

GOVERNMENT OF INDIA  
MINISTRY OF CHEMICALS AND FERTILIZERS  
DEPARTMENT OF FERTILIZERS

**RAJYA SABHA**

**UNSTARRED QUESTION NO. 3073 TO BE ANSWERED ON: 28.03.2023**

**Use of Nano-Urea**

**3073: SHRI VIJAY PAL SINGH TOMAR:**

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

- (a) whether the Ministry has tested the effectiveness of the nano- urea which off sets the requirement of 1 kg of Nitrogen generally used by the farmers;
- (b) whether the Ministry is aware that farmers will still have to use the packaged urea at the initial stage of sowing;
- (c) if so, whether the Ministry has initiated any study to explore the possibilities of using nano-urea at the initial stage;
- (d) if so, the details thereof; and
- (e) if not, whether the Ministry is planning to do so?

**ANSWER**

MINISTER OF STATE FOR CHEMICALS & FERTILIZERS

**(SHRI BHAGWANTH KHUBA)**

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(a) to (e): Based on the preliminary experimental trials undertaken in several ICAR research institutes /State Agricultural Universities, Government of India has notified the specifications of Nano nitrogen under Fertilizer Control Order, 1985.

Indian Council of Agricultural Research (ICAR) has informed that trials were conducted at 20 selected locations in selected crops to study the effect of IFFCO nano-urea (liquid) used as foliar spray. The study indicated that nano-urea can be used as foliar spray for top-dressing instead of conventional urea. In addition, foliar application of nano urea along with basal application of recommended dose of conventional urea has yield advantage of 3-8% over conventional fertilizer application.

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. Further, Nano Urea is included under monthly supply plan issued by Department of Fertilizers regularly.

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