



Tamil Nadu Agricultural University
Coimbatore – 641 003



Dr. M. Rajavel, Ph.D.,
Public Relations Officer
Mobile: 94890 56730

Phone: 0422 - 6611302
Fax: 0422 – 2431821
E-mail: pro@tnau.ac.in

To
The Editor,
Sir,

Date: 18.06.2022

I request that the following message may kindly be published in your esteemed daily:

IFFCO Nano Urea Field Day in ARS, Bhavanisagar

The IFFCO (Indian Farmers and Fertilizer Co-operative) a leading fertilizer company in the country has introduced IFFCO Nano Urea which is first of its kind notified by FCO (Fertilizer Control Order) in 2021 in India vis-à-vis the world. The nano urea was scientifically evaluated, validated and biosafety tested by the Department of Nano Science & Technology, Directorate of Natural Resource Management, Tamil Nadu Agricultural University for the past three years by a team of scientists under the leadership of Dr. K.S. Subramanian, Head of the division. The event is intended to disseminate the liquid nano urea technology which was demonstrated in rice and maize 10 acres each in the past two years. The spray was given through drones.

Urea is one of the commonly used fertilizers in the country for more than 60 years and the application has quick and universal response in a wide array of crops. Regardless of soil fertility status or crops, both the basal and top dressing of urea have unequivocally helped the plants to turn green and grow better that eventually led to the higher yield and productivity. However, the use efficiency remained constant in the range of 30-35% leaving major portion of unutilized N either gets volatilized as ammonia into atmosphere or leached out into the groundwater causing eutrophication. In order to minimize the loss of N and maximize the use efficiency, the IFFCO brought out a unique nano-urea fertilizer which is readily absorbed by the plants and assimilated into amino acids with no loss to the environment.

The TNAU established a dedicated Department of Nano Science & Technology as early as 2010 with an initial investment of Rs. 12 crores encompassing infrastructure, sophisticated equipments, trained manpower in USA and Canada besides 10 research projects. In the past 12 years, the Department has received more than Rs. 30 crores worth of projects, 15 technologies developed, 6 patents filed (1 awarded) and published more than 50 high impact factor publications. The Director General of ICAR suggested that the TNAU be given projects for scientific validation and biosafety of IFFCO Nano-urea under the guidance of Dr. K.S. Subramanian. The TNAU has

done extensive research on IFFCO Nano Urea that serve as the base to get the notification of the fertilizer by the FCO. In addition to TNAU, ICAR has conducted observation trials in 11,000 locations spread across the country covering all agro-climatic zones and crops and found that the IFFCO Nano urea gave consistently higher yield regardless of the soil fertility status in the range of 8-40%. Based on the data available, it is recommended that a bottle of liquid nano urea (500 ml) is to be dissolved in 125 litres of water and that can be sprayed on crops twice at 20 and 40 days after sowing / transplanting. Indeed, Dr. K.S. Subramanian, the lead scientist in nanotechnology participated in the Parliamentary Standing Committee constituted by the Ministry of Chemicals and Fertilizers under the Chairmanship of Honourable Member of Parliament Mrs Kanimozhi Karunanidhi and offered technical input on Nano Urea and drone technology for nano urea spray.

In order to reduce the drudgery of spraying with manual labourers, the TNAU has taken a project to do the spraying using drones in rice and maize. The data have clearly shown that drone spray is comparable to manual spray and area coverage by drone is 5 minute per acre. The recommended IFFCO liquid nano urea volume of 500 ml is dissolved in 30 litres of water and sprayed on one acre in two rounds of sprays (15 litres each). The optimal spraying parameters such as flight height (1.5 m), speed (5 m per sec), swath (4 m) and payload (15 litres) have been fixed for both rice and maize for the effective spraying.

The Field Day at the Agricultural Research Station, Bhavanisagar, Erode District is conducted on 18.6.2022 to disseminate the IFFCO Nano Urea technology to the farmers of western zone of Tamil Nadu. During the event, Dr. K.S. Subramanian welcomed the gathering and offered preamble to the IFFCO Nano Urea. Mr. C. Jayaraj, State Marketing Manager, IFFCO provided status of IFFCO Nano Urea in the State of Tamil Nadu. The Joint Director of Agriculture Erode District Thiru C. Chinnasamy delivered a keynote address. The Director of Research Dr. M. Raveendran and Director (Natural Resource Management) Dr. P. Balasubramanian offered felicitations. Dr. N. Sakthivel, Professor & Head, proposed a formal vote of thanks.

Public Relations Officer