

IFFCO started production of commercial Nano Urea Liquid,

First dispatch to farmers in UP on World Environment Day,

5th June, 2021; New Delhi : On the occasion of World Environment Day, Indian Farmers Fertilizer Cooperative Limited (IFFCO) dispatched its first consignment of Nano Urea Liquid to Uttar Pradesh for farmers use. IFFCO Nano Urea Liquid is a novel smart fertilizer developed 1st time in the world by a patented technology of IFFCO at its Nano Biotechnology Research Center, Kalol, Gujarat. The product was introduced on 31st May, 2021 by its Dr. U.S. Awasthi, MD, IFFCO during 50th annual general body meeting of its RGB members at IFFCO Head Office, New Delhi. Green flag off ceremony was done today at Kalol, Gujarat.

Shri Dilip Shangani, Vice Chairman, IFFCO said that “IFFCO Nano Urea is a product of 21st century and it is need of hour to keep the environment–soil, air and water safe for future generations while securing food for all”.

The process of construction of Nano Urea Plants at IFFCO's units at Kalol (in Gujarat) and Aonla and Phulpur (in Uttar Pradesh) has already been initiated by IFFCO. In Phase-I, the annual production capacity of 14 crore bottles is being installed which would be ramped to additional 18 crore bottles in Phase – II by the year 2023. These 32 crore bottles are expected to potentially replace 1.37 Crore MT of Urea by the year 2023.

IFFCO Nano Urea is environment friendly

Loss of nutrients from fields by way of leaching and gaseous emissions have been contributing to the environmental pollution and climate change, this can be reduced by the application of Nano Urea which has no residual effect. Urea forms 82 % of the total nitrogenous fertilisers consumed in India and it has recorded exponential increase in consumption over the years. It is expected that urea consumption will touch 35 million MT during 2020-21. Around 30-50 % of Nitrogen from Urea is utilised by plants and the rest gets wasted due to quick chemical transformation as a result of leaching, volatilization and run off, thereby low use efficiency. The excess application of urea contributes to the greenhouse gas in form of nitrous oxide lead to Global Warming. Nano Urea Liquid is environmental friendly, smart fertilizer with high nutrient

use efficiency and a sustainable solution for curtailing pollution and reduction in global warming in the long run as it reduces the emissions of nitrous oxide and doesn't contaminate soil, air and water bodies. Thus, making it a promising alternative to the conventional urea.

The size of one IFFCO Nano Urea particle is about 30 nanometre (1 nm is one billionth of a meter), and when compare to the conventional urea it has about 10,000 times more surface area to volume size when compare to granular urea." Further, "due to ultra-small size and surface properties of Nano urea, it get absorbed by the plants when sprayed on their leaves". Upon penetration these nanoparticles reaches to plant parts where nitrogen is required and release nutrients in a controlled manner.

Nano Urea Liquid addresses environmental concerns caused currently by conventional urea such as emission of greenhouse gas, nitrous oxide, ammonia emission, acidification of soil and eutrophication in water bodies. It is required in lesser measure compared to the conventional urea fertiliser to fulfil plant's nitrogen requirement. All India efficacy trials on over 40 crops by ICAR research institutes, State Agricultural Universities, Krishi Vigyan Kendra, and Farmers at more than 11,000 locations have demonstrated that Nano Urea increases crop productivity and can reduce the requirement of conventional Urea by 50%. Further, application of nano urea (liquid) improves yield, biomass, soil health and nutritional quality of the produce.

Nano Urea has been tested for biosafety and toxicity as per the guidelines of Department of Biotechnology (DBT), Government of India and international guidelines developed by OECD which are adopted and accepted globally. Nano Urea liquid is completely safe for human, animals, birds, rhizosphere organisms and environment at the recommended levels of application.

IFFCO Nano Urea is a giant step towards sustainable agriculture and food systems with a step towards precision & smart farming. This has potential to revolutionize the entire agriculture Sector across the world.

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