684	1.757	1.311
35	Uttar Pradesh	40.629	63.520	22.595	30.775	13.453
36	West Bengal	13.022	26.357	12.420	21.792	13.229
<b>GRAND TOTAL</b>		<b>212.133</b>	<b>325.353</b>	<b>206.969</b>	<b>273.676</b>	<b>186.511</b>

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