

GOVERNMENT OF INDIA
MINISTRY OF CHEMICALS AND FERTILIZERS
DEPARTMENT OF FERTILIZERS

LOK SABHA

UNSTARRED QUESTION NO. 2174 TO BE ANSWERED ON: 15.12.2023

Advantages of the Use of Nano Urea

**2174: SHRI SANJAY BHATIA:
SHRI JAGDAMBIKA PAL:**

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

- (a) whether Nano urea and Nano DAP are advantageous for the farmers of the country and if so, the details thereof indicating the benefits accruing to farmers;
- (b) whether Nano urea is being produced by any other company besides IFFCO, if so the details thereof;
- (c) the details of recommended doses of Nano urea by the farmers in the country;
- (d) whether the Government has notified Nano DAP in the Fertilizer Control Order-1985 and if so, the details thereof;
- (e) the current production capacity of Nano DAP fertilizer in the country; and
- (f) whether the Government plans to further increase the production capacity of Nano DAP in the country and if so, the details thereof?

ANSWER

MINISTER OF STATE FOR CHEMICALS & FERTILIZERS
(SHRI BHAGWANTH KHUBA)

(a) to (d): Based on the multi-locational trials in the State Agricultural Universities (SAUs) and Indian Council of Agricultural Research (ICAR) institutions, Department of Agriculture & Farmers Welfare (DA&FW) had provisionally notified Nano Urea developed by M/s Indian Farmers Fertilizers Cooperative Limited (IFFCO), as Nano Nitrogen Fertilizers in Fertilizer Control Order, 1985. Indian Council of Agricultural Research (ICAR) has informed that experimental trials of Nano urea revealed 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. Price of IFFCO Nano Urea (liquid) is Rs 225 / 500 ml bottle, which is 16 % less than the price of a 45 Kg bag of conventional Urea. Further, Nano Urea developed by M/s Ray Nano Science & Research Centre and M/s Zuari Farm Hub Limited have also been included in Fertilizer Control Order (FCO)-1985.

Nano Urea (liquid) when sprayed on the leaves easily enters through stomata and other openings and fulfils nitrogen requirement of crops. Because of its unique size and higher surface area to volume ratio, it effectively addresses crop nutrient requirement which results in reduced nutritional stress, better growth, and yield attributes of crops.

The Government of India has also notified Nano DAP under the Fertilizer Control Order (FCO) – 1985 on the basis of the bio efficacy trials and toxicology tests. M/s Coromandel International Limited (CIL) and M/s Indian Farmers Fertiliser Cooperative Limited (IFFCO) have been granted permission to manufacture Nano DAP. Indian Council of Agricultural Research (ICAR) has informed that IFFCO and CIL have developed Nano DAP and have conducted preliminary field trials on selected crops in selected ICAR Institutes/SAU's. The report indicated that with the use of Nano DAP as seed treatment and foliar application, there is a possibility of saving of granular DAP conventionally applied. Further, Nano DAP developed by M/s Zuari Farm Hub Limited has also been included in Fertilizer Control Order (FCO)-1985

(e): IFFCO has started commercial production of Nano DAP from 8th March, 2023 at its Kalol plant, the production capacity of which is 6 crore bottles (500 ml) per annum. Moreover, Coromandal International Limited (CIL) has also started production of Nano DAP from its Pilot Plant at Vizag (Andhra Pradesh) with annual Capacity 50 lakh bottles (1 litre) per annum.

(f): The Government of India is not directly involved in setting up of Nano DAP Plants. Companies are free to set up these plants as per the commercial considerations. Accordingly, IFFCO has decided to set up two more Nano DAP plants at Kandla and Paradeep with production capacity of 6 crore bottles (500 ml) each per annum. Further, CIL has also decided to set up a Nano DAP plant at Kakinada with Annual Capacity of 4 Crore Bottles (1 litre Bottle) per annum.
