जैव प्रौद्योगिकी विभाग
Department of Biotechnology
Ministry of Science & Technology
Government of India

teri

DEAKIN UNIVERSITY

Next Generation Smart Delivery Systems for Agrochemicals

Key Features:

- Understanding the application of nanomaterials as delivery vehicles in agriculture
- From lab to audience: Smart delivery of agrochemicals
- Discuss new ideas on development of nano-carriers as per the requirements of agro-industries
- E-certificates
- Networking

Date: 27th September, 2021
Time: 14.00 - 17:00 IST (GMT +05:30)

Background Concept

In recent years, nanotechnology is very much relevant in plant science and agriculture. Advancement of nanotechnology has improved the ways for large-scale production of physiologically important metallic nanoparticles that can be used to improve fertilizer formulations. Consequently, we can expect enhanced uptake of nano-fertilizers by plant cells leading to minuscule nutrient loss. Nanoparticles have high surface area, sorption capacity, and controlled-release kinetics to the targeted sites, thereby making them suitable for "smart delivery system." This kind of delivery systems can improve the nutrient use efficiency through mechanisms, such as targeted delivery, slow or controlled release of agrochemicals. Besides, such delivery systems could precisely release their active ingredients in response to environmental triggers and biological demands. With all the promise of nanotechnology, we must mention that the development of the smart delivery system is mostly available at the bench-top level. Commercialization of such nanomaterials for agricultural applications requires large-scale production, testing priorities, risk assessment and regulatory guidance at the global level. The webinar aims to shed light on the current status of smart delivery systems in agriculture, highlighting the challenges and drawbacks. The lectures from international and national speakers will cater to faculties, researchers, scientists, students and industries to understand various aspects of delivery systems using green nanotechnology that offers low cost, facile method, and controlled-release features.

Coordinator : Dr Pushplata Singh, Fellow and Area Convenor, TERI
Co-coordinator: Dr. Rita Choudhary, Dr. Palash K Manna, Dr. Shruti Shukla, TERI

Key Speakers:

- Prof. Kamlesh Choure, Director, Department of Biotechnology, AKS University, Satna, Madhya Pradesh, India
- Dr. Dhruba Jyoti Sarkar, Scientist, Aquatic Environmental Biotechnology and Nanotechnology Division, ICAR-Central Inland Fisheries Research Institute, Kolkata, West Bengal, India
- Dr. Francisco Jesùs Carmona, Marie Sklodowska-Curie Action Fellow, Department of Inorganic Chemistry, Universidad de Granada, Granada, Spain
- Dr. Pavani P Nadiminti, Scientist, Department of Animal, Plant and Soil Science, La Trobe Institute for Agriculture & Food, Bundoora, VIC, Australia

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