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To
The Editor,
Sir,

Date: 24.12.2025

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

TNAU Secures Patent for Drone-Compatible Nano Fertilizer

The Controller of Patents, Patent Office, Government of India, has awarded the patent entitled "A Water-in-Water Pickering Emulsion Based Nano Complex Foliar Fertilizer and Preparation Method Thereof" to TNAU for developing a liquid fertilizer suitable for drone spraying. This patented technology is the result of research conducted at the Centre for Agricultural Nanotechnology by Ph.D. scholar Dr. D. Pradeep, under the guidance of Dr. K. S. Subramanian and Dr. S. Marimuthu.

Due to labour shortages, many farmers have shifted to using liquid nitrogen fertilizers with drones, which has often led to spray drift, poor efficiency, and low nitrogen levels in crops. To address these challenges, the researchers adopted the Pickering emulsion technique to increase the nitrogen content of the liquid fertilizer. In this technique, the nutrient is encapsulated with silica nanoparticles cross-linked using polyethylene glycol, increasing the nitrogen content to around 32–36%. This new nano fertilizer has higher density and improved stability, enabling more accurate nutrient delivery and minimizing drift during application. The Patent Cell of the School of Postgraduate Studies supported the entire patent process, including drafting, filing, and coordination with the patent attorney.

Public Relations Officer